



GR FRYERS

Customer Maintenance Manual

SPECIFICATION SHEETS

INSTALLATION / OPERATION MANUAL

ADDITIONAL RESOURCES

SERVICE MANUALS

HOBART SERVICE PARTS STORE

CATALOG OF REPLACEMENT PARTS

FRYERS

VULCAN**1GR35M
FREE STANDING GAS FRYER****SPECIFICATIONS**

35 - 40 lbs. capacity free standing model gas fryer, Vulcan Model No. 1GR35M. Stainless steel cabinet. Set of four 6" adjustable casters. Stainless steel fry tank with three heat exchanger tubes and a "V" shaped cold zone. 1¼" full port ball type drain valve. Twin fry baskets with plastic coated handles. 90,000 BTU/hr. input. Behind the door millivolt snap action thermostat control adjusts from 200° to 400°F.

Overall Dimensions:

15½"w x 30¼"d x 47⅛"h working height 36¼".

CSA design certified. NSF listed.

SPECIFY TYPE OF GAS WHEN ORDERING

- Natural Gas
 Propane Gas

SPECIFY ALTITUDE

- Natural Gas for above 2000 ft.
 Propane Gas for above 3500 ft.

1GR35M: Behind the door millivolt thermostat control adjusts from 200° to 400°F.

STANDARD FEATURES

- Stainless steel fry tank, 35 - 40 lbs. capacity.
- 1¼" full port ball type drain valve.
- Stainless steel cabinet.
- Set of four 6" adjustable casters (2 locking).
- Twin fry baskets with plastic coated handles.
- 90,000 BTU/hr. input.
- Three heat exchanger tubes positioned for easy cleaning.
- Hi-limit shut-off.
- Combination gas shut-off valve and pilot safety system.
- Tank brush, stainless steel crumb scoop and clean-out rod.
- One year limited parts and labor warranty.

ACCESSORIES (Packaged & Sold Separately)

- FRYMATE-VX15 add-on frymate.
- Stainless steel tank cover – doubles as a work surface top.
- Connecting Kit(s) – Connects two fryers together (brackets, grease strip and hardware included).
- Single large basket – 13"w x 13¼"d x 5½"h.
- Set of twin baskets – 6½"w x 13¼"d x 6"h.
- ¾" Flexible gas hose with quick disconnect.
- 10" high stainless steel removable splash guard.

OPTIONS

- Second year extended limited parts and labor warranty.

VULCAN

a division of ITW Food Equipment Group LLC

P.O. Box 696 ■ Louisville, KY 40201 ■ Toll-free: 1-800-814-2028 ■ Local: 502-778-2791 ■ Quote & Order Fax: 1-800-444-0602



1GR35M FREE STANDING GAS FRYER

INSTALLATION INSTRUCTIONS

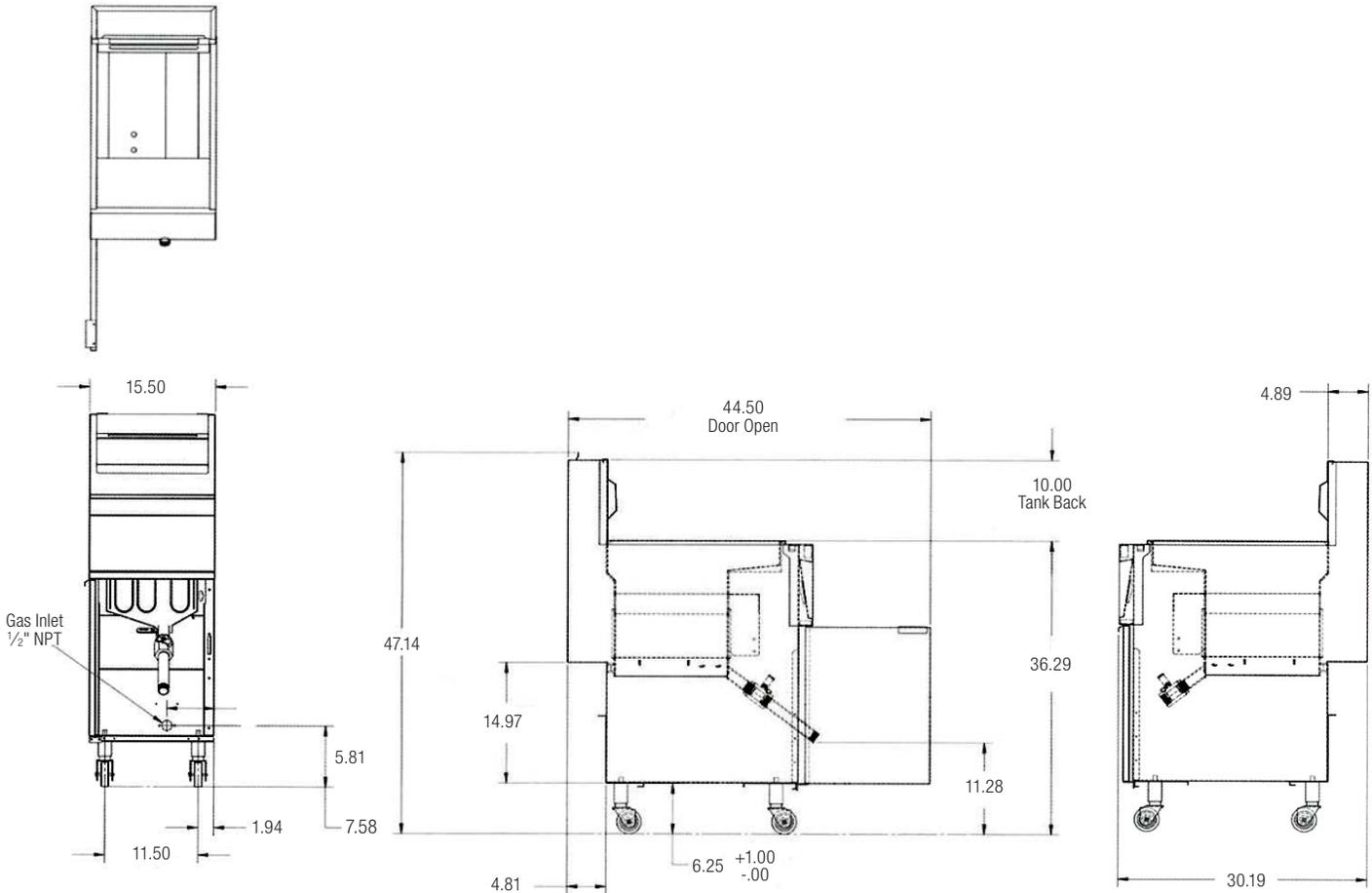
- A combination valve with pressure regulator is provided with this unit.
 - Natural Gas
Operating pressure – 4.0" W.C.
Recommended supply pressure 7-9" W.C.
Not to exceed 14" W.C. (1/2 PSI)
 - Propane Gas
Operating pressure – 10.0" W.C.
Recommended supply pressure 11-12" W.C.
Not to exceed 14" W.C. (1/2 PSI)
- An adequate ventilation system is required for Commercial Cooking Equipment. Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269. When writing refer to NFPA No. 96.

- All models require a 6" (152 mm) clearance at both sides and rear adjacent to combustible construction.
- All models require a 16" (407 mm) minimum clearance to adjacent open top burner units.
- This appliance is manufactured for commercial installation only and is not intended for home use.

SERVICE CONNECTIONS:

Ⓟ 1/2" (13 mm) ID and 3/4" (19 mm) OD rear gas connection.

NOTE: In line with its policy to continually improve its product, Vulcan reserves the right to change materials and specifications without notice.



Model	Width	Depth	Overall Height	Working Height	Tank Size	BTU/HR	Fry Comp. Capacity	Approx. Shipping Weight
1GR35M	15½"	30¼"	47⅞"	36¼"	14" x 14"	90,000	35 - 40 lbs.	215 lbs.

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FRYERS

VULCAN**1GR45 SERIES
FREE STANDING GAS FRYER**

Model 1GR45M

**SPECIFICATIONS**

45 - 50 lbs. capacity free standing gas fryer, Vulcan-Hart Model No. (1GR45M) (1GR45A) (1GR45D) (1GR45C). Stainless steel cabinet. Set of four 6" adjustable casters (2 locking). Stainless steel fry tank with four heat exchanger tubes and a "V" shaped cold zone. 1 1/4" full port ball type drain valve. Twin fry baskets with plastic coated handles. 120,000 BTU/hr. input. Millivolt(M), solid state analog knob (A), solid state digital (D), or programmable computer (C) control system. Electronic ignition standard with solid state and computer control models. Tank brush, stainless steel crumb scoop and clean-out rod.

Overall Dimensions:

15 1/2"w x 30 1/4"d x 47 1/8"h. Working height 36 1/4".

CSA design certified. NSF listed

SPECIFY TYPE OF GAS WHEN ORDERING

- Natural Gas.
 Propane Gas.

SPECIFY ALTITUDE

- Natural Gas for above 2000 ft.
 Propane Gas for above 3500 ft.

- 1GR45M:** Behind the door millivolt thermostat control adjusts from 200° to 400°F.
- 1GR45A:** Solid state analog knob control behind the door. Accurate temperature control 200° to 390°F. User selectable fat melt modes. Electronic ignition.
- 1GR45D:** Digital Solid state temperature control programmable from 200° to 390°F. Completely programmable with single digital 4 character display. User selectable fat melt modes. Automatic and manual select boil out modes. Electronic ignition.
- 1GR45C:** Computer control with digital character display. Completely programmable with 10 menu timers display product names and cook times. Off line programming of menu items uploaded through USB interface, software included. Adjusts from 200° to 390°F. User selectable fat melt modes. Automatic and manual select boil out modes. Programmable Celsius and Fahrenheit temperature scales. Electronic ignition.

STANDARD FEATURES

- Stainless steel fry tank, 45 - 50 lb. capacity. Includes limited 10 year tank warranty.
- 1 1/4" full port ball type drain valve.
- Stainless steel cabinet.
- Set of four 6" adjustable casters (2 locking).
- Twin fry baskets with plastic coated handles.
- 120,000 BTU/hr. input.
- Four heat exchanger tubes positioned for easy cleaning.
- Hi-limit shut-off.
- Combination gas shut-off valve and pilot ignition system.
- Tank brush, stainless steel crumb scoop and clean-out rod.
- One year limited parts and labor warranty.

ACCESSORIES

- FRYMATE-VX15 add-on frymate.
- Stainless steel tank cover – doubles as a work surface top.
- Connecting Kit(s) – Connects two fryers together (brackets, grease strip and hardware included).
- Single large basket – 13"w x 13 1/4"d x 5 1/2"h.
- Set of twin baskets – 6 1/2"w x 13 1/4"d x 6"h.
- 3/4" Flexible gas hose with quick disconnect.
- 10" high stainless steel removable splash guard.

OPTIONS

- Second year extended limited parts and labor warranty.

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**GR KLEENSCREEN PLUS® FILTRATION SYSTEM
BUILT-IN FILTRATION SYSTEM FOR 1GRF FRYERS**



Model 1GR45CF



STANDARD FEATURES

- Filter system accommodates 1GR45F, 1GR65F or 1GR85F.
- Choose from Millivolt (M), Solid State Knob Control (A) Solid State Digital (D), or Computer (C) Controls.
- Boil Out ByPass™ easily removes boil out solution from fry tank without contact of drain manifold, filter pan or motor/ pump.
- Drain valve interlock switch – available on (A), (D) and (C) controls turns off burners when drain valve is opened.
- 6" Casters adjustable - 2 locking, 2 non-locking.
- Electronic ignition on solid state (A), (D) and computer (C) control fryers.
- 18 gauge, stainless steel filter pan. 65 lbs. frying compound capacity on 1GR45F, 100 lbs. capacity on 1GR85F.
- Paperless stainless steel filter screen filters from 2 sides filter area; 1GR45F=220 sq .inches; 1GR85F=462 sq. inches. Micro Filtration Fabric Envelope filters out particulate down to .5 microns.
- 1/3 H.P. motor and pump circulates frying compound at a rate of 8.0 gallons per minute.
- 4' high temperature discard hose.
- One touch push button switch to engage pump and motor (solid state controls (A), (D) and computer (C) models only).
- Tank brush and clean-out rod.
- NEMA 5-15 for 120 volt, 50/60 Hz, 1 phase.
- One year limited parts and labor warranty.
- 10 year fry tank limited warranty.

ACCESSORIES (Packaged & Sold Separately)

- Stainless steel tank cover – doubles as a work surface top.
- Micro-Filtration Fabric Envelopes – 6 filters/per package.
- "Add-On" Frymate – VX15S, VX21S (Field Installed).
- 1GR45F – Twin Basket Lifts (Factory Installed).
- 1GR65F and 1GR85F – Single and Twin Basket Lifts (Factory Installed).
- Prison Security Package (Factory Installed).
- Flexible gas hose with quick disconnect.
- 10" high stainless steel splash guard.

OPTIONS

- Second year extended limited parts and labor warranty.

REFERENCE MATERIALS

- See 1GR45 Spec Sheet F32630.
- See 1GR65 Spec Sheet F32631.
- See 1GR85 Spec Sheet F32632.

SPECIFICATIONS

Built-in filter system, Vulcan-Hart Model No. 1GR (lb. capacity - 45, 65 or 85) (control type M, A, D, or C) F (add suffix-F to fryer battery model No., i.e. 1GR45DF). Filter system accommodates one 45 lbs. or one 85 lbs fryer. Filter vessel constructed of 18 gauge stainless steel. 1/3 H.P. motor/ pump circulates hot frying compound at the rate of 8 gallons per minute, activated by a one touch push button switch on A, D, and C models. System provided standard with paperless stainless steel mesh filter screen. Optional KleenScreen PLUS® envelopes filter out particulate down to .5 microns (trial package included). Standard equipment comes on casters, tank brush, and clean-out rod. Hands free oil return line connection. Drain valve interlock switch turns fryer's burners off when drain valve is opened on A, D, and C models. Requires 120 volt, 50 / 60 Hz, 1 phase power supply.

CSA design certified. NSF listed.

SPECIFY TYPE OF GAS WHEN ORDERING

- Natural Gas
- Propane Gas

SPECIFY ALTITUDE

- Natural Gas for above 2000 ft.
- Propane Gas for above 3500 ft.



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FRYERS



**GR KLEENSCREEN PLUS® FILTRATION SYSTEM
BUILT-IN FILTRATION SYSTEM FOR 1GRF FRYERS**

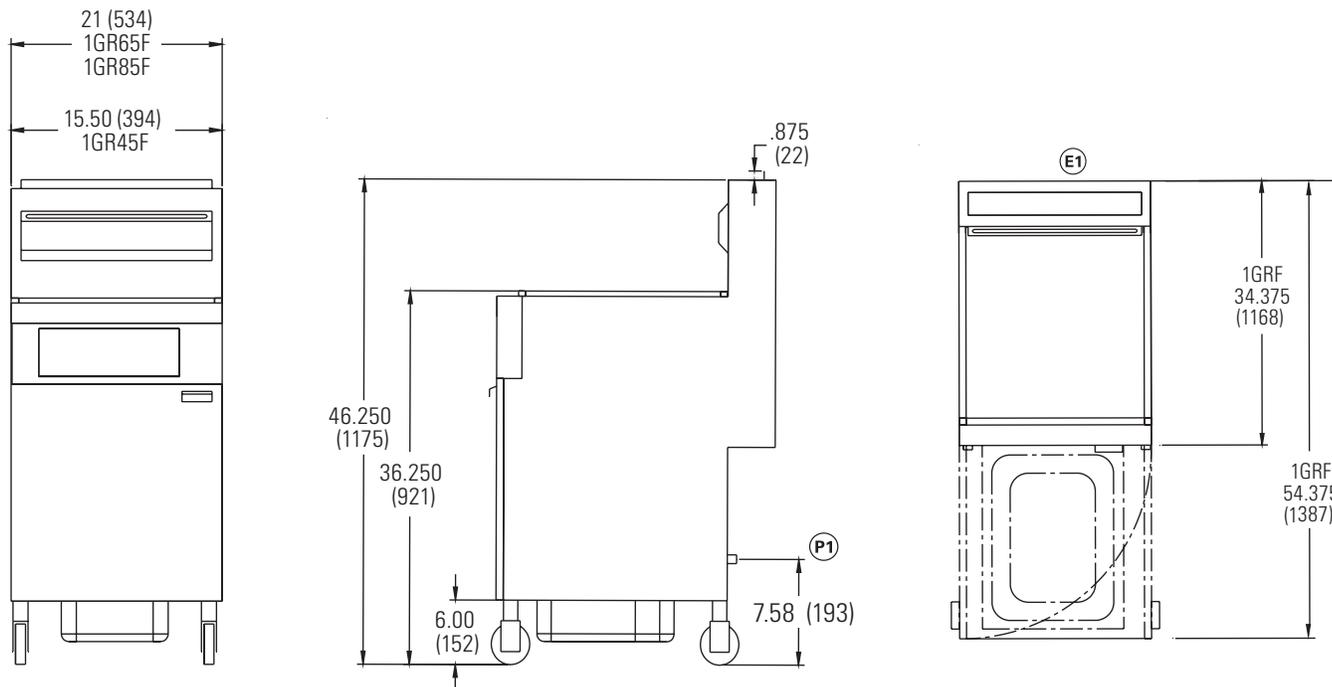
INSTALLATION INSTRUCTIONS

1. A combination valve with pressure regulator is provided with this unit. Natural Gas 4.0" (102 mm) W.C. Propane Gas 10.0" (254 mm) W.C.
2. An adequate ventilation system is required for Commercial Cooking Equipment. Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269. When writing refer to NFPA No. 96.
3. All models require a 6" (152 mm) clearance at both sides and rear adjacent to combustible construction.
4. All models require a 16" (407 mm) minimum clearance to adjacent open top burner units.
5. This appliance is manufactured for commercial installation only and is not intended for home use.

SERVICE CONNECTIONS:

- Ⓟ 1/2" (12.7 mm) I.D. and 3/4" (19 mm) O.D. NPT common rear gas connection.
- ⓔ NEMA 5-15P, 120 volt, 60 Hz, 1 phase electrical connection (filter pump).

NOTE: In line with its policy to continually improve its product, Vulcan reserves the right to change materials and specifications without notice.



Model	Filter Pan Capacity	Filter Screen Fabric Envelope	Motor	Pump	Electric / Amps	Electric / Power
1GR45F	65 lbs.	220 sq. in. 225 sq. in.	1/3 H.P. 1750 RPM	8 Gal/Min	115V 5.0A	115V 50/60Hz 1Ph
1GR65F 1GR85F	100 lbs.	462 sq. in. 515 sq. in.	1/3 H.P. 1750 RPM	8 Gal/Min	115V 5.0A	115V 50/60Hz 1Ph

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FRYERS

VULCAN**1GR65 SERIES
FREE STANDING GAS FRYER**

Model 1GR65D

**SPECIFICATIONS**

65 - 70 lbs. capacity free standing gas fryer, Vulcan-Hart Model No. (1GR65M) (1GR65A) (1GR65D) (1GR65C). Stainless steel cabinet. Set of four 6" adjustable casters (2 locking). Stainless steel fry tank with five heat exchanger tubes and a "V" shaped cold zone. 1 1/4" full port ball type drain valve. Twin fry baskets with plastic coated handles. 150,000 BTU/hr. input. Millivolt (M), solid state analog knob control (A), solid state Digital (D), or programmable computer (C) control system. Electronic ignition standard with solid state and computer control models. Tank brush, stainless steel crumb scoop and clean-out rod.

CSA design certified. NSF listed.

SPECIFY TYPE OF GAS WHEN ORDERING

- Natural Gas.
 Propane Gas.

SPECIFY ALTITUDE

- Natural Gas for above 2000 ft.
 Propane Gas for above 3500 ft.

- 1GR65M:** Behind the door millivolt thermostat control adjusts from 200° to 400°F.
- 1GR65A:** Solid state analog knob temperature control behind the door. Accurate temperature control 200° to 390°F. User selectable fat melt modes. Electronic ignition.
- 1GR65D:** Digital Solid state temperature control programmable from 200° to 390°F. Completely programmable with single digital 4 character display. User selectable fat melt modes. Automatic and manual select boil out modes. Electronic ignition.
- 1GR65C:** Computer control with digital character display. Completely programmable with 10 menu timers display product names and cook times. Off line programming of menu items uploaded through USB interface, software included. Adjusts from 200° to 390°F. User selectable fat melt modes. Automatic and manual select boil out modes. Programmable Celsius and Fahrenheit temperature scales. Electronic ignition.

STANDARD FEATURES

- Stainless steel fry tank, 65 - 70 lb. capacity. Includes limited 10 year tank warranty.
- 1 1/4" full port ball type drain valve.
- Stainless steel cabinet.
- Set of four 6" adjustable casters (2 locking).
- Twin fry baskets with plastic coated handles.
- 150,000 BTU/hr. input.
- Five heat exchanger tubes positioned for easy cleaning.
- Hi-limit shut-off.
- Combination gas shut-off valve and pilot ignition system.
- Tank brush, stainless steel crumb scoop and clean-out rod.
- One year limited parts and labor warranty.

ACCESSORIES

- FRYMATE-VX15 add-on frymate.
- Stainless steel tank cover – doubles as a work surface top.
- Connecting Kit(s) – Connects two fryers together (brackets, grease strip and hardware included).
- Single large basket – 18 3/4" w x 13 1/4" d x 5 1/2" h.
- Set of twin baskets – 9 1/4" w x 13 1/4" d x 6" h.
- 3/4" Flexible gas hose with quick disconnect.
- 10" high stainless steel removable splash guard.

OPTIONS

- Second year extended limited parts and labor warranty.

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- Choose from Millivolt (M), Solid State Knob Control (A) Solid State Digital (D), or Computer (C) Controls.
- Boil Out ByPass™ easily removes boil out solution from fry tank without contact of drain manifold, filter pan or motor/ pump.
- Drain valve interlock switch – available on (A), (D) and (C) controls turns off burners when drain valve is opened.
- 6" Casters adjustable - 2 locking, 2 non-locking.
- Electronic ignition on solid state (A), (D) and computer (C) control fryers.
- 18 gauge, stainless steel filter pan. 65 lbs. frying compound capacity on 1GR45F, 100 lbs. capacity on 1GR85F.
- Paperless stainless steel filter screen filters from 2 sides filter area; 1GR45F=220 sq .inches; 1GR85F=462 sq. inches. Micro Filtration Fabric Envelope filters out particulate down to .5 microns.
- 1/3 H.P. motor and pump circulates frying compound at a rate of 8.0 gallons per minute.
- 4' high temperature discard hose.
- One touch push button switch to engage pump and motor (solid state controls (A), (D) and computer (C) models only).
- Tank brush and clean-out rod.
- NEMA 5-15 for 120 volt, 50/60 Hz, 1 phase.
- One year limited parts and labor warranty.
- 10 year fry tank limited warranty.

ACCESSORIES (Packaged & Sold Separately)

- Stainless steel tank cover – doubles as a work surface top.
- Micro-Filtration Fabric Envelopes – 6 filters/per package.
- "Add-On" Frymate – VX15S, VX21S (Field Installed).
- 1GR45F – Twin Basket Lifts (Factory Installed).
- 1GR65F and 1GR85F – Single and Twin Basket Lifts (Factory Installed).
- Prison Security Package (Factory Installed).
- Flexible gas hose with quick disconnect.
- 10" high stainless steel splash guard.

OPTIONS

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REFERENCE MATERIALS

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- See 1GR65 Spec Sheet F32631.
- See 1GR85 Spec Sheet F32632.

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CSA design certified. NSF listed.

SPECIFY TYPE OF GAS WHEN ORDERING

- Natural Gas
- Propane Gas

SPECIFY ALTITUDE

- Natural Gas for above 2000 ft.
- Propane Gas for above 3500 ft.



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FRYERS



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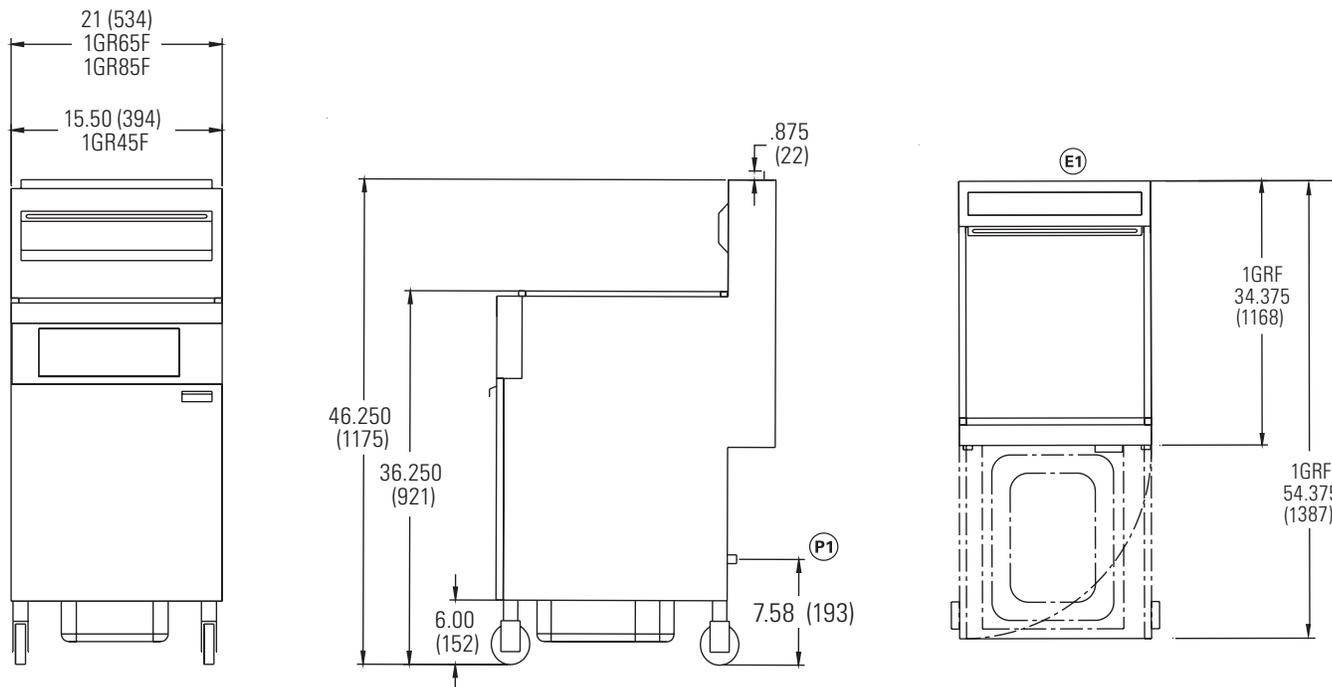
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1. A combination valve with pressure regulator is provided with this unit. Natural Gas 4.0" (102 mm) W.C. Propane Gas 10.0" (254 mm) W.C.
2. An adequate ventilation system is required for Commercial Cooking Equipment. Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269. When writing refer to NFPA No. 96.
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4. All models require a 16" (407 mm) minimum clearance to adjacent open top burner units.
5. This appliance is manufactured for commercial installation only and is not intended for home use.

SERVICE CONNECTIONS:

- Ⓟ 1/2" (12.7 mm) I.D. and 3/4" (19 mm) O.D. NPT common rear gas connection.
- ⓔ NEMA 5-15P, 120 volt, 60 Hz, 1 phase electrical connection (filter pump).

NOTE: In line with its policy to continually improve its product, Vulcan reserves the right to change materials and specifications without notice.



Model	Filter Pan Capacity	Filter Screen Fabric Envelope	Motor	Pump	Electric / Amps	Electric / Power
1GR45F	65 lbs.	220 sq. in. 225 sq. in.	1/3 H.P. 1750 RPM	8 Gal/Min	115V 5.0A	115V 50/60Hz 1Ph
1GR65F 1GR85F	100 lbs.	462 sq. in. 515 sq. in.	1/3 H.P. 1750 RPM	8 Gal/Min	115V 5.0A	115V 50/60Hz 1Ph

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OPERATION MANUAL

KLEENSCREEN FILTRATION SYSTEM

SUPPLEMENT INSTRUCTION MANUAL FOR:

Gas Fryer Models

GR35F ML-126998

GR45F ML-126999

GR65F ML-135534

GR85F ML-135535

GRD35F ML-126732

GRD45F ML-126735

GRD65F ML-126738

GRD85F ML-126741

GRC35F ML-126733

GRC45F ML-126736

GRC65F ML-126739

GRC85F ML-126742

Electric Fryer Models

ERD50F ML-135561

ERD85F ML-135563

ERC50F ML-135565

ERC85F ML-135567



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

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OPERATION AND CARE OF KLEENSCREEN FILTRATION SYSTEM

SAVE THESE INSTRUCTIONS

GENERAL

The KleenScreen Filtration System filters the oil as it is pumped back to its respective tank. Valves inside the doors under each fry tank must be set so only one tank is being drained, filtered and pumped back at any one time.

The KleenScreen Filtration System is used on the following Vulcan Fryer Models:

Gas Fryers			Electric Fryers	
<i>GR35F</i>	<i>GRD35F</i>	<i>GRC35F</i>	<i>ERD50F</i>	<i>ERC50F</i>
<i>GR45F</i>	<i>GRD45F</i>	<i>GRC45F</i>	<i>ERD85F</i>	<i>ERC85F</i>
<i>GR65F</i>	<i>GRD65F</i>	<i>GRC65F</i>		
<i>GR85F</i>	<i>GRD85F</i>	<i>GRC85F</i>		

ASSEMBLY

1. After unpacking, wash the filter tank, crumb basket and filter screen. Use dishwashing detergent and warm water, or clean the components in a dishwasher. Rinse the filter tank, crumb basket and filter screen thoroughly. Wipe components dry with a clean cloth.
2. Pull the filter drawer out.
3. Place the filter tank in the filter drawer. Hang the crumb basket from the left tank handle inside the filter tank (Figs. 1 and 2). Position the filter screen assembly flat on the bottom of the filter tank so the filter orifice underneath the screen fits the suction hole in the bottom of the tank (Figs. 1 and 2). Close the drawer.
4. Make sure the two O-Rings are in place inside the filter suction port (Figs. 1 and 2). As the drawer is closed, make sure the filter suction connector fits tightly into the filter suction port (Figs. 1 and 2).

CONTROLS AND COMPONENT LOCATIONS — Gas Fryers

The filter tank cover is removed to show component locations.

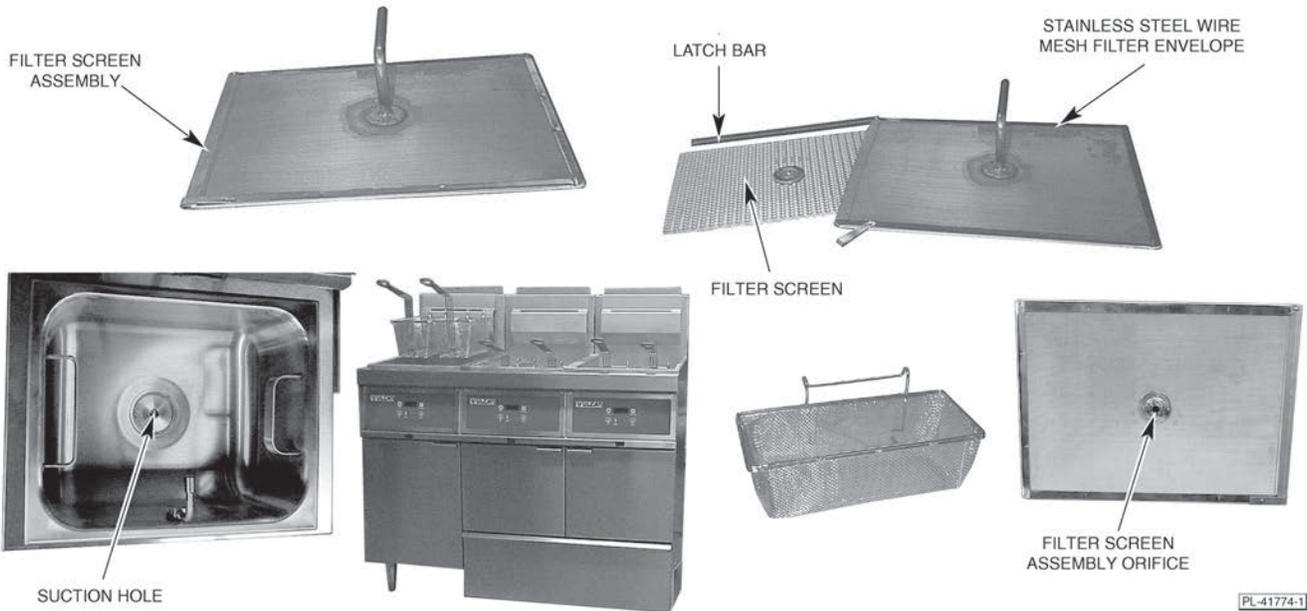
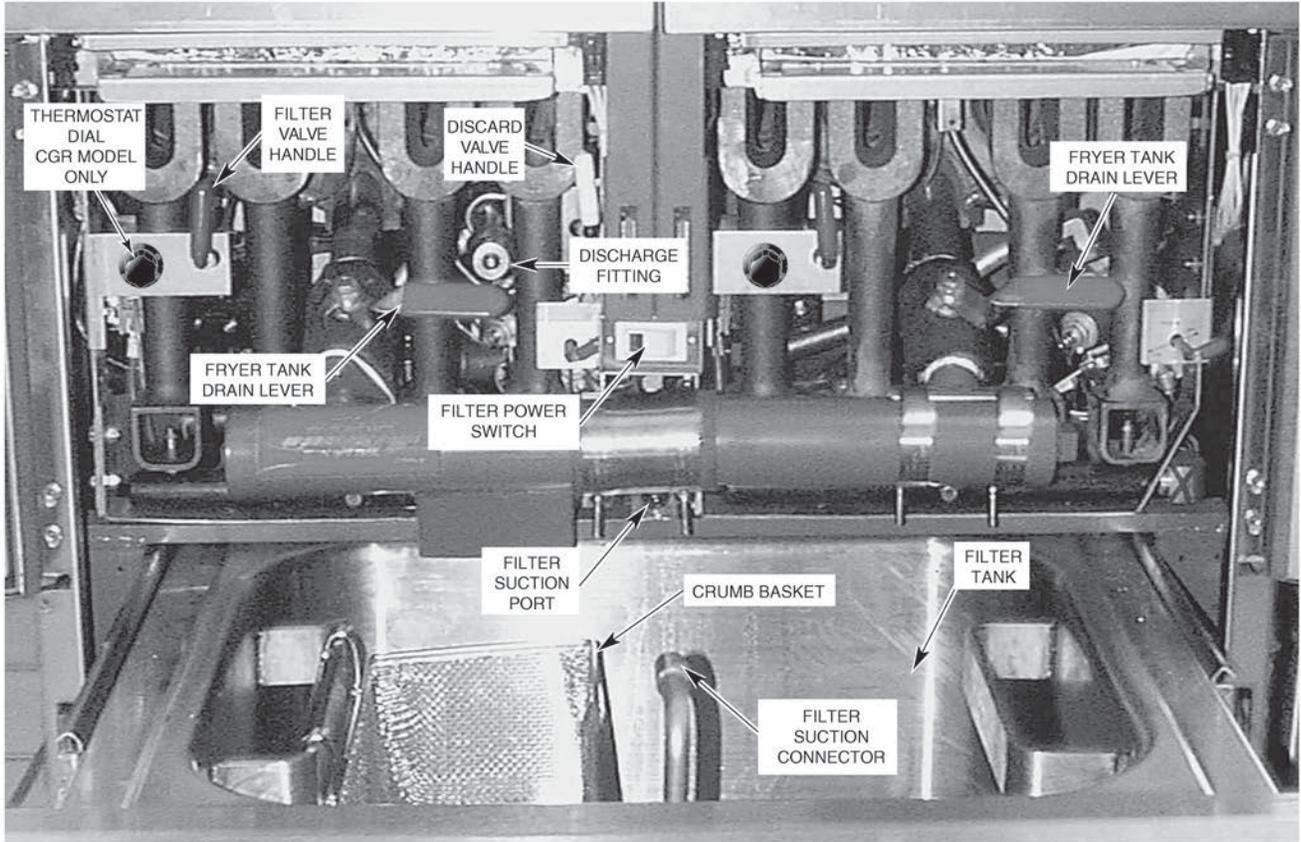


Fig. 1

CONTROLS AND COMPONENT LOCATIONS — Electric Fryers

The filter tank cover is removed to show component locations.

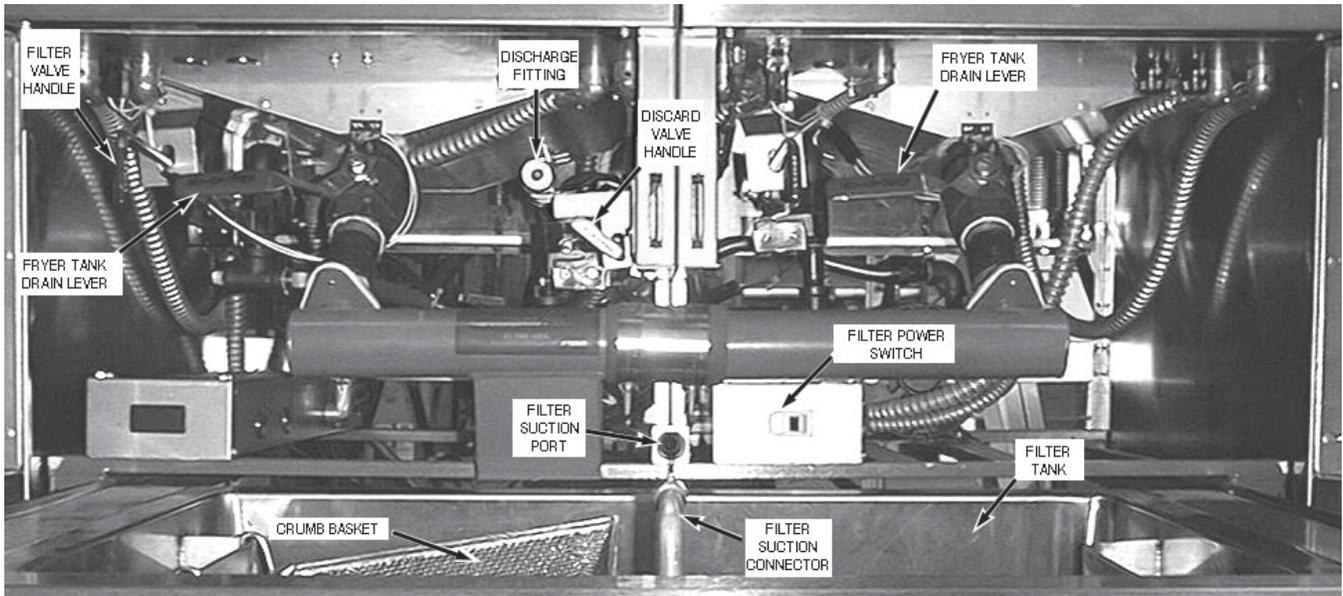


Fig. 2

OPERATION

WARNING: HOT FRYING COMPOUND AND PARTS CAN CAUSE BURNS. USE CARE WHEN OPERATING, CLEANING OR SERVICING THE FRYER. USE CARE WHEN FILTERING. DO NOT LEAVE UNATTENDED.

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

FILTERING PROCEDURE WHEN USING LIQUID SHORTENING

1. Turn the fryer's power OFF and open the doors (Fig. 3).

NOTE: GRC and GRD models have a drain valve interlock system built in that will automatically shut the fryer off as soon as the drain valve is opened.

2. Slowly turn the red fryer tank drain lever counterclockwise (Fig. 5) until it stops. This allows the oil to drain into the filter tank.

NOTE: Drain and filter only one fryer tank at a time.

3. Pull the filter drawer out. Lift the filter tank cover up (Fig. 4). Make sure filter tank and parts are properly assembled (pages 3 through 5).
4. Add 8 ounces of diatomaceous earth to the filter tank. Agitate to mix the diatomaceous earth and shortening. Replace the filter tank cover. Slide the filter drawer back into place.



Fig. 3



Fig. 4

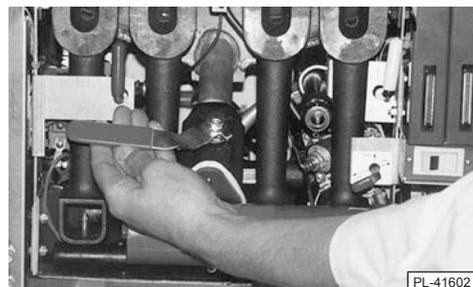
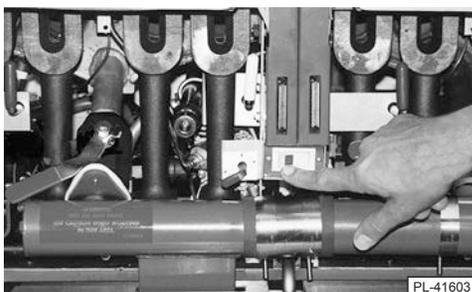
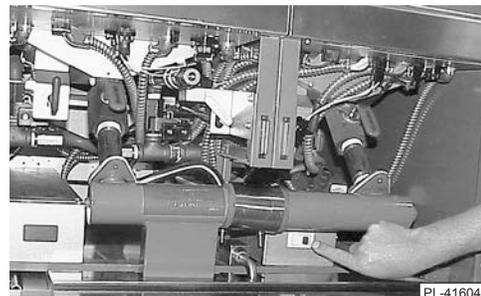


Fig. 5

5. Turn the filter power switch ON (Fig. 6). The red pilot light in the filter power switch comes on.



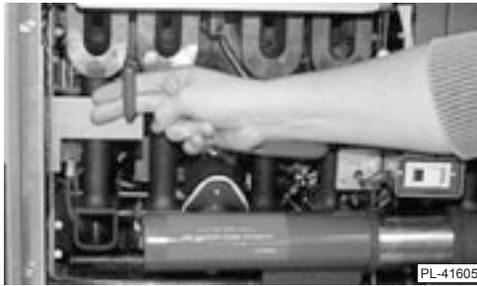
Gas Fryer



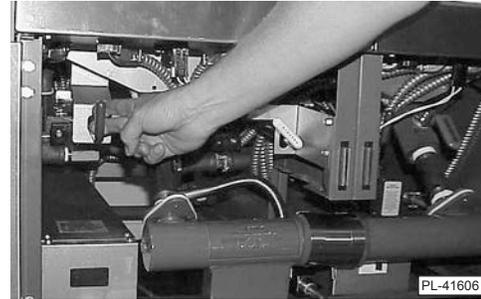
Electric Fryer

Fig. 6

- To start filtering, pull out the red filter valve handle (Fig. 7) of the fryer tank to be filtered. Use a brush to remove all the residue from the bottom of the tank into the drain tube. Let the oil recycle for 1 to 3 minutes, flushing residue from the tank bottom into the filter.



Gas Fryer



Electric Fryer

Fig. 7

- Close the red fryer tank drain lever (Fig. 8) by turning the lever clockwise until it stops. The fryer tank will now refill.
- After filtering is complete (all oil is removed from the filter tank and air bubbles should appear in the fryer tank), push in the red filter valve handle completely (Fig. 9).

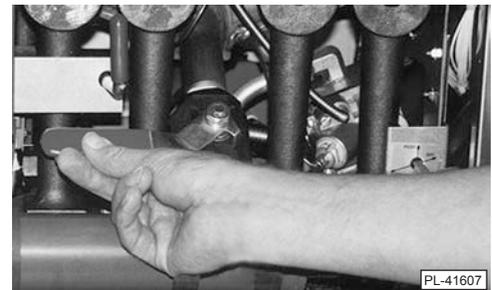
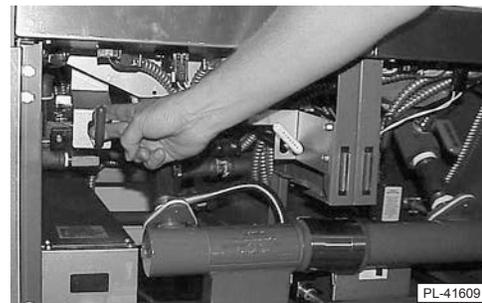


Fig. 8



Gas Fryer



Electric Fryer

Fig. 9

- Turn the filter power switch OFF (Fig. 6).
- Close the fryer doors.

FILTERING PROCEDURE WHEN USING SOLID SHORTENING

- Follow the fat melt procedure discussed in the *INSTRUCTION* manual supplied with your fryer.

WARNING: Do not set a complete block of solid shortening on top of an electric fryer's heating elements. Doing this may damage the elements and increase the potential for shortening flash fire. If solid shortening is to be used in an electric fryer, remove the baskets and crumb screen(s), pack the bottom of the tank completely with solid shortening, lower the elements and then pack the shortening COMPLETELY around over top of the elements. Lay crumb screen(s) in the tank on top of the packed shortening. Follow the Fat Melt instructions in the ER Fryer installation & operation manual. Once all shortening has been melted and the fryer has met the set temperature, fill baskets and resume frying.

2. Set the fryer thermostat at 350°F (177°C).
3. Once shortening has melted, stir oil to eliminate solid shortening in the cold zone (Fig. 10). All solid shortening must have melted completely.
4. Allow the fryer to idle at 350°F (177°C) for 10 minutes, if filtering from a cold start.
5. Turn the fryer off. Make sure filter tank and parts are properly assembled (pages 3 through 5). Make sure the filter drawer is completely closed before opening the drain valve. Open the drain valve and drain the shortening into the filter tank. Allow hot shortening to stand in the filter tank for approximately 6 to 10 minutes. Then proceed with steps 4 through 10 under Filtering Procedure when Using Liquid Shortening on pages 6 and 7.

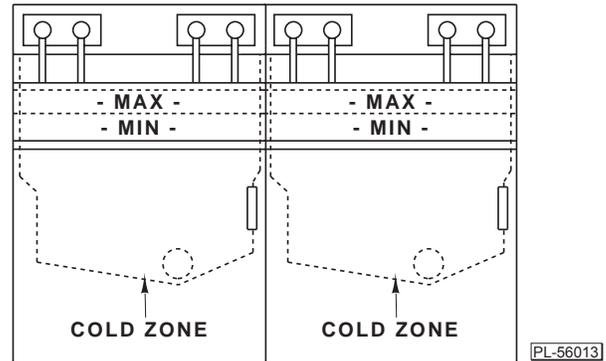


Fig. 10

FILTERING TIPS

- If filtering at the end of the day, make sure all the oil is returned to the fryer tank.
- Open the filter drawer approximately 1" to allow any oil in the return line to run back into the filter tank. This will take about 30 seconds to complete.
- Close the filter drawer. If solid shortening is used, follow the "Melt" procedure the next morning.

PERIODICALLY REMOVE EXCESS DEBRIS FROM THE FILTER

The following operation is required after filtering one or more batches, as needed:

1. Pull the filter drawer out and remove the filter tank cover from the filter tank.
2. Remove the crumb basket and empty any debris into the trash.
3. Remove the filter screen assembly.
4. Scrape debris from the bottom of the filter tank and from the screen assembly into the trash.

NOTE: Scrape debris away from suction hole to avoid compacting debris in hole.

5. Reinstall the filter screen assembly and crumb basket.
6. Replace the filter tank cover. Close the drawer.

FLUSH AND DISCARD

1. Turn the fryer power OFF.
2. Make sure filter tank and parts are properly assembled (pages 3 through 5). Open the fryer tank drain lever (Fig. 11) of the fryer tank that holds oil that is to be discarded.

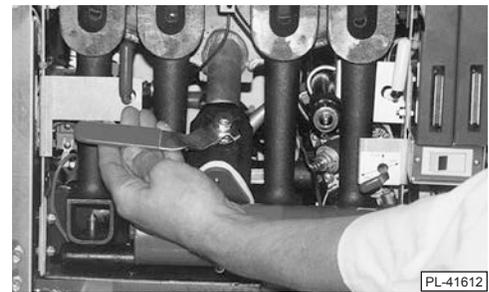
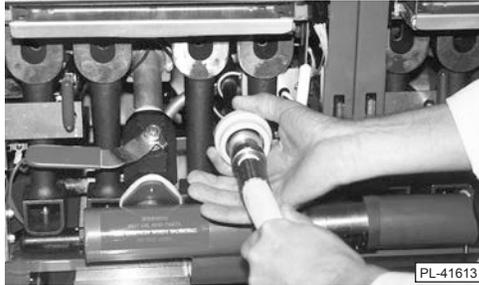
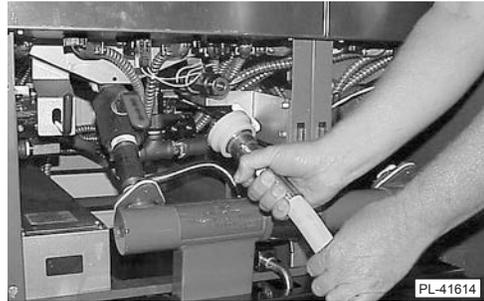


Fig. 11

3. While holding the discard hose at the base of the fitting, use your free hand to slide the collar away from the end of the female fitting (Fig. 12). Align the male and female parts of the quick disconnect line and push the hose onto the male connector discharge fitting. Release the collar. Pull the discharge hose away from the fryer to make sure discharge hose is fully inserted and locked.



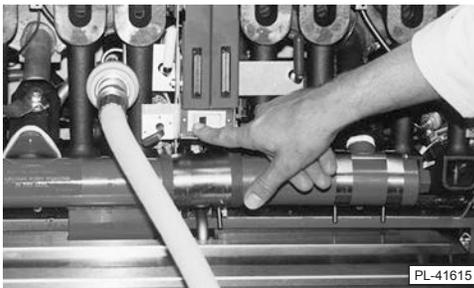
Gas Fryer



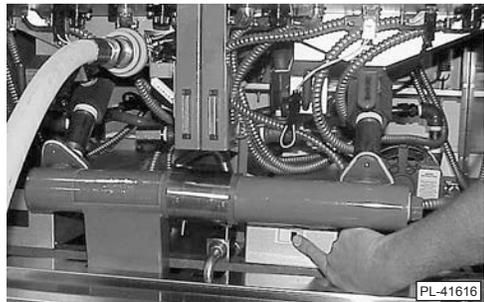
Electric Fryer

Fig. 12

4. Turn the filter power switch ON (Fig. 13).



Gas Fryer



Electric Fryer

Fig. 13

5. Place the nozzle in a suitable discharge container. To start the pump, pull the white discard valve handle out (Fig. 14); the oil begins to flow through the discard hose. If the discharge container is not large enough for the entire amount, stop the pump by pushing in the white discard valve handle, empty the container and resume. When the last of the oil is in the discharge container, stop the pump by pushing in the white discard valve handle, turn the filter power switch OFF and disconnect the discharge hose (Fig. 15).

6. Clean the filter drawer following the instructions on page 10.

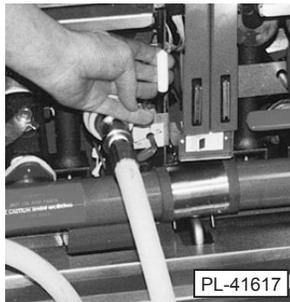


Fig. 14

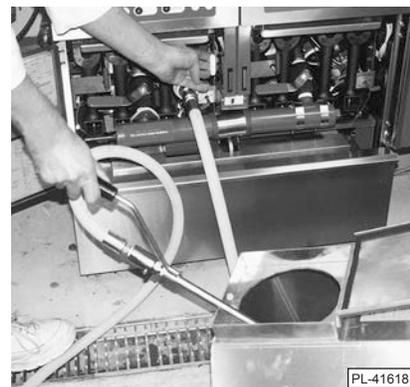


Fig. 15

MAINTENANCE

WARNING: HOT FRYING COMPOUND AND PARTS CAN CAUSE BURNS. USE CARE WHEN OPERATING, CLEANING OR SERVICING THE FRYER. USE CARE WHEN FILTERING.

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

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT/TAGOUT PROCEDURES.

CLEANING THE FILTER DRAWER

1. Pull the filter drawer out and remove the filter tank cover.
2. After filter parts have cooled, lift the filter tank out of the drawer (Fig. 16). Set the filter tank aside.
3. Lift the drawer from the drawer slides (Fig. 17) and set the drawer aside.
4. Lift the drawer slides up and off the slide guides (Fig. 18).
5. Carry the parts to the sink area for cleaning.
6. Remove the crumb basket from the filter tank.
7. Remove and disassemble the filter screen assembly for cleaning (Fig. 19). The top left side of the assembly has a metal latch and bar. Slide the metal latch off the bar. Lift the bar up to allow access to the internal filter.

NOTE: The filter screen assembly should be cleaned daily. The filter screen assembly parts may be placed in a dishwasher or cleaned using a sink spraydown hose with dish detergent. However, periodic fryer boil-out cleaning is recommended to remove thick grease residue on the filter screen assembly. This residue may hinder the filtration process. If you notice that the oil filter return time is taking longer than 4 minutes to complete the filter cycle, boil-out of the screen assembly is recommended. This can be performed as part of the normal fry tank boil-out procedure (see Fryer Boil-Out Instructions on page 11).

8. Wash all parts of the filter, including the drawer and drawer guides, in normal dishwashing detergent. All parts are dishwasher-safe and can be cleaned in a commercial dishwasher instead of by hand.
9. Rinse parts thoroughly and wipe dry with a clean cloth. All parts must be completely dried before reuse.
10. Reinstall all removed filter parts before operating the filter system.
11. The top cover must be replaced before operating this system.



Fig. 16



Fig. 17



Fig. 18



Fig. 19

FRYER BOIL-OUT INSTRUCTIONS

CAUTION: Do not run water or boil-out solution through the filter motor or pump. Do not use the filter during boil-out or cleaning of the fryer.

Before cleaning the fryer, read the entire cleaning instructions provided by the cleaning product's manufacturer. Some cleaners will require a boil-out procedure at boiling temperature, and some will not. If your cleaning product company calls for a boil-out procedure, follow their procedures after performing steps 1 through 5. If boil-out is required, but no procedures are stated, follow steps 1 through 23.

1. Turn off the fryer that is to be boiled out.
2. Remove and set aside the filter drawer assembly.
3. Drain all shortening from the fryer to be boiled out. Drain old shortening into a suitable disposal container and discard.
4. Remove the filter screen assembly from the filter drawer vessel and separate the screen into two parts (see page 10).
5. Place the two separated parts of the screen assembly into the fryer tank that is to be boiled out.
6. Following the cleaning instructions on page 10, clean the remaining drawer assembly parts.
7. Place a stock pot under the drain manifold opening (Fig. 20).
8. Close the drain valve and fill the fryer tank with hot water to the - **Max** - fill line.
9. Set the fryer thermostat to 210°F to 225°F (99°C to 107°C) and turn the fryer on.
10. Allow water to simmer.
11. Add boil-out solution and mix thoroughly. Do not boil solution. This may cause the fryer to boil over. Simmer water to dissolve solution completely and achieve the maximum cleaning benefit.
12. Allow the fryer to simmer for 10 to 15 minutes. Watch the fryer to make sure it does not boil over. During the boil-out process, scrub the tank using the cleaning brush provided with the fryer. To avoid damage to the tank finish, do not use a metal brush or scouring pad.
13. Turn the fryer off and allow the boil-out solution to remain in the fry tank for another 10 to 15 minutes. The hot boil-out solution will continue to break down oil residue at water temperatures as low as 180°F (82°C).
14. Open the drain valve.
15. Drain the boil-out compound into the stock pot below the drain manifold opening (Fig. 21). Monitor the contents of the stock pot. The full content of the fryer tank may not fit into the stock pot. If not, close the drain valve when the stock pot is almost full and discard the boil-out solution.
16. Replace the emptied stock pot below the drain manifold opening, and repeat steps 14 and 15 as many times as needed.
17. Close the drain valve and fill the tank with clean, hot water to the - **Max** - fill line; drain and discard as in steps 14 and 15.



Fig. 20



Fig. 21

18. After rinsing the tank, close the drain valve and refill the tank with hot water to the - **Max** - fill line.
19. Add 1 cup (0.2 L) of vinegar per 20 lb (9 kg) of fryer capacity to neutralize any caustic ingredients remaining from the boil-out solution.
20. Turn the fryer on and slow boil for a few minutes with the thermostat set at 210°F to 225°F (99°C to 107°C).
21. Turn the fryer off and drain the tank (see steps 14 and 15).
22. Close the drain valve and rinse the tank again with hot water.
23. Drain fryer tank (see steps 14 and 15) and remove. Dry and reassemble the filter screen assembly. Thoroughly dry the fryer tank. Close the drain valve. Reinstall the entire filter drawer assembly to the fryer. Fill the tank to the - **Min** - fill line with fresh oil or shortening.

TROUBLESHOOTING

NOTE: If using solid shortening, after all filtered oil has been returned to the fryer tank and the filter power switch is off, open the filter drawer approximately 1 inch. This allows the remaining shortening in the line to drain into the filter tank to prevent possible clogging as the shortening cools and solidifies.

SYMPTOM	POSSIBLE CAUSE	SUGGESTED CORRECTIVE ACTION
Oil not filtering or discarding; pump motor is on.	<ol style="list-style-type: none"> 1. Drawer not closed all the way. 2. Filter screen is plugged. 3. Clog in filter system line(s). 4. Shortening is below 300°F (149°C) and too thick. 5. Mechanical problem with return or discard valve. 6. Pump is inoperative. 7. Discard hose connection not fully engaged. 	<ol style="list-style-type: none"> 1. Close the drawer. 2. Clean filter screen. 3. Call service. 4. Increase temperature above 300°F (149°C). 5. Call service. 6. Call service. 7. Remove and reconnect the hose.
Pump motor is not running.	<ol style="list-style-type: none"> 1. Check 120 V power connection. 2. Filter power switch is not turned on. 3. Discard valve handle is not extended. 4. Pump motor not working. 	<ol style="list-style-type: none"> 1. Plug unit into 120 V receptacle. 2. Turn switch on. 3. Pull out discard valve handle. 4. Call service.

SERVICE

Contact your local Vulcan Service Office for any repairs or adjustments needed on this equipment.



DONE TO PERFECTION.

INSTALLATION & OPERATIONAL MANUAL



1GR45M Shown

GRM SERIES GAS FRYERS

MODELS:

1GR35M	ML-136407
1GR45M	ML-136408
1GR65M	ML-136409
1GR85M	ML-136410

For additional information on Vulcan-Hart or to locate an authorized parts and service provider in your area, visit our website at www.vulcanequipment.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 THE 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.**

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INTRODUCTION

GENERAL

Vulcan Fryers are produced with quality workmanship and material. Proper installation, usage and maintenance will result in years of satisfactory performance.

Before installing the fryer, thoroughly read this manual and carefully follow all instructions.

This manual is applicable to model listed on the cover page. Procedures in this manual will apply to all models unless specified. Pictures and illustrations can be of any model unless the picture or illustration needs to be model specific.

ORDERING PARTS

Customers may order parts directly from their local authorized service center. If not known, call Vulcan Customer Service at 800-814-7028.

To speed up your order, provide the model number, serial number, gas type, part needed, item part number (if known) and quantity needed.

FRYER CAPACITY				
MODEL	# of Heat Tubes Each Fry Tank	BTU / Hour Each Fry Tank	Width Inch (cm) Total System	Shortening lbs. (kg) Each Fry Tank
1GR35M	3	90,000	15.5" (39)	35-40 (16-18)
1GR45M	4	120,000	15.5" (39)	45-50 (21-23)
1GR65M	5	150,000	21.0" (53)	65-70 (29-32)
1GR85M	5	150,000	21.0" (53)	85-90 (39-41)

UNPACKING

This fryer was inspected before leaving the factory. The carrier assumes full responsibility for the safe delivery upon acceptance of the shipment. Check for possible shipping damage immediately after receipt.

If the fryer is found to be damaged, complete the following steps:

1. Carrier must be notified within 5 business days of receipt.
2. Carrier's local terminal must be notified immediately upon discovery (note time, date, and who was spoken to), and follow up and confirm with written or electronic communication.
3. All original packing materials must be kept for inspection purposes.
4. The fryer cannot have been moved, installed, or modified.
5. Notify Vulcan Customer Service immediately at 800-814-2028.

Check that the following have been included:

- ◆ Crumb Rack
- ◆ Basket Hanger
- ◆ Twin Fry Baskets (2)
- ◆ Tank Brush

GRM SERIES GAS FRYERS

- ◆ Adjustable Casters (4) two locking, two non-locking for freestanding fryers.
- ◆ Drain Pipe Extension for freestanding fryers only.
- ◆ Twin Fry Basket (2) per fry tank.
- ◆ Cleanout Rod
- ◆ Crumb Scoop
- ◆ Manual and Warranty – Retain for future reference.
- ◆

INSTALLATION

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

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. Make sure the fryer is configured for the proper elevation.

Record your fryer model, device, and serial numbers for future reference in the space provided below. This information can be found on the fryer data plate.

Fryer Model No: _____

Device: _____

Serial No: _____

Clearances

- ◆ Minimum clearance from combustible construction:
 - 6" (15 cm) from the sides of the fryer
 - 6" (15 cm) from the back of the fryer
 - The fryer may be installed on combustible floors
- ◆ Minimum clearance from noncombustible construction:
 - 0" from the sides of the fryer
 - 0" from the back of the fryer
- ◆ Between the fryer and any open-top flame units: 16" (41 cm)
- ◆ Allow space for servicing and operation.

Location

- ◆ Install fryer in an area with sufficient air supply for gas combustion at fryer burners.
- ◆ Do not obstruct the flow of combustion and ventilation air.
- ◆ Provide adequate clearance for air openings into the combustion chamber.
- ◆ Do not permit fans to blow directly onto fryer.

GRM SERIES GAS FRYERS

- ◆ Avoid wall-type fans, which create cross-currents within a room. Avoid open windows next to sides or back.

CODES AND STANDARDS

The fryer must be installed in accordance with:

In the United States:

- ◆ State and local codes, or in the absence of local codes, with:
- ◆ National Fuel Gas Code, ANSI-Z223.1/NFPA #54 (latest edition). Copies may be obtained from The American Gas Association Accredited Standards Committee Z223, @ 400 N. Capital St. NW, Washington, DC 20001 or the Secretary Standards Council, NFPA, 1 Batterymarch Park Quincy, MA 02169-7471.
- ◆ NFPA Standard #96 Vapor Removal from Cooking Equipment, latest edition, available from the National Fire Protection Association, Batterymarch Park, Quincy, MA.
- ◆ National Electrical Code, ANSI/NFPA-70 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA. 02169-7471.
- ◆ In the commonwealth of Massachusetts all gas appliances vented through a ventilation hood or exhaust system with a damper or with a power means of exhaust shall comply with 248 CMR.

In Canada:

- ◆ Local codes
- ◆ CAN/CSA-B149.1 Natural Gas and Propane Installation Code (latest edition), available from the Canadian Standards Association, 155 Queen Street, Suite 1300, Ottawa, Ontario Canada K1P 6L1.
- ◆ CSA C22.1 Canadian Electric Code (latest edition), available from the Canadian Standards Association, 155 Queen Street, Suite 1300, Ottawa, Ontario Canada K1P 6L1.

ASSEMBLY

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

FLUE CONNECTION

Make the flue connection as follows:

- ◆ 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.

- ◆ Locate the fryer under a hood with adequate connection to an exhaust duct. The hood must extend 6" (15 cm) beyond fryer on both sides.
- ◆ 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 gases from the appliance. Proper air balance should be maintained in the room.
- ◆ Ensure that your ventilation system does not cause a down draft at the fryer's flue opening. Down draft will not allow the fryer to exhaust properly and will cause overheating which may cause permanent damage. Damage caused by down draft will not be covered under equipment warranty. Never allow anything to obstruct the flue or ventilation exiting from the fryer flue. Do not put anything on top of flue area.

GAS CONNECTION

⚠ WARNING 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 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 ½" (12.7 mm) iron pipe. If using the optional quick-disconnect flex hose, ¾" (19 mm) iron pipe.

Make sure the pipes are clean and free of obstructions, dirt, and piping compound. A battery requires one or two connections of appropriate size 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 (ALL MODELS):

The gas pressure should be set at 4" W.C. (Water Column) (0.8 kPa) for natural gas and 10" W.C. (2.75 kPa) for propane gas. If incoming pressure exceeds ½ PSI (3.45 kPa), an additional pressure regulator must be installed.

TESTING THE GAS SUPPLY PIPING SYSTEM:

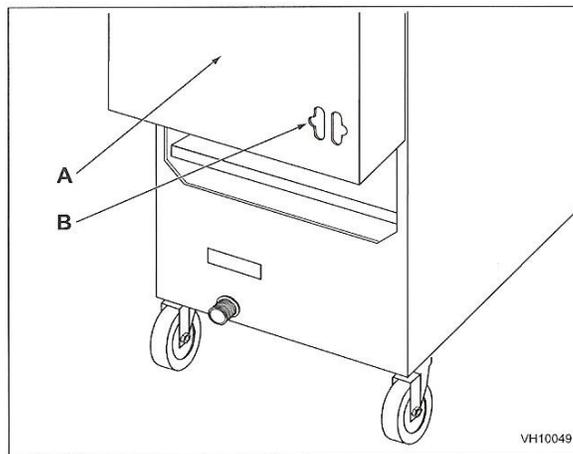
When test pressures exceed ½ PSI (3.45 kPa), the fryer and its individual shutoff valve must be disconnected from the gas supply piping system.

When test pressures are ½ PSI (3.45 kPa) or less, the fryer must be isolated from the gas supply piping system by closing its individual shutoff valve.

Fryers with Casters:

Separate instructions for installing casters are included with the casters:

- ◆ The installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69, 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 CSA 6.9 or Quick-Disconnect Devices for Use with Gas Fuel,
- ◆ When installing a quick disconnect you must also install a means for limiting the movement of the fryer. This device will prevent the gas line or quick disconnect from being strained. The restraining device should be attached to the cutout on the back panel. See illustration for location.



A Rear of Fryer
B Strain Relief Chain Connection
(Chain supplied by others)

- ◆ The fryer must be installed with a connector (not supplied by Vulcan) complying with the above codes.
- ◆ The fryer must be installed with restraining means to guard against transmission of strain to the connector. See illustration.
- ◆ The fryer must be installed with the casters provided.

- ◆ If the restraint is ever to be disconnected, first turn the gas supply off. If disconnection of the restraint is necessary, to reconnect this restraint after the fryer has been returned to its originally installed position.

LEVELING THE FRYER

Check the level of the fryer by placing a level on top of the fryer after gas connections have been made.

Ensure that the fryer is level front-to-back and side-to-side in the final installed position.

Lock the wheels after unit is level.

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.

▲ WARNING Fryer is not to be used during a power outage

OVER-TEMPERATURE SHUTDOWN

If the shortening becomes overheated, a high-temperature shutoff device will turn the gas valve off and extinguish the pilot.

If the fryer shuts down due to overheating, DO NOT relight the pilot until the shortening temperature is below 300 F (149 C).

If an overheating situation persists, contact your local Vulcan-Hart authorized service office.

BEFORE FIRST USE

Cleaning

New units are wiped down at the factory to remove any visible signs of dirt, oil, grease, etc. remaining from the manufacturing process.

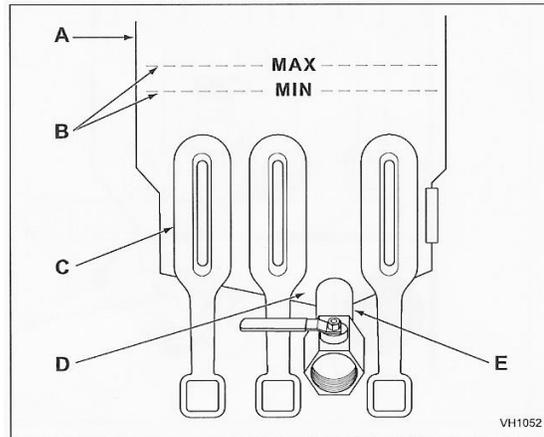
Before any food preparation, thoroughly wash the protective oil from all surface parts and the tank interior with hot soapy water to remove any film residue and dust or debris.

NOTICE Do not use chlorine or sulfate/sulfide cleaners.

- ◆ Wash any accessories shipped with unit.
- ◆ Rinse fryer and accessories thoroughly and drain the fryer.
- ◆ Wipe tank completely dry with a soft, clean cloth.

FILLING TANK WITH SHORTENING

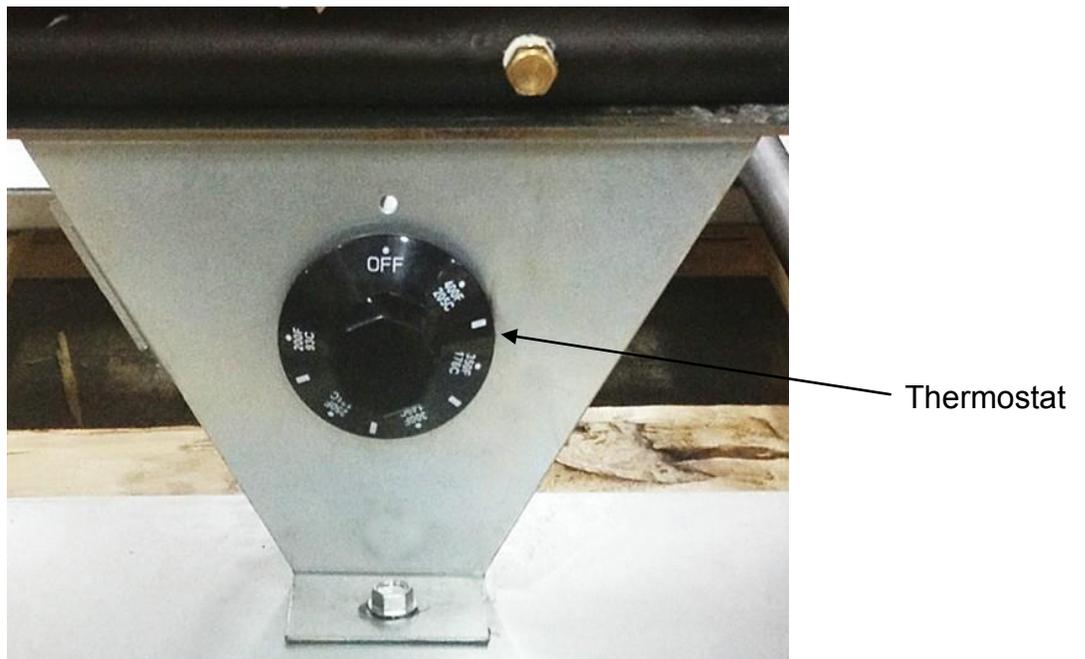
NOTICE Solid shortening must NOT be used with GRM fryers. Melting solid shortening will damage the tank and void your warranty.



- A Fryer Tank
- B MIN and MAX Fill Level Lines
- C Heat Pipes
- D Cold Zone
- E Drain Pipe

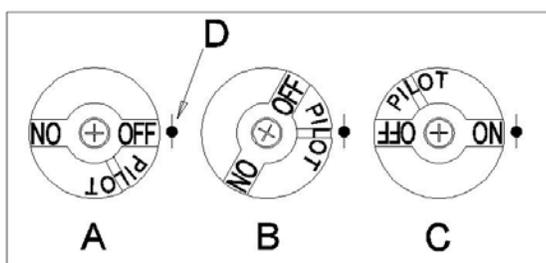
- ◆ Close the drain valve.
- ◆ Fill the fryer tank with liquid shortening.
- ◆ Shortening level should be between the min and max lines in the fryer tank.
- ◆ Shortening will expand when heated. Do not fill the fryer tank past the MAX line.
- ◆ Add fresh shortening as needed to maintain oil level.

LIGHTING THE PILOT



GRM SERIES GAS FRYERS

1. Open the door.
2. Make sure that thermostat is set to OFF. The thermostat is located behind the door.
3. Push the gas control valve knob and turn to OFF (see figure below, view A). 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

TURNING ON THE FRYER

- ◆ Set the temperature knob to desired temperature.
- ◆ After the set temperature has been reached, the thermostat shuts off the gas flow to burners.
- ◆ The pilot remains lit. The burners will cycle on and off, maintaining the set temperature.

TURNING OFF THE FRYER

1. Turn the thermostat OFF.
2. To keep the pilot lit, turn the gas valve to “L” in Pilot.
3. To shut off all gas to the system, including the pilot, turn the gas valve knob to the OFF position.

EXTENDED SHUTDOWN

1. Turn the thermostat knob to OFF.
2. Push in the pilot knob and turn to OFF.
3. Thoroughly drain the fryer. Refer to DRAINING THE FRYER.
4. Clean the fryer according to CLEANING.
5. Turn off the main gas shutoff valve.

BASIC FRYING INSTRUCTION

- ◆ Set the desired temperature and allow shortening to heat up to that temperature.
- ◆ Fry items that are the same size to ensure equal doneness.
- ◆ Drain or wipe dry raw or wet foods to minimize splatter when lowering into hot shortening.
- ◆ Add fresh shortening as needed.

Fry Basket Guidelines

- ◆ Do not overfill baskets. (See table for recommended basket capacities below) Carefully lower basket into oil.
- ◆ When frying doughnuts and fritters, turn product only once during frying.
- ◆ When cooking French fries or onion rings, shake the basket several times.
- ◆ Batter-covered foods should be dropped carefully, one by one, into shortening or basket. If you use the basket, first dip the basket into the shortening to reduce batter-build up on basket surfaces.
- ◆ When frying is completed, remove basket or product. Hang basket on rear hanger.

Fry Basket Capacity:

1GR35M: Recommended pounds per basket are 1.5 lbs. (0.7 kg).

1GR45M: Recommended pounds per basket are 2.5 lbs. (1.1 kg).

1GR65M: Recommended pounds per basket are 3.0 lbs. (1.4 kg).

1GR85M: Recommended pounds per basket are 3.5 lbs. (1.6 kg).

EXTENDING SHORTENING LIFE

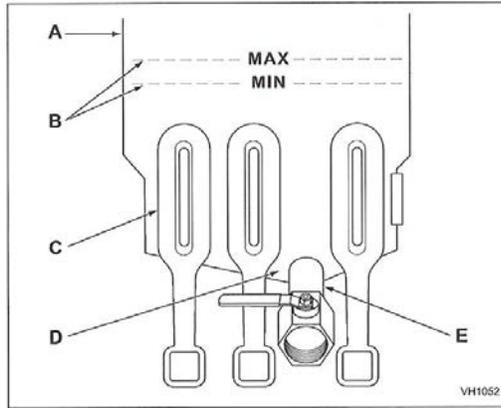
Shortening life can be extended by the following guidelines:

- ◆ 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 surrounding clean. Use tank covers when not in use. (accessory).
- ◆ Set thermostat correctly.
- ◆ Remove excess moisture and particles from food products before placing on fryer.
- ◆ Use a fitted tank cover (accessory) to keep oil covered from light and oxygen

DRAINING THE OIL

▲ WARNING Hot oil and hot parts can cause burns. Use care when operating, cleaning, and servicing the fryer.

1. Turn the thermostat knob to the OFF position. .
2. Insert the drain extension into the drain valve. Tighten only hand tight.
3. Direct the drain extension into the mobile filtering device that you want to use.
4. Slowly open the drain valve to allow oil to flow from the fry tank to the filter pan. Then open the drain valve all the way.
5. When fry tank is empty use the tank brush to remove any additional debris.
6. Close the drain valve.
7. Fill tank with new shortening. Fill to a minimum of the MIN level but no higher than halfway between MIN and MAX. Oil will expand as it is heated.
8. After the fry tank is filled with new oil, turn the thermostat knob to the desired set temperature. The burners will come on and will heat the oil.



- A Fryer Tank
- B MIN and MAX Fill Level Lines
- C Heat Pipes
- D Cold Zone
- E Drain Pipe

CLEANING

⚠ WARNING Hot oil and hot parts can cause burns. Use care when operating, cleaning, and servicing the fryer.

Daily

Clean your fryer regularly with the tank brush along with a damp cloth, and polish with a soft dry cloth. If regular cleaning is neglected, grease will be burned on and discolorations may form.

Fingerprints are sometimes a problem on highly polished surfaces of stainless steel. They can be minimized by applying a cleaner that will leave a thin oily or waxy film.

- ◆ Clean all exterior surfaces of your fryer at least once daily.
- ◆ Use a damp cloth with warm water and a mild soap or detergent.

NOTICE Do not use chlorine or sulfate/sulfide cleaners.

- ◆ Rinse thoroughly, and 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, non-metallic scouring pad for particularly stubborn discolorations.
- ◆ Always rub with the grain of the stainless steel.
- ◆ Do not use a metallic scoring pad or harsh cleaners.

BOIL OUT PROCEDURE

Weekly or as required:

1. Drain the tank as described under DRAINING THE TANK.
2. Once the shortening has been drained, flush out scraps and sediment using the provided tank brush.
3. Close the drain valve and fill tank water. Use a low foaming cleaner/degreaser to clean the fry tank. Follow the instructions on the side of the package.

NOTICE Do not use chlorine or sulfate/sulfide cleaners.

4. Solution level must be between the MIN and MAX levels on the fryer tank.
5. Set the temperature knob to 200°F or for the recommended solution being used. Allow solution to simmer for about 15 to 20 minutes.
6. Drain the cleaning solution from the tank.
7. Close the drain valve and refill the tank with water. Add 1 cup (1/4 L) of vinegar to neutralize alkaline left by the cleaner. Solution level must be between the MIN and MAX level on the fryer tank.
8. Bring the solution to a simmer only, turn the thermostat off. Allow to stand for a few minutes.
9. Drain the tank according to DRAINING THE TANK. Rinse thoroughly with clear, hot water. All traces of cleaner must be removed. Dry the tank thoroughly.
10. Close the drain valve and add shortening. Follow the FILLING TANK WITH SHORTENING procedure in this manual. The fryer is now ready for use.

MAINTENANCE

⚠ WARNING Hot oil and hot parts can cause burns. Use care when operating, cleaning, and servicing the fryer.

⚠ WARNING Spilling hot fryer compound can cause severe burns. Do not move fryer without draining all frying compound from the tank.

FLUE VENT INSPECTION

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

Service in the US and Canada

Check www.vulcanequipment.com for the closest service office.

Troubleshooting Chart:	
Problem:	Probable Cause:
No Heat:	Thermostat dial not turned on. Pilot not lit. Gas supply not turned on. Wire connections loose (call service) Wires connections need cleaning (call service) Thermopile (call service)
Insufficient or too much heat:	Thermostat dial not set to desired temperature. High limit tripped (call service) Temperature probe (call service)
Tank will not drain:	Shortening too cold. Drain pipe clogged with debris.

LIMITED ORIGINAL COMMERCIAL EQUIPMENT WARRANTY FOR THE GRM SERIES GAS FRYERS

Vulcan warrants the GRM Gas Fryer to be free of defects in materials and workmanship for a period of 1 year from the date of original installation.

This Warranty is subject to the following conditions and limitations:

1. This warranty is limited to product(s) sold by Vulcan to the original user in the continental United States and Canada.
2. Original installation must occur within 18 months of date of manufacture, and proof of the installation must be provided to Superior / Vulcan.
3. The liability of Vulcan is limited to the repair or replacement of any part found to be defective.
4. Vulcan will bear normal labor charges incurred in the repair or replacement of a warranted piece of equipment within 50 miles (80 kilometers) of an authorized service agency. Time and travel charges in excess of 50 miles (80 kilometers) will be the responsibility of the person or firm requesting the service.
5. This warranty does not apply to any product(s) which have not been installed in accordance with the directions published in the appropriate installation and operation manuals. Vulcan will bear no responsibility or liability for any product(s) which have been mishandled, abused, misapplied, misused, subject to harsh chemical action, (chlorinated or sulfate products), or poor water quality, field modified by unauthorized personnel, damaged by flood, fire, or other acts of nature, or which have altered or missing serial numbers.
6. Vulcan does not recommend or authorize the use of any product(s) in a non-commercial application, including but not limited to residential use. The use or installation of product(s) in non-commercial applications renders all warranties, expressed or implied, including the warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE, null and void, including any responsibility for damage, cost and legal actions resulting from the use or installation of product(s) in any non-commercial setting.
7. Adjustments such as calibrations, leveling, tightening of fasteners or utility connections normally associated with original installation are the responsibility of the installer and not that of Superior / Vulcan.
8. Exception to the 1 year warranty period is as listed:
Fry Tanks: If tank is found to be leaking within the first two years of operation from date of installation and verified by an authorized service agency, the fry tank will be replaced at no charge including labor, travel, freight, and mileage. Fry tanks found to be leaking that are over 2 years and under 5 years, 25% of the current selling fry tank price, plus labor, freight and mileage will be the responsibility of the person or firm requesting the service. Fry tanks found to be leaking that are over 5 years and under 8 years, 50% of the current selling fry tank price, plus labor, freight and mileage will be the responsibility of the person or firm requesting the service. Fry tanks found to be leaking that are over 8 years and under 10 years, 75% of the current selling fry tank price, plus labor, freight and mileage will be the responsibility of the person or firm requesting the service. After 10 years – no fry tank part warranty will be provided.
9. Original purchased replacement parts manufactured by Vulcan will be warranted for 90 days from the parts invoice date. This warranty is for parts cost only, and does not include freight or labor charges. Exceptions are stainless steel fry tanks which will be warranted as stated in item 8.
10. This states the exclusive remedy against Vulcan relating to the product(s), whether in contract or in tort or under any other legal theory, and whether arising out of warranties, representations, instructions, installations or defects from any cause. Vulcan shall not be liable, under any legal theory, for loss of use, revenue or profit, or for substituted use or performance, or for incidental, indirect, or special or consequential damages or for any other loss of cost of similar type.
11. THIS WARRANTY AND THE LIABILITIES SET FORTH HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OF THEIR LIABILITIES AND WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE AND CONSTITUTES THE ONLY WARRANTY OF VULCAN WITH RESPECT TO THE PRODUCT(S).

F-32911 (Rev. 5/13)



EXTENDED SHUTDOWN & RESTART OF YOUR VULCAN COOKING EQUIPMENT

Following you will find instructions on how to shut down your Vulcan cooking equipment for an extended period, and how to safely restart equipment after idle.

Always refer to the procedures as instructed in the Installation & Operation manual for your specific model. Manuals may be found by visiting the Vulcan website and clicking on RESOURCES at the top right of the home page.

Always remember that cooking equipment and its parts are hot. Use care when operating, cleaning or performing maintenance.

For additional product resources, please visit <https://www.vulcanequipment.com/>.

GAS & ELECTRIC FRYERS

EXTENDED SHUTDOWN – LG, VEG, GR GAS FRYERS

1. Turn the thermostat knob to off.
2. Thoroughly drain the fryer according to instructions outlined in “draining the fryer” section.
3. Clean the fryer according to instructions outlined in “cleaning” section.
4. Push in the pilot knob and turn to off.
5. Turn off the main gas shutoff valve.

EXTENDED SHUTDOWN – POWERFRY GAS FRYERS

1. Thoroughly drain the fryer. Refer to instructions outlined in “draining the fryer” section.
2. Clean the fryer according to instructions outlined in “cleaning” section.
3. Push power switch to the off position
4. Turn off the main gas shutoff valve.

EXTENDED SHUTDOWN – ER ELECTRIC FRYERS

1. Open the door to the fryer.
2. Press the power switch to the off position.
3. Thoroughly drain the fryer according to instructions outlined in “draining the fryer” section.
4. Clean the fryer according to instructions outlined in “cleaning” section.
5. Turn off the main electric circuit breaker to fryer.



Model 1VEG35M
Shown with accessory casters



GAS & ELECTRIC FRYERS (CONTINUED)

DRAINING THE TANK – FREESTANDING FRYERS WITHOUT FILTRATION

1. Turn off fryer.
2. Insert the drain extension into the drain valve. Tighten only hand tight.
3. Direct the drain spout into the container that you want to drain the shortening into.
4. Open the drain valve. The oil will drain into the container. When the container is full or the fryer tank is empty, close the drain valve. Repeat this step until the fryer is empty. Remove the drain extension and place it back into the provided holder.

DRAINING THE TANK – FRYERS WITH BUILT-IN FILTRATION

Fryers with Millivolt (M) controls:

1. Turn thermostat knob to off position.
2. Open drain valve and allow oil to drain into filter pan.
3. Close drain valve.
4. Attach high temperature hose to male quick disconnect.
5. Place nozzle end into a discard container.
6. Pull lever to turn on motor/pump.
7. Once oil is drained from filter pan push lever in to turn off motor/pump.

Fryers with Analog (A) Controls:

1. Do not turn off power.
2. Open drain valve and allow oil to drain into filter pan.
3. Close drain valve.
4. Discard oil using flush/discard hose. Make sure that the vertical filter switch is on discard.
5. Place nozzle end into a discard container.
6. Press filter switch on control panel to turn on motor/pump.
7. Once oil is drained from filter pan press filter switch to turn off motor/pump.
8. Press filter switch to flush/ filter and not discard.

Fryers with Digital (D) or Computer (C) Controls:

1. Do not turn off power.
2. Open drain valve and allow oil to drain into filter pan.
3. Close drain valve.
4. Discard oil using flush/discard hose. Make sure that the vertical filter switch is on discard.
5. Place nozzle end into a discard container.
6. Pull lever to turn on motor/pump.
7. Press filter switch on control panel to turn on motor/pump. Hold for at least 3 seconds.
8. Once oil is drained from filter pan press filter switch to turn off motor/pump.



GAS & ELECTRIC FRYERS (CONTINUED)

CLEANING

1. Clean your fryer regularly with the tank brush along with a damp cloth, and polish with a soft dry cloth. If regular cleaning is neglected, grease will be burned on and discolorations may form.
 - a. Fingerprints are sometimes a problem on highly polished surfaces of stainless steel. They can be minimized by applying a cleaner that will leave a thin oily or waxy film.
2. Clean all exterior surfaces of your fryer at least once daily.
3. Use a damp cloth with warm water and a mild soap or detergent.
 - a. Do not use chlorine or sulfate/sulfide cleaners.
4. Rinse thoroughly, and then dry with a soft dry cloth.
5. 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.
6. Remove discolorations by washing with any detergent or soap and water.
7. Use a self-soaping, non-metallic scouring pad for particularly stubborn discolorations.
8. Always rub with the grain of the stainless steel.
 - a. Do not use a metallic scoring pad or harsh cleaners.
9. Air Filter Cleaning (VK fryers only): The air filter needs to be cleaned at least once every three months. Pull the air filter off and clean in a dishwasher or by hand. Dry thoroughly before replacing it into position. There is no need to tighten the band clamp with tools.

RESTART FROM EXTENDED SHUTDOWN – ALL MODELS

1. Schedule a qualified gas service technician to be onsite upon restart if kitchen has been down for more than 30 days.
 - a. Check all gas equipment in kitchen for gas leaks.
2. Perform a boil-out as instructed in the Installation & Operation manual for your specific model.
3. Perform the BEFORE FIRST USE cleaning instructions as instructed in the Installation & Operation manual for your specific model.
4. Fill the fry tank with oil and start fryer per the instructions of your model Installation & Operation manual guidelines.



GR35 SHOWN

GR SERIES GAS FRYERS WITH MILLIVOLT CONTROLS

MODEL	ML	MODEL	ML
GR25	126988	GR35F	126998
GR35	126989	GR45F	126999
GR45	126990	GR65F	135534
GR65	126991	GR85F	135535
GR85	126992		

- NOTICE -

This Manual is prepared for the use of trained Vulcan Service Technicians and should not be used by those not properly qualified. If you have attended a Vulcan Service School for this product, you may be qualified to perform all the procedures described in this manual.

This manual is not intended to be all encompassing. If you have not attended a Vulcan Service School for this product, you should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should be performed by a trained Vulcan Service Technician.

Reproduction or other use of this Manual, without the express written consent of Vulcan, is prohibited.

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

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GENERAL

INTRODUCTION

This Service Manual covers specific service information related to the models listed on the front cover.

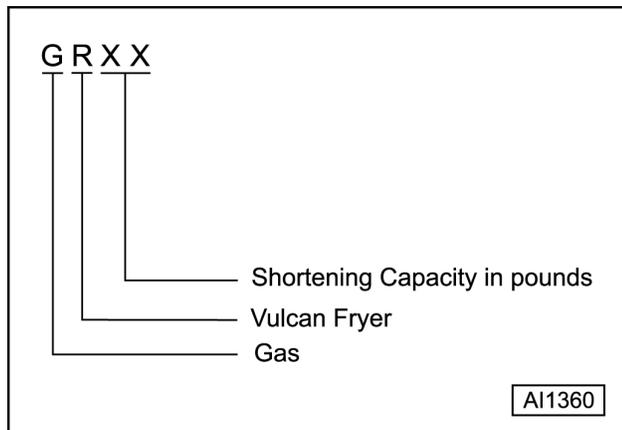
SINGLE FLOOR MODEL OR BATTERY FRYERS

Fryers with the Filter-Ready option installed, use the Mobile Filter. For service information related to the Mobile Filter, refer to F24599 MOBILE FILTERS. Filter-Ready fryers are available as single floor models only.

The information in the GR Series Service Manual also applies to Non-Filter Ready fryers. Non-Filter Ready fryers are available in batteries of two to six.

An RO Frymate (dump station) can be configured in a battery with fryers 15 1/2" or 21" in width.

Model Designations



Models and Features

MODEL	FEATURES			
	FRYER WIDTH (INCHES)	SHORTENING CAPACITY (POUNDS)	FRY TANK	COOKING CONTROL
GR25 ¹	10 1/2	25-30	Full	Thermostat
GR35	15 1/2	35-40	Full	Thermostat
GR45	15 1/2	45-50	Full	Thermostat
GR65	21	65-70	Full	Thermostat
GR85	21	85-90	Full	Thermostat
RO15 (Frymate)	15 1/2			
RO21 (Frymate)	21			
RO21S (Frymate)	21			
NOTE:	1. Available in battery configurations only.			

KLEENSCREEN FILTERING SYSTEM

The new Kleenscreen filtering system has been integrated into the GR Series fryer battery. The filter is housed in a pull-out drawer assembly at the base of the fryer. The filtering components in the drawer include a stainless steel filter tank, crumb-catch basket and a dual element mesh filter screen. With the filter drawer closed, a self-seating oil return line provides the path to return the filtered oil to the fry tank.

This system is designed to provide a thorough and easy method for filtering shortening.

Some of the benefits include:

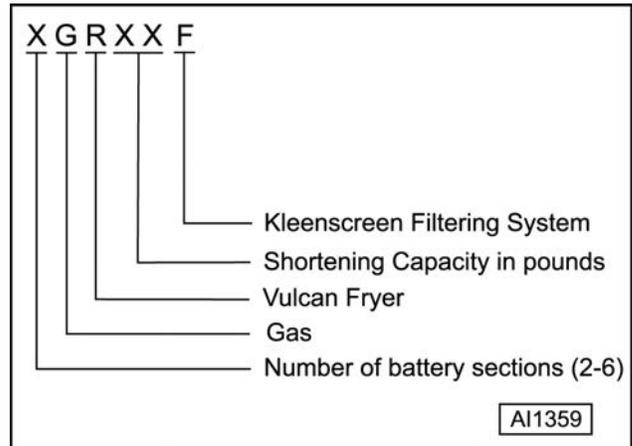
- Self-contained system eliminating the use of external filter equipment.
- Paperless filtering system.
- Easy to clean and low maintenance.

The Kleenscreen fryer battery still utilizes many of the same components as the single floor model and Non-Filter ready battery fryers.

Kleenscreen fryer batteries are available in a minimum of two and a maximum of six fryer sections. The fryer size of each section is identical.

An RO Frymate (dump station) can also be included as one or more of the sections.

Model Designations



Models and Features

MODEL	FEATURES				
	FRYER WIDTH (INCHES)	SHORTENING CAPACITY PER FRYER (POUNDS)	KLEENSCREEN FILTER PAN CAPACITY (POUNDS)	FRY TANK	COOKING CONTROL
2GR35F ¹	31	35-40	80	Full	Thermostat
2GR45F ¹	31	45-50	80	Full	Thermostat
2GR65F ²	42	65-70	130	Full	Thermostat
2GR85F ²	42	85-90	130	Full	Thermostat
RO15 (Frymate)	15 1/2				
RO21 (Frymate)	21				
RO21S (Frymate)	21				
NOTES:	1. For each additional fryer section, add 15 1/2" to the width. 2. For each additional fryer section, add 21" to the width.				

SPECIFICATIONS

Electrical

- 120VAC supply for Filter-Ready fryers and Kleenscreen filter models only. The filter pump motor draws approximately 5 amps.

Gas Pressures

Manifold (per fryer section):

- Natural - 4" W.C.
- Propane - 10" W.C.

Building supply pressure (Min):

- Natural - 5" W.C. (7" W.C. battery units)
- Propane - 11" W.C. (12" W.C. battery units)

NOTE: Propane or Natural gases -14" W.C. (Max).

Input BTU Rating

GR SERIES	NO. OF TUBES	BTU/HR/SECTION
GR25, GR25F	2	60,000
GR35, GR35F	3	90,000
GR45, GR45F	4	120,000
GR65, GR65F	5	150,000
GR85, GR85F	5	150,000

TOOLS

Standard

- Standard set of hand tools.
- VOM with AC current tester.
NOTE: Any quality VOM with a sensitivity of 20,000 ohms per volt can be used.
- Temperature tester (thermocouple type).
- U-Tube Manometer.
- Pipe joint compound suitable for use with propane gas.

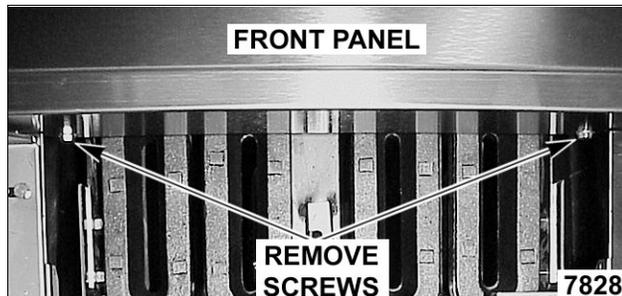
REMOVAL AND REPLACEMENT OF PARTS

FRONT PANEL



WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

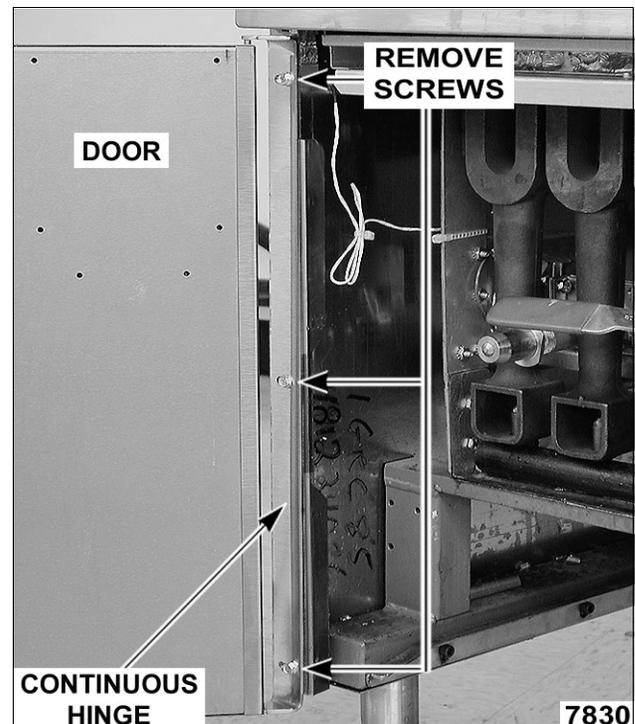
1. Open fryer door and remove screws from front panel.



2. Lift front panel from fryer.
3. Reverse procedure to install.

DOOR

1. Open the fryer door and remove screws securing hinge & door assembly to fryer.



2. When replacing door, install screws and tighten top and bottom screws enough to hold door in place.
3. Close door, check alignment and adjust if necessary.
4. Finish tightening screws to fully secure.

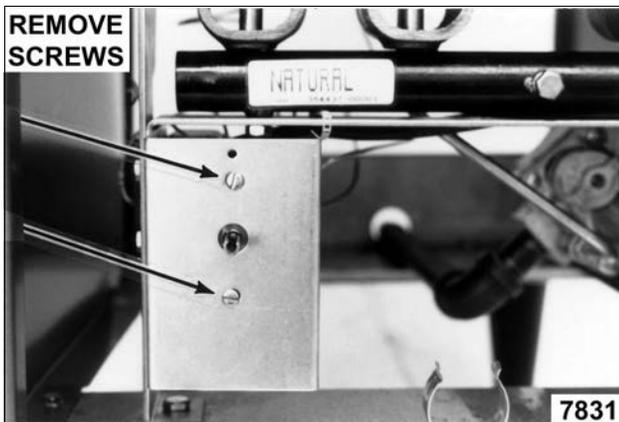
CONTROL THERMOSTAT



WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

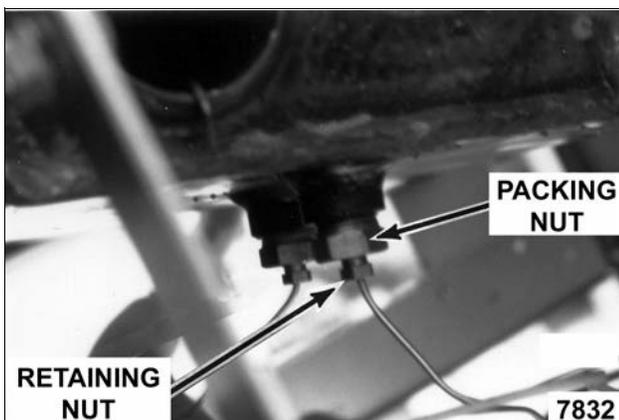
CAUTION: Do not sharply bend and kink the capillary tube or damage may occur.

1. Drain shortening from fry tank.
2. Remove burners (as necessary) as outlined under MAIN BURNERS.
3. Remove knob from control thermostat shaft then remove control thermostat from mounting bracket.

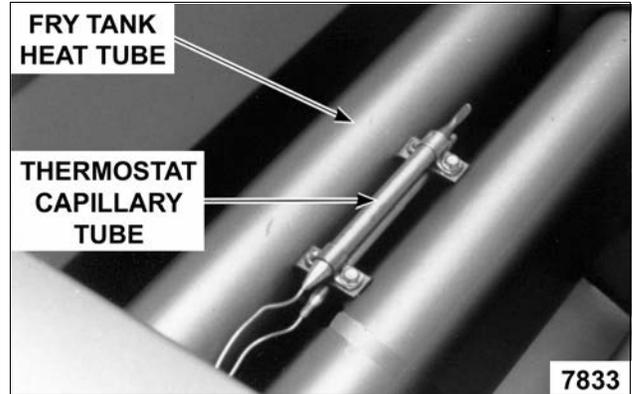


NON FILTER READY SHOWN

4. Disconnect lead wires from control thermostat.
5. Remove the capillary tube retaining and packing nuts, from the bottom of fry tank.



6. Remove screws securing capillary tube mounting clips to the fry tank heat tube then remove capillary tube.



7. Reverse procedure to install and check for proper operation.

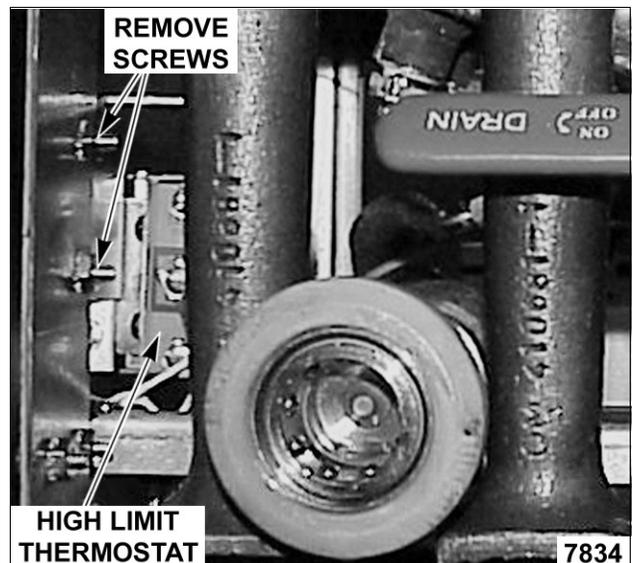
HIGH LIMIT THERMOSTAT



WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

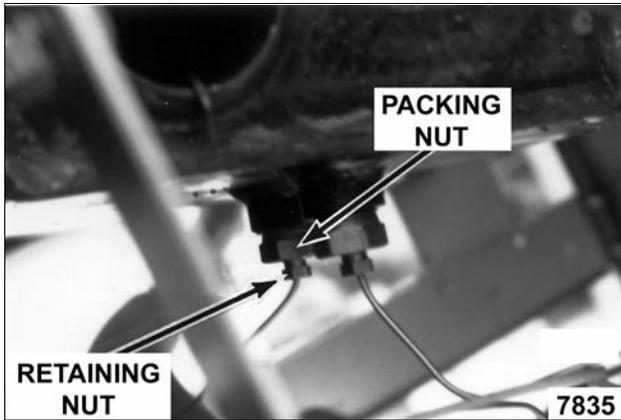
CAUTION: Do not sharply bend and kink the capillary tube or damage may occur.

1. Drain shortening from fry tank.
2. Remove burners (as necessary) as outlined under MAIN BURNERS.
3. Remove screws securing the high limit thermostat to mounting bracket.

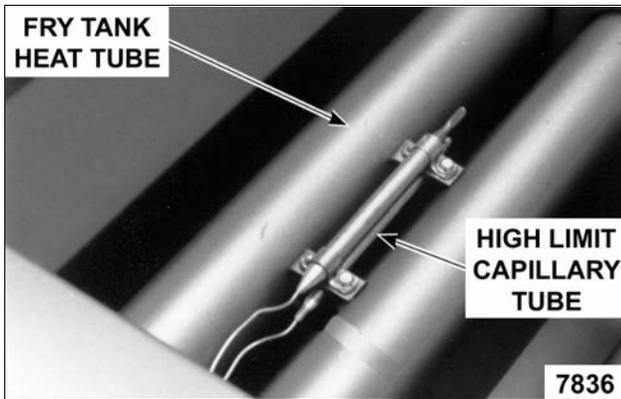


4. Disconnect lead wires from high limit thermostat.

- Remove the capillary tube retaining and packing nuts, from the bottom of fry tank.



- Remove screws securing capillary tube mounting clips to the fry tank heat tube then remove capillary tube.



- Reverse procedure to install.

MAIN BURNERS

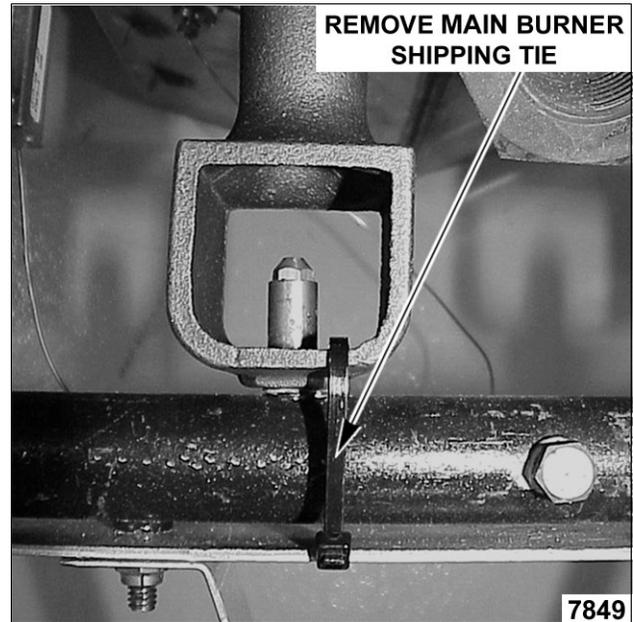


WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

WARNING: SHUT OFF THE GAS BEFORE SERVICING THE UNIT.

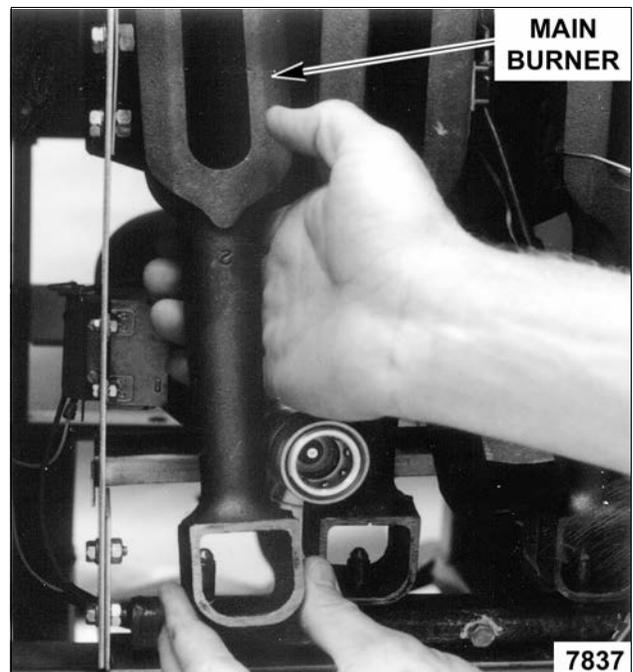
- Open fryer door.
- Remove main burner shipping ties (if installed).

NOTE: All shipping ties should be removed during installation. Do not replace for normal operation.

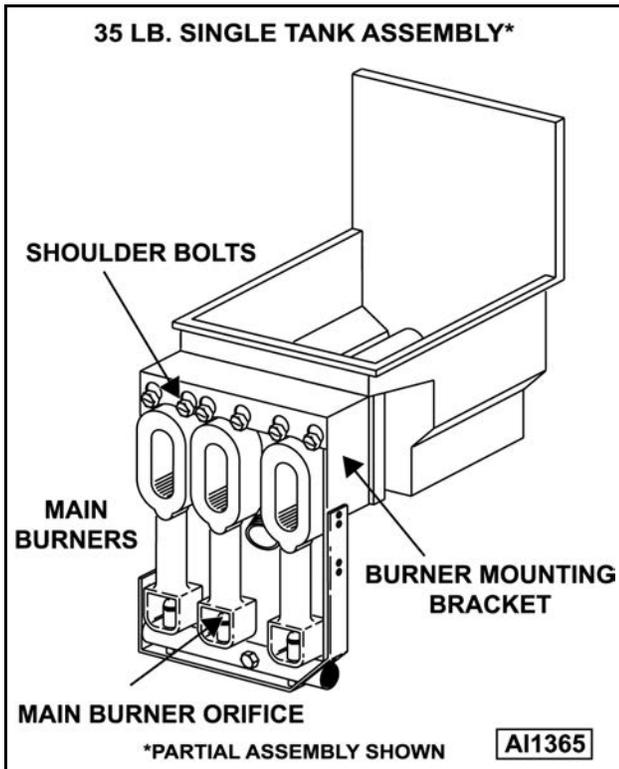


- Lift main burner up and tilt the top of burner toward fry tank until it clears the gas orifice at the bottom.

A. Lift main burner from fryer.



NOTE: The main burners mount to the fryers' burner mounting bracket by shoulder bolts that rest in the keyway slot.



4. Reverse procedure to install.

MAIN BURNER ORIFICE

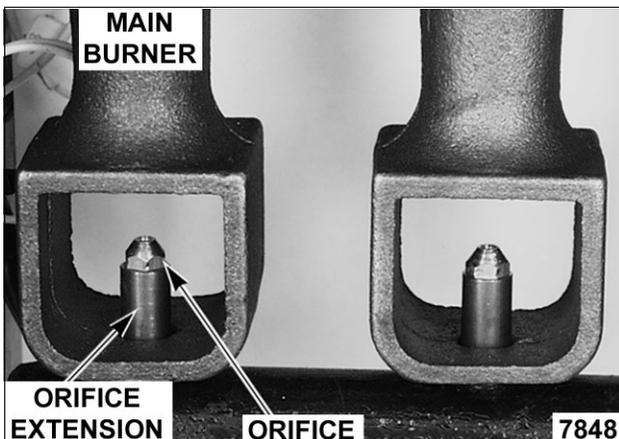


WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

WARNING: SHUT OFF THE GAS BEFORE SERVICING THE UNIT.

1. Remove main burner orifice from orifice extension.

NOTE: When installing, do not over tighten the orifice or damage to the threads may occur.



2. Reverse procedure to install.

GAS COMBINATION VALVE



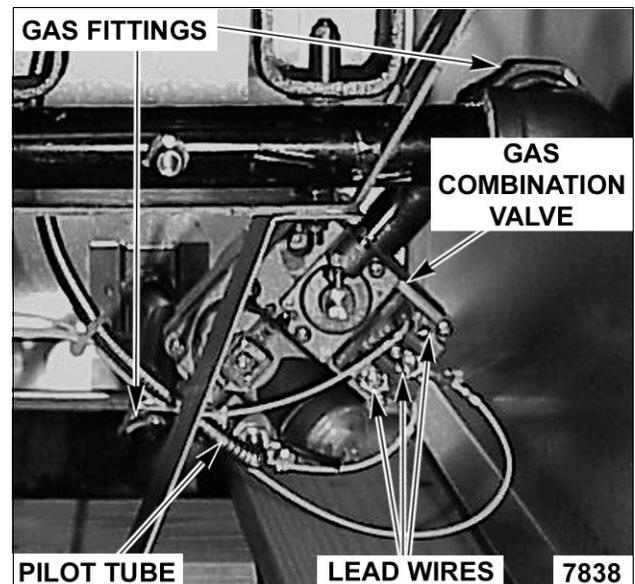
WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

WARNING: SHUT OFF THE GAS BEFORE SERVICING THE UNIT.

WARNING: ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH A SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

NOTE: Gas combination valves are not serviceable and should not be disassembled. Once the problem has been isolated to this control, replace it. Do not attempt to repair the assembly.

1. Remove burners (as necessary) as outlined under MAIN BURNERS.
2. Disconnect lead wires from gas combination valve.
3. On filter ready and Kleenscreen fryers only, remove cotter pin securing handle to gas combination valve on/off knob. Pull handle (with gas combination valve knob bracket attached) away from valve assembly.
4. Disconnect pilot tube.
5. Separate gas line fittings then remove gas combination valve assembly.



NOTE: Remove fittings and piping from gas combination valve and install (in same orientation) on the replacement valve.

- Reverse procedure to install and check for proper operation.

PILOT BURNER

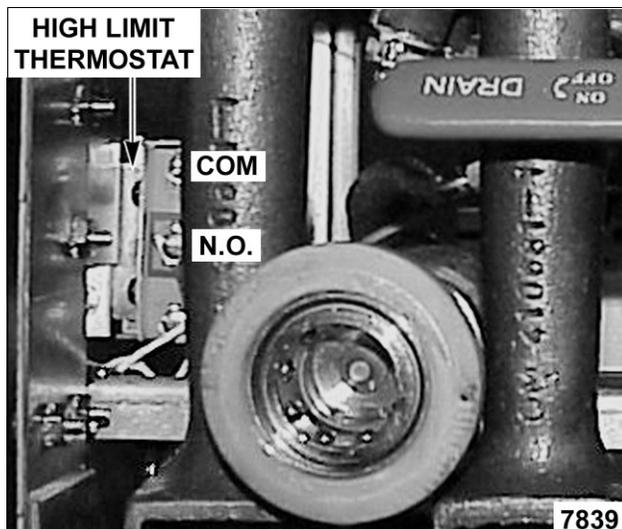


WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

WARNING: SHUT OFF THE GAS BEFORE SERVICING THE UNIT.

WARNING: ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH A SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

- Remove burners (as necessary) as outlined under MAIN BURNERS.
- Disconnect thermopile lead wires from N.O. and COM terminals on the high limit thermostat.

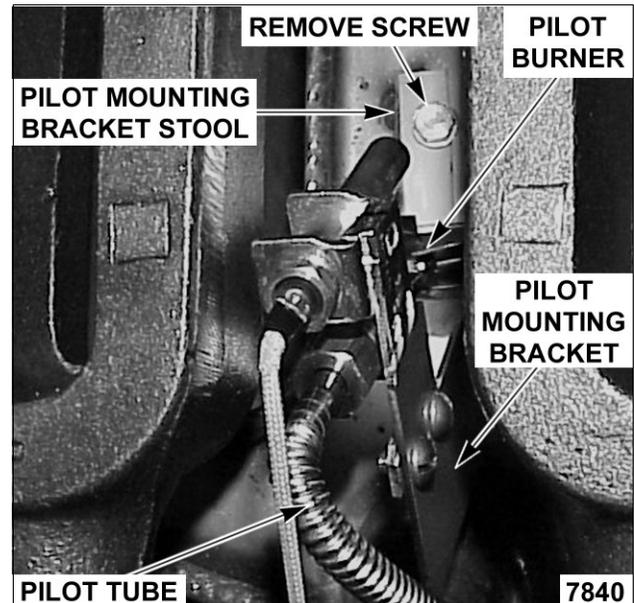


- Disconnect pilot tube from pilot burner.

NOTE: With pilot tube disconnected from pilot burner, the pilot orifice is accessible for inspection or cleaning.

CAUTION: If orifice is clogged with debris, clean with air or liquid only.

- Remove pilot burner from pilot mounting bracket stool (on fry tank).
- Remove pilot burner from pilot mounting bracket.



- Reverse procedure to install and check for proper operation.

THERMOPILE

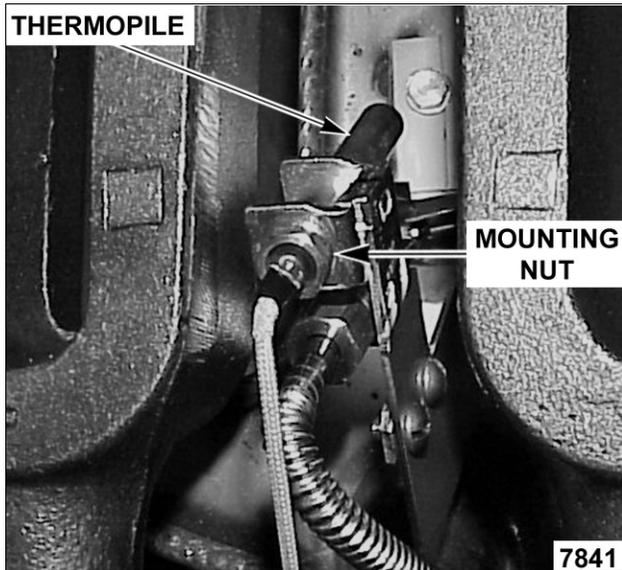


WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

WARNING: SHUT OFF THE GAS BEFORE SERVICING THE UNIT.

WARNING: ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH A SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

- Remove pilot burner as outlined under PILOT BURNER.
- Remove mounting nut securing thermopile to pilot burner.



3. Reverse procedure to install and check for proper operation.

FRY TANK ASSEMBLY



WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

WARNING: SHUT OFF THE GAS BEFORE SERVICING THE UNIT.

WARNING: ALL GAS JOINTS DISTURBED DURING SERVICING MUST BE CHECKED FOR LEAKS. CHECK WITH A SOAP AND WATER SOLUTION (BUBBLES). DO NOT USE AN OPEN FLAME.

1. Drain shortening from fry tank.
2. Disconnect the gas supply line to allow access to fryer from all sides.
3. Remove fry baskets, crumb screen and basket hanger.

NOTE: If the fryer is a battery section, remove grease strip and split the silicone seal between the fryer section tanks with a utility knife.

4. Remove front panel as outlined under FRONT PANEL.
5. On Kleenscreen fryer sections only, remove bolts securing the drain pipe flange to the manual drain valve.
6. Remove main burners as outlined under MAIN BURNERS.
7. Disconnect lead wires and pilot tube from the gas combination valve.

8. Remove pilot burner as outlined under PILOT BURNER.
9. Remove control thermostat as outlined under CONTROL THERMOSTAT.
10. Remove high limit thermostat as outlined under HIGH LIMIT THERMOSTAT.
11. Remove gas manifold and hanger assembly from the fryer.
 - A. For fryer sections above the filter drawer assembly on battery fryers or single floor model fryers (filter ready), remove mounting nuts securing gas manifold and hanger assembly to the fryer's base frame.
 - B. For other fryer sections in a battery and for non-filter ready fryers, remove mounting nuts securing gas manifold and hanger assembly to the V shaped support bracket.
12. On Kleenscreen and filter ready fryers only, separate the oil return line (hose or flexible tubing) fitting at the elbow.
13. Separate gas line fitting at the inlet side of the gas combination valve.
14. Remove bolts securing gas line support bracket at the left side of gas manifold and hanger assembly. Allow gas line support bracket to swing out of way then replace bolts in the frame. Hand tighten only.
15. Remove screws securing the top of fry tank to the flue wrap.

CAUTION: Use care when lifting fry tank assemblies from the fryer body. Exterior surfaces of the fryer can be slippery and the assemblies are heavy.

16. Grasp the fry tank at the top (by flue) and front lip, then lift fry tank assembly from the fryer body. Place the assembly on floor or table for removal of the remaining components.

NOTE: If side access is not available, lift fry tank assembly from the front of the fryer while rotating the assembly upwards and toward the front.

17. On Kleenscreen fryers only, remove filter valve assembly (as necessary) and oil return line piping from fryer. If removing left side fry tank above filter drawer assembly, disconnect oil line and remove discard valve assembly from fryer.
18. Remove bolts securing gas manifold hanger assembly to the fry tank.
19. Remove screws securing flue box to fry tank then remove flue box.
20. Remove drain valve.

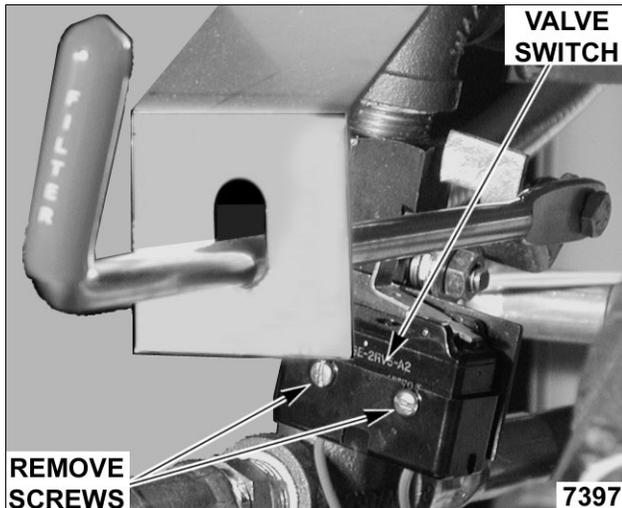
- Reverse procedure to install all the parts removed from original fry tank onto replacement fry tank, then install the assembly.

FILTER VALVE AND DISCARD VALVE SWITCHES



WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

- Open the door to the fryer section being serviced.
- Remove burners (as necessary) as outlined under MAIN BURNERS.
- Disconnect lead wire connector (2 pin) from the appropriate switch.
- Remove switch mounting screws.



- Reverse procedure to install and check for proper operation.

NOTE: Switches are not adjustable.

PUMP AND MOTOR



WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

- Open both fryer cabinet doors above the filter tank drawer.
- Pull the filter drawer out, remove the filter tank assembly and push the tank support arms back underneath the fryer.

NOTE: The remaining steps are written for front removal of the pump assembly. If access to the back of the fryer is available, it may be easier to remove the pump from the rear.

- Remove burners from the right side fryer section above filter tank drawer as outlined under MAIN BURNERS.
- Disconnect the electrical connection to the motor.
- Separate the swivel hose connections at the pump.

NOTE: When viewed from pump end, the right side is the intake port and the left side is the discharge port.

- Remove motor mounting bolts.
- Remove the motor and pump (pipe fittings attached) from the fryer.
 - If replacing the pump and motor, remove the existing pipe assemblies and reuse.
- Reverse procedure to install.

NOTE: Ensure the rubber vibration pad or the grommets are installed under the motor mounting plate.

SERVICE PROCEDURES AND ADJUSTMENTS

WARNING: CERTAIN PROCEDURES IN THIS SECTION REQUIRE ELECTRICAL TEST OR MEASUREMENTS WHILE POWER IS APPLIED TO THE MACHINE. EXERCISE EXTREME CAUTION AT ALL TIMES. IF TEST POINTS ARE NOT EASILY ACCESSIBLE, DISCONNECT POWER AND FOLLOW LOCKOUT / TAGOUT PROCEDURES, ATTACH TEST EQUIPMENT AND REAPPLY POWER TO TEST.

CONTROL THERMOSTAT CALIBRATION

NOTE: Check the level of shortening in fry tank before proceeding. When the oil temperature is within normal operating range (325°F - 375°F), the level must be between the MIN & MAX fill lines.

1. Place a thermocouple in the geometric center of the fry tank 1" below the oil surface.
2. Set control thermostat to 350°F.
3. Allow the shortening temperature to stabilize (normally 3 cycles).
4. Record the temperature reading from the meter, at which the main burners turn off and turn on for at least two complete heating cycles.
5. Calculate the **differential** temperature by subtracting the temperature reading when the main burners turn off to the temperature reading when the main burners turn on.

[Differential = Temp. (burners off) - Temp. (burners on)]

Example: 360° (burners off) - 340° (burners on) = 20°F.

The differential calculated should be less than 20°F.

- A. If the differential is less than 20°F, the control thermostat is functioning properly.
- B. If the differential is more than 20°F, the control thermostat is malfunctioning.
 - 1) Install a replacement control thermostat as outlined under CONTROL THERMOSTAT in REMOVAL AND REPLACEMENT OF PARTS.
6. Calculate the **average** temperature by adding the temperature reading when the main burners turn off to the temperature reading when the main burners turn on and divide this answer by 2.

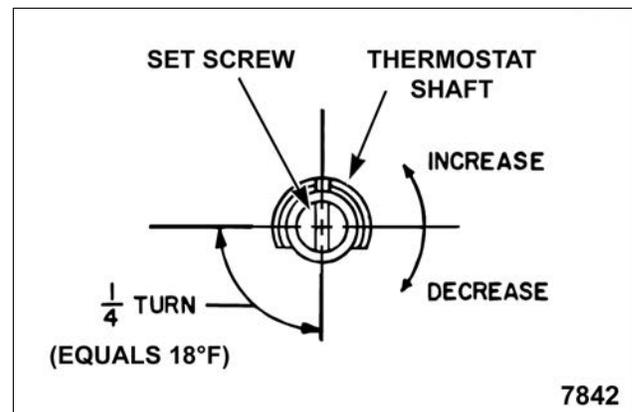
[Temp. (burners off) + Temp. (burners on)] ÷ 2 =

Average Temp.

Example: 360° + 340° ÷ 2 = 350°F.

The average temperature should be 350°F (± 10°F).

- A. If the average temperature reading is within tolerance, the control thermostat is properly calibrated.
- B. If the average temperature reading is out of tolerance, continue with procedure.
7. To adjust:
 - A. Remove control thermostat knob.
 - B. Hold control thermostat shaft and turn the inner set screw clockwise to decrease temperature or counterclockwise to increase temperature (1/4 turn = 18°F).



- C. Replace control thermostat knob and repeat step 6 for up to three attempts. Allow the main burners to cycle at least two times between adjustments before performing the calculation.
 - 1) When calibration is successful, remove control thermostat knob and apply a non-permanent adhesive material to set screw head to secure from rotation.
 - 2) Replace control thermostat knob.
8. If the above adjustment cannot be obtained, install a replacement control thermostat as outlined under CONTROL THERMOSTAT in REMOVAL AND REPLACEMENT OF PARTS.

GAS MANIFOLD PRESSURE ADJUSTMENT

WARNING: SHUT OFF THE GAS SUPPLY BEFORE SERVICING THE UNIT.

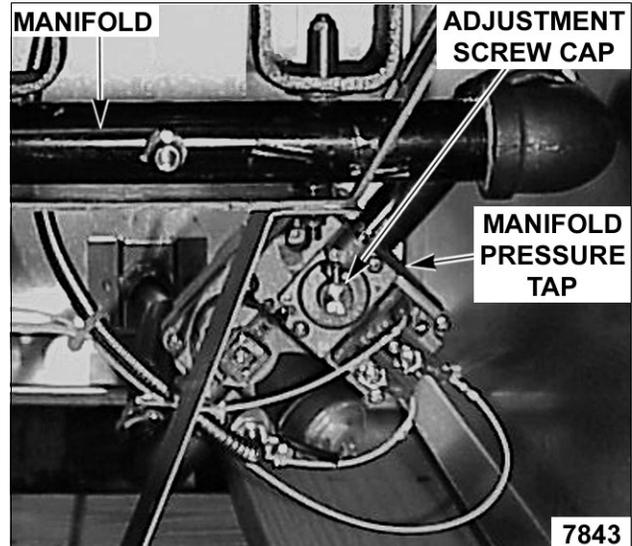
GAS PRESSURE (INCHES W.C.)				
GAS TYPE	MANIFOLD	LINE		
		RECOMMENDED	MIN	MAX
Natural	4	7	5	14
Propane	10	11	11	

NOTE: If the incoming line pressure is less than the minimum stated, then the manifold pressure cannot be set correctly.

1. Open the door and turn gas combination valve knob/extension arm to off.
2. Remove the 1/8" NPT plug (pressure tap) on the outlet side of the valve and attach a manometer.

NOTE: Gas manifold pressure can also be measured at the pressure tap in the manifold. On Kleenscreen battery fryers only, the drain pipe may need to be removed for access.

3. Turn the gas supply on.
4. Light the pilot burner and turn the gas combination valve knob/extension arm to on.
5. Set control thermostat to call for heat and verify the main burners light.
6. Observe the manometer pressure reading and compare to the pressure chart near the end of this procedure.
 - A. If other appliances are connected to the same gas line, turn them all on and check manometer pressure reading again. If a pressure drop of 1/2" water column or more is observed, then the gas supply needs to be checked by the gas line installer or the local gas company for adequate sizing.
 - B. If adjustment is necessary, continue with procedure.
7. Remove the adjustment screw cap to access the pressure adjustment screw.



NON FILTER READY SHOWN

- A. To increase pressure, turn the screw clockwise. To decrease pressure, turn the screw counterclockwise.

NOTE: Accurate gas pressure adjustments can only be made with the gas on and the main burners lit.

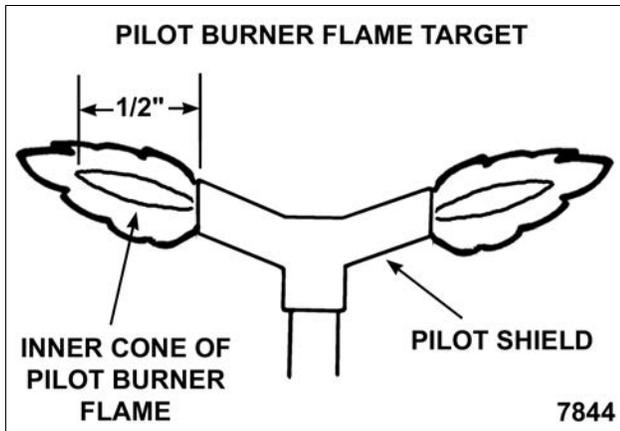
8. Set pressure as outlined in gas pressure table.
9. Once the correct pressure has been set, turn the gas combination valve knob/extension arm to off and shut off the gas supply.
10. Replace the adjustment screw cap and 1/8" NPT plug (pressure tap) on the outlet side of the valve.
11. Check fryer for proper operation.

PILOT BURNER FLAME ADJUSTMENT

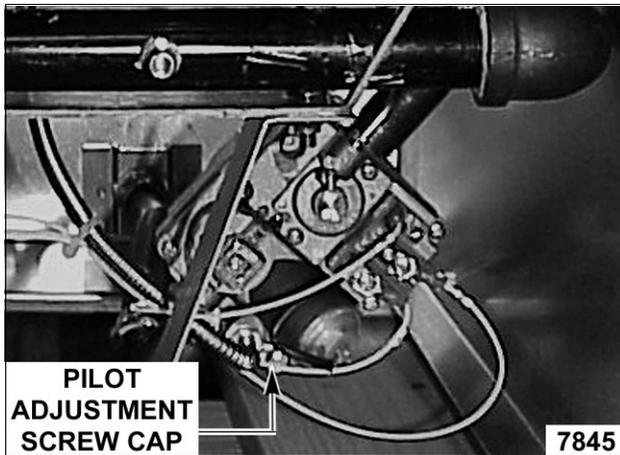
NOTE: Verify the proper gas type (natural or propane) is being supplied to the fryer before proceeding.

1. Turn control thermostat to off.
2. Light pilot burner and leave gas combination valve knob/extension arm in the pilot position. Allow pilot to burn for 3-4 minutes to stabilize flame.
 - A. If pilot burner is not lighting or does not remain lit when the gas combination valve knob/extension arm is released, see TROUBLESHOOTING. Wait 5 minutes between pilot burner lighting attempts for unburned gas to vent.
3. Verify the inner cone of pilot burner flame is extending approximately 1/2" beyond the outer edges of the pilot shield.

- A. If adjustment is necessary, continue with procedure.



4. Remove the adjustment screw cap from the gas combination valve.



NON FILTER READY SHOWN

- A. To increase pilot flame, turn the screw counterclockwise. To decrease pilot flame, turn the screw clockwise.
5. With the pilot burner lit, turn gas combination valve knob/extension arm to on and set the control thermostat to call for heat.
- A. If main burners do not light or pilot burner goes out, proceed to MILLIVOLT CONTROLS TEST.

MILLIVOLT CONTROLS TEST

1. Verify millivolt control circuit wiring is correct and connections are clean and secure.
2. Verify pilot burner flame is adjusted properly as outlined under PILOT BURNER FLAME ADJUSTMENT.
3. With control thermostat off and gas combination valve knob/extension arm in the pilot position, allow pilot to burn for 3-4 minutes to stabilize voltage output from thermopile.
4. Verify thermopile output voltage.
 - A. Set VOM to DC millivolt scale and connect meter leads to N.O. and COM terminals on the high limit thermostat.
 - 1) If 450 millivolts or greater is measured, the thermopile is functioning properly. Continue with test.
 - 2) If less than 450 millivolts is measured, install a replacement thermopile as outlined under THERMOPILE in REMOVAL AND REPLACEMENT OF PARTS.
5. Turn gas combination valve knob/extension arm to on and set the control thermostat to call for heat.
6. Verify main burners light and remain lit.
 - A. If main burners operate as described, the millivolt controls are functioning properly.
 - B. If main burners do not light, continue with test.
7. Verify control thermostat contacts are closing.
 - A. Connect meter leads to the TH terminal on gas combination valve and COM terminal on the high limit thermostat.
 - 1) If 150 millivolts or greater is measured, control thermostat is functioning properly. Replace gas combination valve as outlined under GAS COMBINATION VALVE in REMOVAL AND REPLACEMENT OF PARTS.

ELECTRICAL OPERATION

COMPONENT FUNCTION

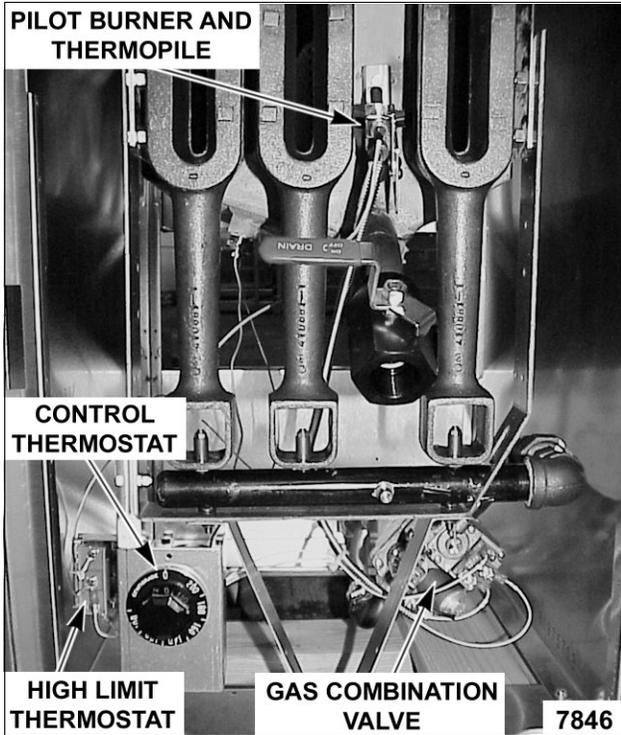
FRYER CONTROLS

Control Thermostat	Regulates shortening temperature at the selected set point. Temperature range from off to 200°F thru 400°F.
Thermopile	When heated by the pilot burner flame, generates DC millivolts to energize pilot valve coil and main valve coil on the gas combination valve.
Gas Combination Valve	Allows gas flow to the pilot when pilot valve coil is energized; and gas flow to the main burners when main valve coil is energized. Also, regulates the gas manifold pressure.
High Limit Thermostat	Prevents the shortening from reaching temperatures over 465°F (auto reset).

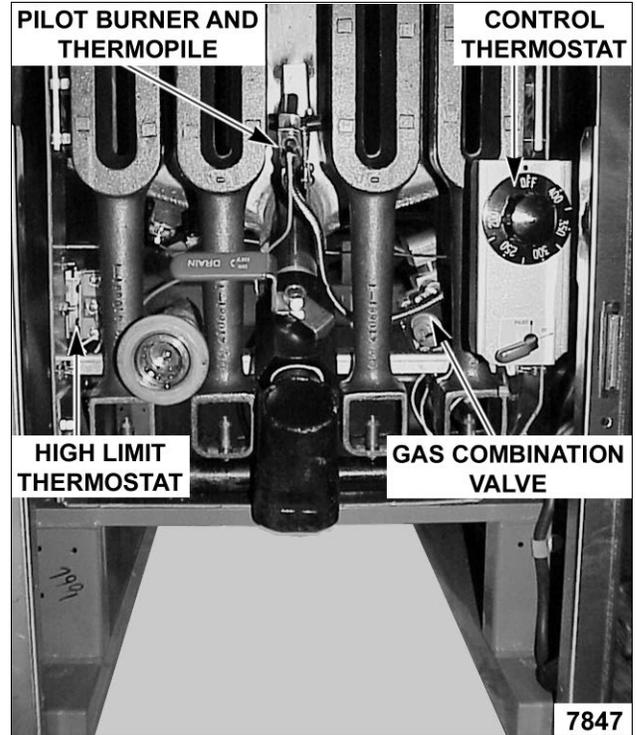
KLEENSCREEN FILTER CONTROLS

Filter Power Switch	Supplies 120VAC to pump motor. Filter valve switch or discard valve switch must be closed (valve handle extended).
Pump Motor	Operates pump to circulate shortening through filtering system.
Filter Valve Switch	Energizes pump motor to filter the shortening when the N.O. switch contacts are closed (valve handle extended); and filter power switch is turned on.
Discard Valve Switch	Energizes pump motor to discard the shortening from filter tank when the N.O. switch contacts are closed (valve handle extended); and filter power switch is turned on.

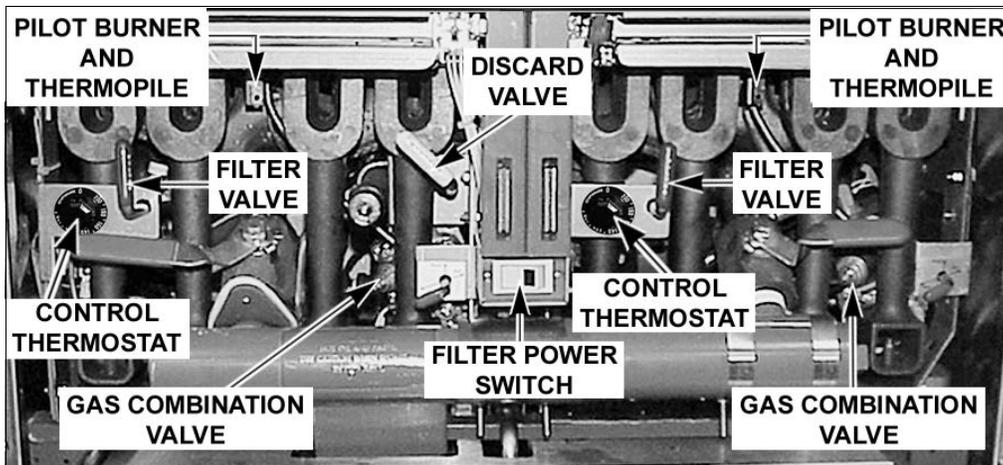
COMPONENT LOCATION



GR35 NON FILTER READY SHOWN



GR45 FILTER READY SHOWN



* PUMP MOTOR LOCATION - RIGHT SIDE FRYER SECTION ABOVE FILTER DRAWER.
 * JUNCTION BOX LOCATION - LEFT FRYER SECTION AT THE REAR.

2GR45F KLEENSCREEN FRYER BATTERY SHOWN

SEQUENCE OF OPERATION

Millivolt Controls

Refer to schematic diagram 7825.

1. Conditions.
 - A. Gas shutoff valve(s) on and gas combination valve knob/extension arm in the on position.
 - B. Shortening at proper level in fry tank and below last set point temperature used.
 - C. Pilot lit.
 - 1) Pilot valve coil is energized on gas combination valve and pilot valve opens for gas flow to pilot burner.

NOTE: Pilot flame must be sufficient to generate 450 millivolts DC (minimum) from thermopile.
 - D. Main valve coil on combination valve not energized (valve closed).
 - E. Control thermostat off.
 - F. High limit thermostat closed.
2. Set control thermostat to call for heat.
 - A. Main valve coil on gas combination valve is energized and main valve opens for gas flow to main burners.
 - 1) Main burners light.

NOTE: As long as the millivolts from thermopile remain sufficient to keep the pilot valve coil energized, and the control thermostat is calling for heat, the main gas valve stays open.
3. Shortening reaches set temperature and control thermostat opens.
 - A. Main gas valve coil de-energized and main valve closes.
 - 1) Gas flow stops and main burners go out.
4. Control thermostat cycles main burners until thermostat is turned off; gas valve knob/extension arm is turned to pilot or off.

Kleenscreen Filtering System

Refer to wiring diagram 7850. Refer to Installation & Operation manual for specific instructions on filtering.

NOTE: The filter valve handle and the discard valve handle are connected to a mechanical valve and switch assembly to route the flow of oil in the filtering system and supply power to the pump motor.

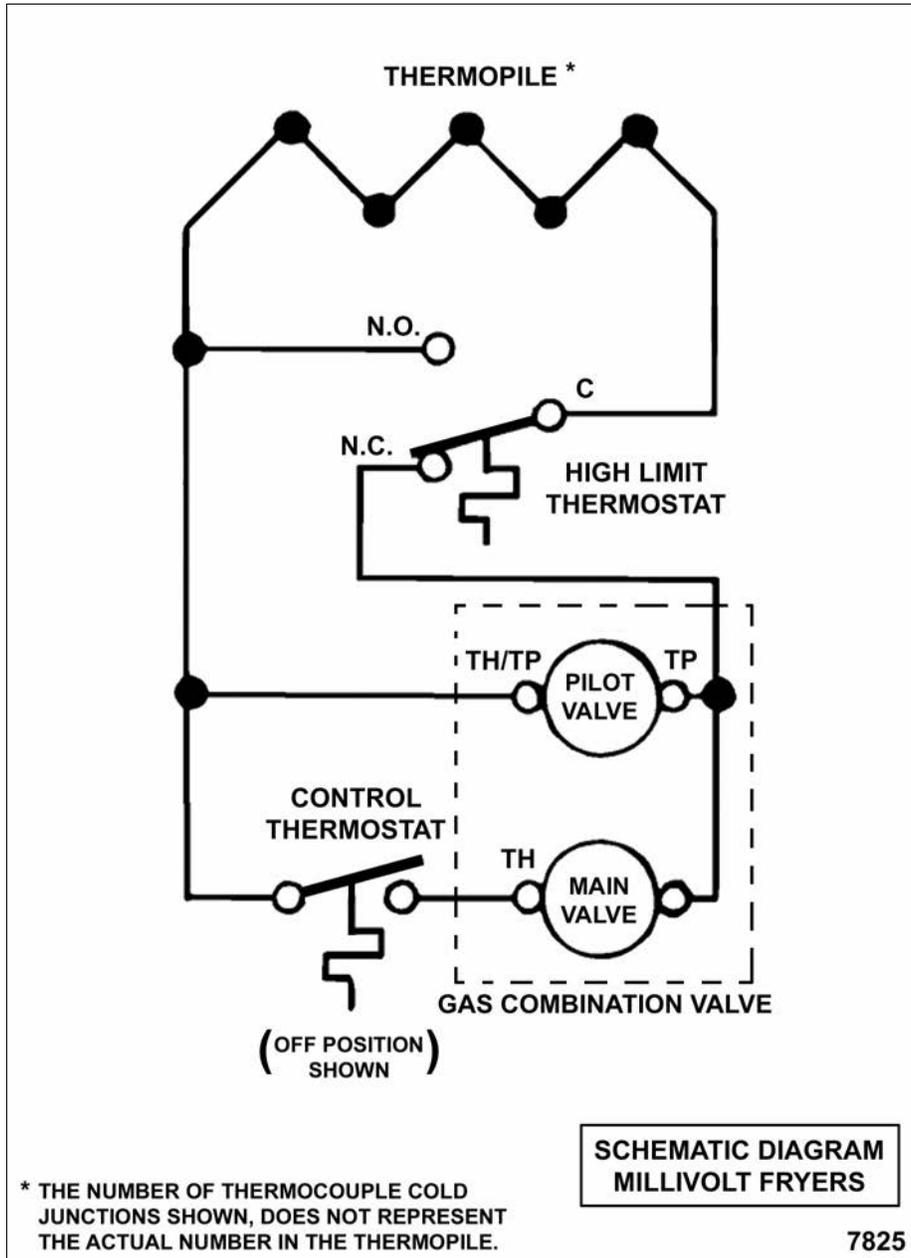
1. Conditions
 - A. Fryer connected to correct supply voltage and is properly grounded.
 - B. Shortening between 300°F and 350°F.

NOTE: Oil should not be filtered outside of this temperature range. At lower temperatures the oil is thicker which may increase filtering time and place a greater load on the pump. At higher oil temperatures, oil seal life is decreased.
 - C. Control thermostat off.

NOTE: Control thermostat must remain off during filtering.
 - D. Filter drawer assembly installed properly.
 - E. Filter power switch turned off.
 - F. Filter valve handle retracted.
 - 1) Filter valve switch N.O. contacts open.
 - G. Discard valve handle retracted.
 - 1) Discard valve switch N.O. contacts open.
2. Open the drain valve to the fryer section in need of filtering and drain the shortening into filter tank.
3. Turn filter power switch on.
 - A. Switch pilot light comes on.
4. Extend filter valve handle of the same fryer section.
 - A. Filter valve switch N.O. contacts close.
 - 1) Power supplied to pump motor.
 - B. Pump motor circulates oil through filter until power is removed.
5. When the oil filtering process is completed, close the manual drain valve to the fryer and allow the fry tank to refill.
 - A. When all filtered oil is returned to the fryer, retract the filter valve handle.
 - 1) Power is removed from pump motor.
6. Turn filter power switch off.

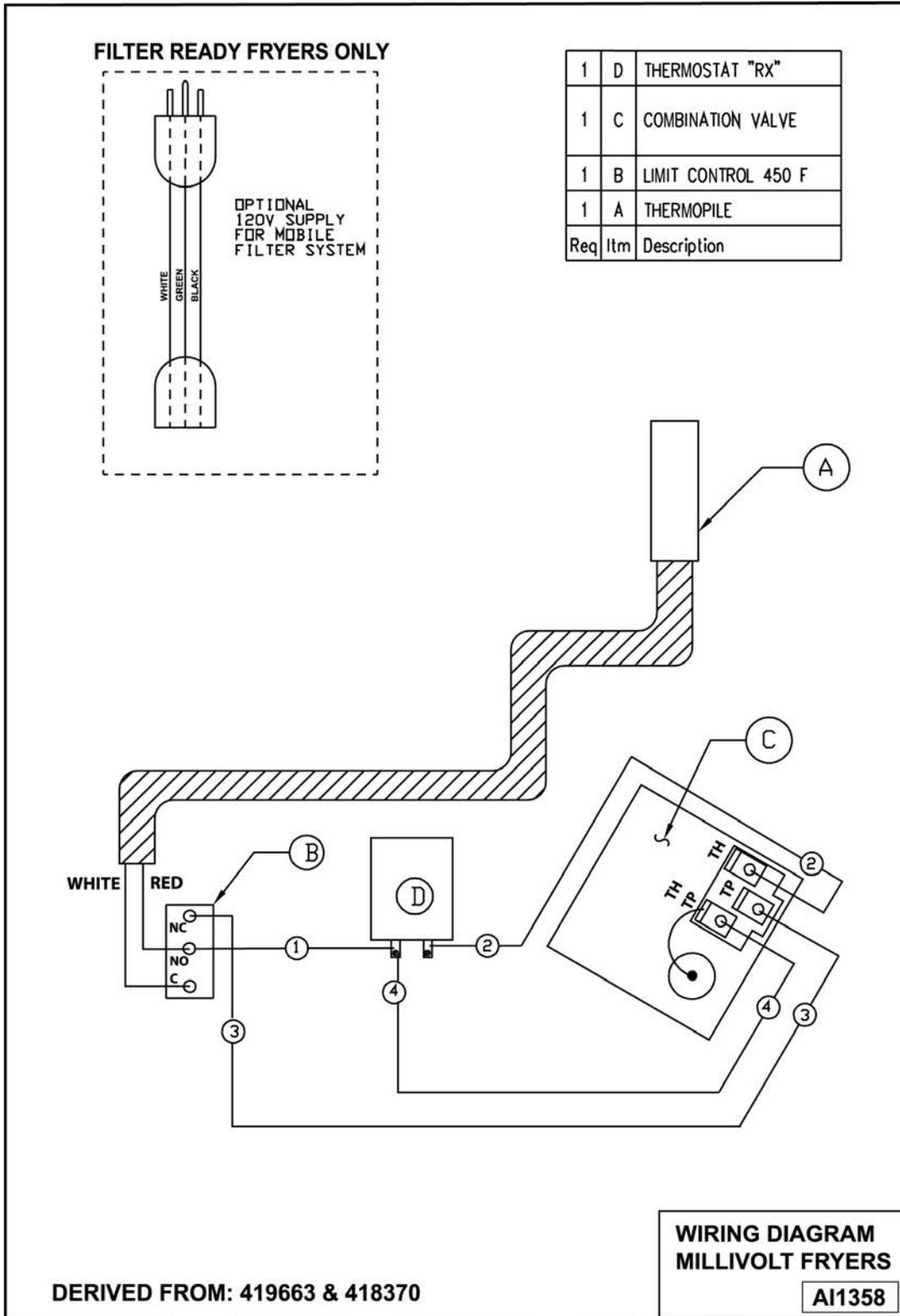
SCHEMATIC DIAGRAM

Millivolt Controls

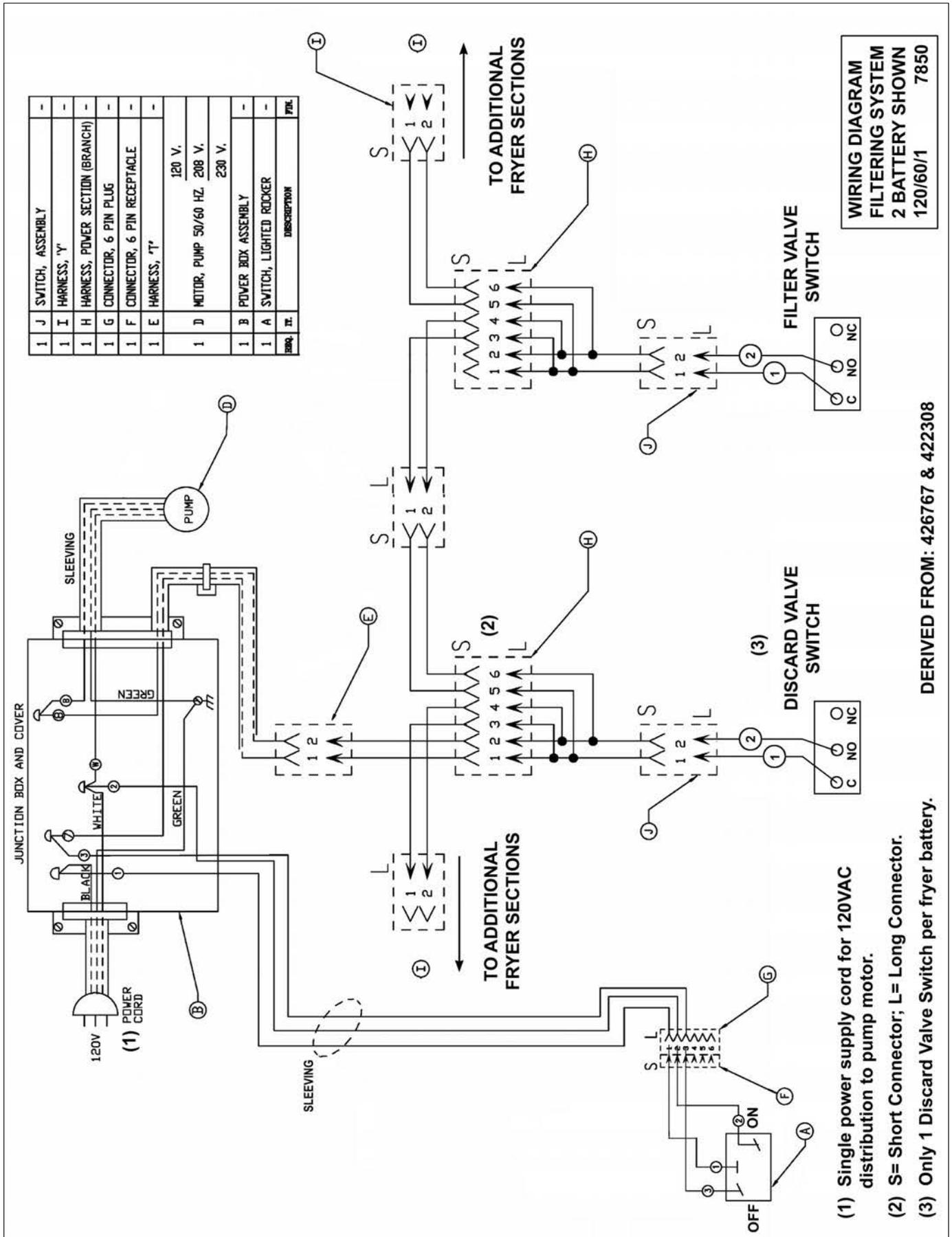


WIRING DIAGRAMS

Millivolt Controls

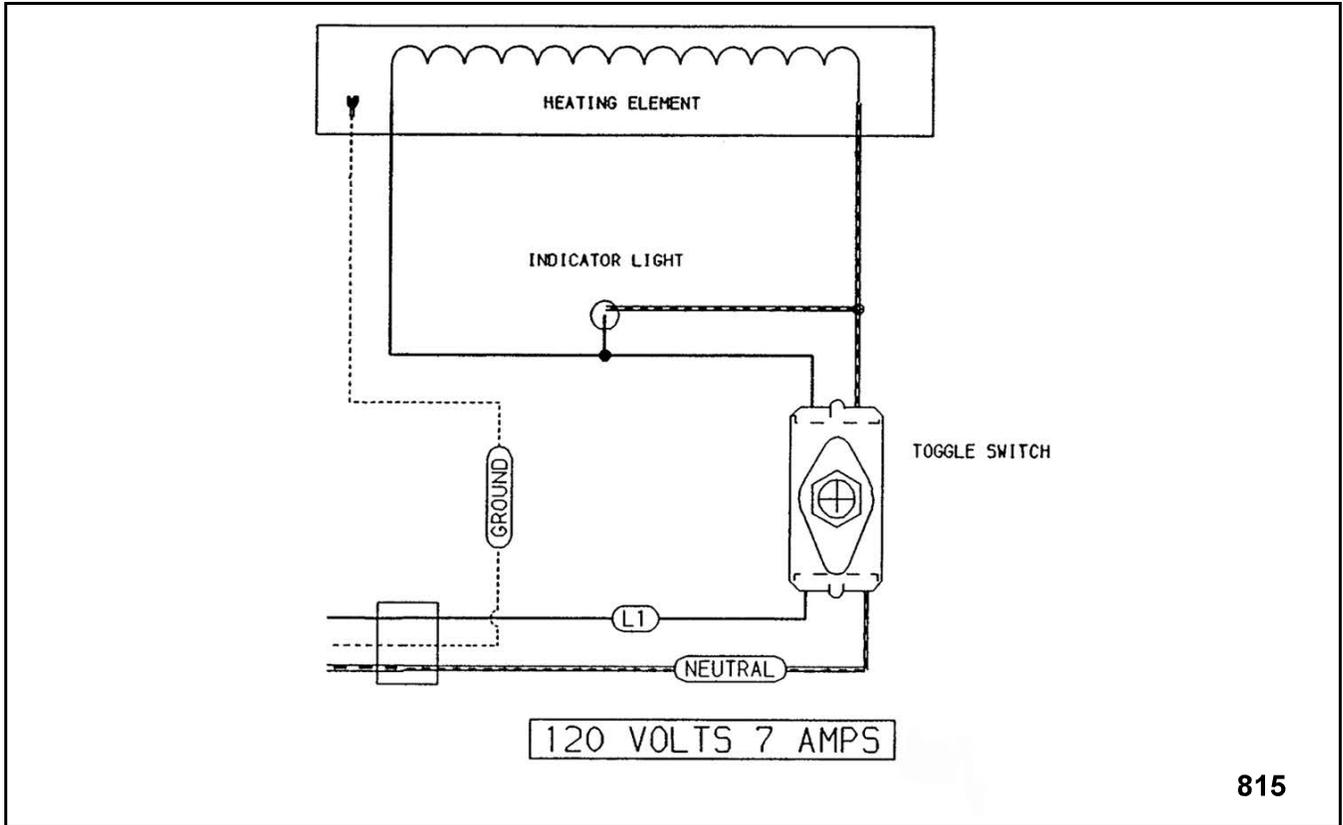


Junction Box, Kleenscreen Filtering System



DERIVED FROM: 426767 & 422308

Frymate (Dump Station)



TROUBLESHOOTING

ALL MODELS

SYMPTOMS	POSSIBLE CAUSES
Pilot burner will not light.	<ol style="list-style-type: none"> 1. Gas supply off. 2. High limit thermostat open or malfunction. 3. Incorrect gas type. 4. Pilot burner flame adjustment too low. 5. Pilot burner orifice obstructed or incorrect. 6. Gas combination valve malfunction.
Pilot burner lights but will not maintain flame.	<ol style="list-style-type: none"> 1. Pilot burner flame adjustment too low. 2. Pilot burner orifice obstructed or incorrect. 3. Thermopile malfunction. 4. Insufficient gas pressure. 5. High limit thermostat malfunction. 6. Gas combination valve malfunction.
Pilot burner adjusted properly but flame fluctuates or goes out.	<ol style="list-style-type: none"> 1. Insufficient gas pressure due to other equipment operating on same line. 2. Excessive drafts. <ol style="list-style-type: none"> A. Vent hood not adjusted properly. B. Fryer door open or removed.
Main burner(s) light but will not maintain flame.	<ol style="list-style-type: none"> 1. Insufficient gas pressure. 2. Main burner(s) gas orifice obstructed or incorrect. 3. Thermopile malfunction 4. Main burner(s) malfunction. 5. Gas combination valve malfunction.
Fryer does not heat, pilot burner lit.	<ol style="list-style-type: none"> 1. Control thermostat off or malfunctioning. 2. Gas combination valve malfunction. 3. Wiring connections loose or wiring malfunction.
Excessive or low heat.	<ol style="list-style-type: none"> 1. Control thermostat calibration or malfunction. 2. Gas pressure incorrect. 3. Main burner(s) gas orifice obstructed or incorrect. 4. Flue obstructed. 5. Vent hood not adjusted properly. 6. Fryer load capacity exceeded.
High limit thermostat shutting off main burners.	<ol style="list-style-type: none"> 1. Shortening level below minimum fill line. 2. Control thermostat malfunction. 3. High limit thermostat malfunction.
Main burners light when control thermostat is turned off.	<ol style="list-style-type: none"> 1. Control thermostat malfunction. 2. Control thermostat terminals shorted or lead wire grounded. 3. Gas combination valve malfunction.

FRYMATE (DUMP STATION) WITH OPTIONAL HEATER

SYMPTOM	POSSIBLE CAUSES
No heat.	<ol style="list-style-type: none"> 1. Unplugged. 2. Power switch off or inoperative. 3. Main circuit breaker off or open. 4. Malfunctioning heat assembly.

KLEENSCREEN FILTERING SYSTEM

SYMPTOM	POSSIBLE CAUSES
Oil not filtering, pump motor is on.	<ol style="list-style-type: none"> 1. Filter screen plugged. 2. Clog in filter system lines. <p>NOTE: When all filtered oil is returned to the fry tank and filter power switch is off, open the filter drawer approximately 1". Allow the remaining shortening in the line to drain into the filter tank to prevent possible clogging after the shortening cools and solidifies. Close the filter drawer when complete.</p> <ol style="list-style-type: none"> 3. Shortening below 300°F (too thick). 4. Filter valve switch malfunction. 5. Filter valve mechanical malfunction. 6. Pump is inoperative.
Shortening not discarding, pump motor on.	<ol style="list-style-type: none"> 1. Filter screen plugged. 2. Clog in filter system lines. <p>NOTE: When all filtered oil is returned to the fry tank and filter power switch is off, open the filter drawer approximately 1". Allow the remaining shortening in the line to drain into the filter tank to prevent possible clogging after the shortening cools and solidifies. Close the filter drawer when complete.</p> <ol style="list-style-type: none"> 3. Shortening below 300°F (too thick). 4. Discard valve switch malfunction. 5. Discard valve mechanical malfunction. 6. Discard hose connection not fully engaged. 7. Pump is inoperative.
Pump motor is not running.	<ol style="list-style-type: none"> 1. Filter power switch inoperative. 2. Filter/discard handle not extended. 3. Filter/discard valve switch malfunction. 4. Filter relay malfunction. 5. Pump motor inoperative.

CONDENSED SPARE PARTS LIST**KLEENSCREEN FILTER**

PART NUMBER	DESCRIPTION	NOTES
411496-B4	Lighted Rocker Switch, Filter	
417792-1	Pump and Motor Assy, Filter (120VAC)	

GR SERIES GAS FRYERS WITH MILLIVOLT CONTROL

PART NUMBER	DESCRIPTION	NOTES
419999-2	Thermostat, Reed Switch	
419670-2	High Limit Thermostat (w/stuffing box)	
410839-4	Thermopile, Millivolt (manual ign.)	
410841-22	Gas Valve (NAT)	
410841-23	Gas Valve (LP)	
412212-7	Pilot (NAT)	
412212-2	Pilot (LP)	



7415

GR Series GAS Fryers with Tridelta Controls

See "MODEL AND ML NUMBERS" for list of model and ML numbers.

GR Series

- NOTICE -

This Manual is prepared for the use of trained Vulcan Service Technicians and should not be used by those not properly qualified.

This manual is not intended to be all encompassing. If you have not attended a Vulcan Service School for this product, you should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should be performed by a trained Vulcan Service Technician.

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SERVICE UPDATES

SERVICE UPDATES - GR SERIES GAS FRYERS

May 2018

- Updated Service Manual and loaded into TIS.

GENERAL

INTRODUCTION

The Service Manual covers specific service information related to the models listed in MODEL AND ML NUMBERS. Current production model fryers are built using a solid state control and computer control from Tridelta Industries (TDI).

MODEL AND ML NUMBERS

Model	ML No.	Model	ML No.
GRD25	ML-052513	GRD35F	ML-126732
GRD35	ML-052080	GRD45F	ML-126735
GRD45	ML-052081	GRD65F	ML-126738
GRD65	ML-052082	GRD85F	ML-126741
GRD85	ML-052306	GRC35F	ML-126733
GRC35	ML-052083	GRC45F	ML-126736
GRC45	ML-052084	GRC65F	ML-126739
GRC65	ML-052085	GRC85F	ML-126742
GRC85	ML-052307		

SINGLE FLOOR MODEL FRYERS

Fryers with the Filter-Ready option installed use the mobile filter. For service information related to the mobile filter, refer to F24599 "MOBILE FILTERS."

An RO Frymate (dump station) can be configured in a battery with fryers 15-1/2 inches or 21 inches in width.

Model Designations

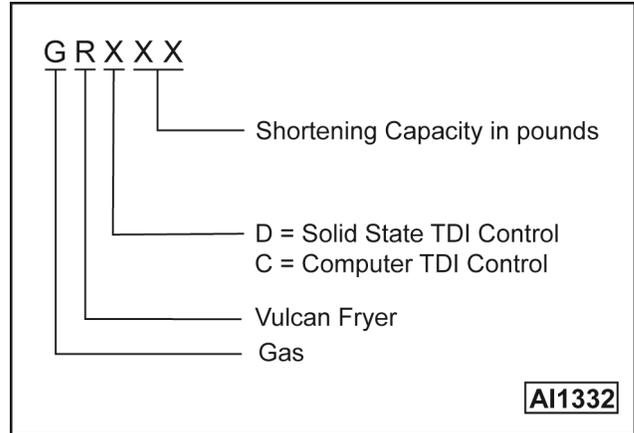


Fig. 1

Models, Features, and Options						
MODEL	FEATURES					OPTIONS
	FRYER WIDTH (inches)	FRYING CAPACITY (pounds)	FRY TANK	COOKING CONTROL	COOK TIMER (mm:ss)	AUTOMATIC BASKET LIFTS
GRD25 ¹	10-1/2	25-30	Full	Solid State	0-99:59	Single
GRD35	15-1/2	35-40	Full	Solid State	0-99:59	Single or Dual
GRD45	15-1/2	45-50	Full	Solid State	0-99:59	Single or Dual
GRD65	21	65-70	Full	Solid State	0-99:59	Single or Dual
GRD85	21	85-90	Full	Solid State	0-99:59	Single or Dual
GRC35	15-1/2	35-40	Full	Computer	0-99:59	Single or Dual
GRC45	15-1/2	45-50	Full	Computer	0-99:59	Single or Dual
GRC65	21	65.70	Full	Computer	0-99:59	Single or Dual
GRC85	21	85-90	Full	Computer	0-99:59	Single or Dual
RO15 (Frymate)	15-1/2					
RO21 (Frymate)	21					
RO21S (Frymate)	21					
NOTE: ¹ Available in battery configurations only.						

KLEENSCREEN FILTERING SYSTEM

The new "Kleenscreen" filtering system has been integrated into the GR Series fryer battery. The filter is housed in a pull-out drawer assembly at the base of the fryer. The filtering components in the drawer include a stainless steel filter tank, crumb-catch basket, and a dual-element mesh filter screen. With the filter drawer closed, a self-seating oil return line provides the path to return the filtered oil to the fry tank.

This system is designed to provide a thorough and easy method for filtering fryer oil.

Some of the benefits include:

- Self-contained system eliminating the use of external filter equipment.
- Paperless filtering system.
- Easy to clean and low maintenance.

The fryer battery still utilizes many of the same components as the Vulcan GR series fryers.

Kleenscreen fryer batteries are available in a minimum of two and a maximum of six fryer sections. The fryer size of each section is identical.

An RO Frymate (dump station) can also be included as one or more of the sections.

Model Designations

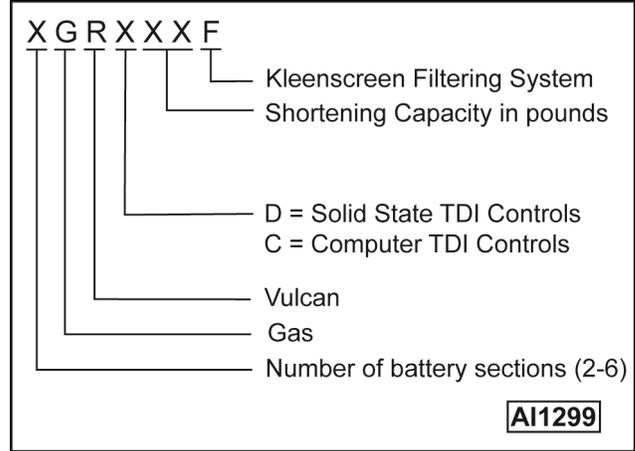


Fig. 2

Models, Features, and Options							
MODEL	FEATURES						OPTIONS
	FRYER WIDTH (inches)	FRYING OIL CAPACITY PER FRYER (pounds)	FILTER PAN CAPACITY (pounds)	FRY TANK	COOKING CONTROL	COOK TIMER (mm:ss)	AUTOMATIC BASKET LIFTS
2GRD35F ¹	31	35-40	80	Full	Solid State	99:59	Single or Dual
2GRD45F ¹	31	45-50	80	Full	Solid State	99:59	Single or Dual
2GRD65F ²	42	65-70	130	Full	Solid State	99:59	Single or Dual
2GRD85F ²	42	85-90	130	Full	Solid State	99:59	Single or Dual
2GRC35F ¹	31	35-40	80	Full	Computer	99:59	Single or Dual
2GRC45F ¹	31	45-50	80	Full	Computer	99:59	Single or Dual
2GRC65F ²	42	65-70	130	Full	Computer	99:59	Single or Dual
2GRC85F ²	42	85-90	130	Full	Computer	99:59	Single or Dual

Models, Features, and Options							
MODEL	FEATURES						OPTIONS
	FRYER WIDTH (inches)	FRYING OIL CAPACITY PER FRYER (pounds)	FILTER PAN CAPACITY (pounds)	FRY TANK	COOKING CONTROL	COOK TIMER (mm:ss)	AUTOMATIC BASKET LIFTS
RO15 (Frymate)	15-1/2						
RO21 (Frymate)	21						
RO21S (Frymate)	21						
NOTES:	¹ For each additional fryer section, add 15-1/2 inches to the width. ² For each additional fryer section, add 21 inches to the width.						

SPECIFICATIONS

Electrical

- 120VAC supply. A 24VAC transformer provides power for the fryer controls, basket lift controls (if installed), and the filtering controls on Kleenscreen battery fryers.
- Kleenscreen filter models require a separate 120VAC connection for the filter pump motor (5-amp draw).

Gas Pressures

Manifold (per fryer section):

- Natural - 4" W.C.
- Propane - 10" W.C.

Building supply pressure (min):

- Natural - 5" W.C. (7" W.C. battery units).
- Propane - 11" W.C. (12" W.C. battery units).

NOTE: Propane or Natural gases - 14" W.C. (max).

Input BTU Rating

GR SERIES	NO. OF TUBES	BTU/HR/SECTION
GRD25	2	60,000
GRD35, GRC35	3	90,000
GRD45, GRC45	4	120,000
GRD65, GRC65	5	150,000
GRD85, GRC85	5	150,000

TOOLS

Standard

- Standard set of hand tools.
- VOM with minimum of NFPA-70E CAT III 600V, UL/CSA/TUV listed. Sensitivity of at least 20,000 ohms per volt. Meter leads must also be rated at CAT III 600V.
- Clamp on type amp meter with minimum of NFPA-70E CAT III 600V, UL/CSA/TUV listed.
- Temperature tester (thermocouple type).
- ESD (Electrostatic discharge) Protection Kit.
- U-Tube manometer.

Special

- Field service grounding kit P/N TL- 84919.
- LOCTITE® 242 P/N 520228 or equivalent.
- Burndy pin extraction tool RX2025 GE1; Newark Electronics Catalog Number 16F6666. Used for removing pin terminals on Burndy connectors.

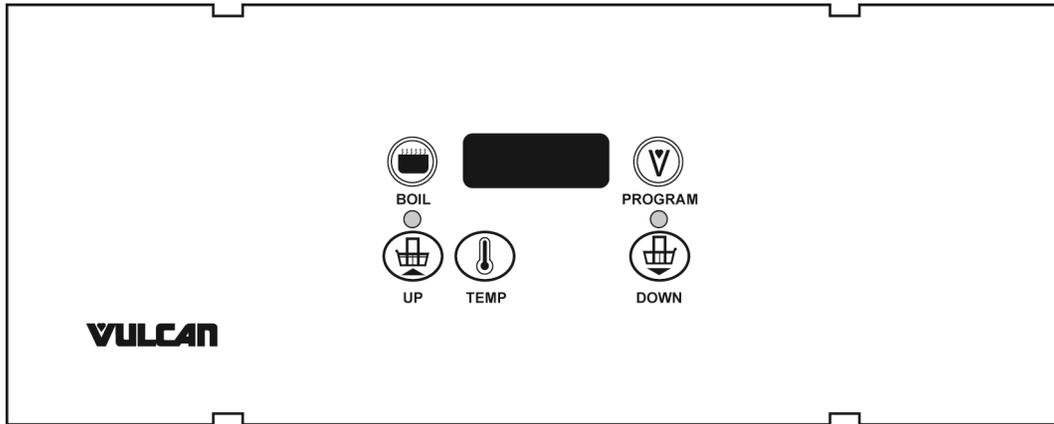
CONTROL PANELS

Solid State

- **OLDER CONTROLS:** Five product/programming keys: Left basket (up arrow), Right basket (down arrow), Temperature, Program (V), and Boil.
- **NEWER CONTROLS:** Five product/programming keys: Timer Left (up arrow), Timer Right (down arrow), Temperature, Program (V), and Filter.

- OLDER CONTROLS: Four-digit display window that indicates fryer status, time left to cook, and actual or set point temperature.
- NEWER CONTROLS: Eight-digit display window that indicates fryer status, time left to cook, and actual or set point temperature.
- Two LED lamps that illuminate when a basket timer is being programmed, or blink when a timer is activated (left or right basket).

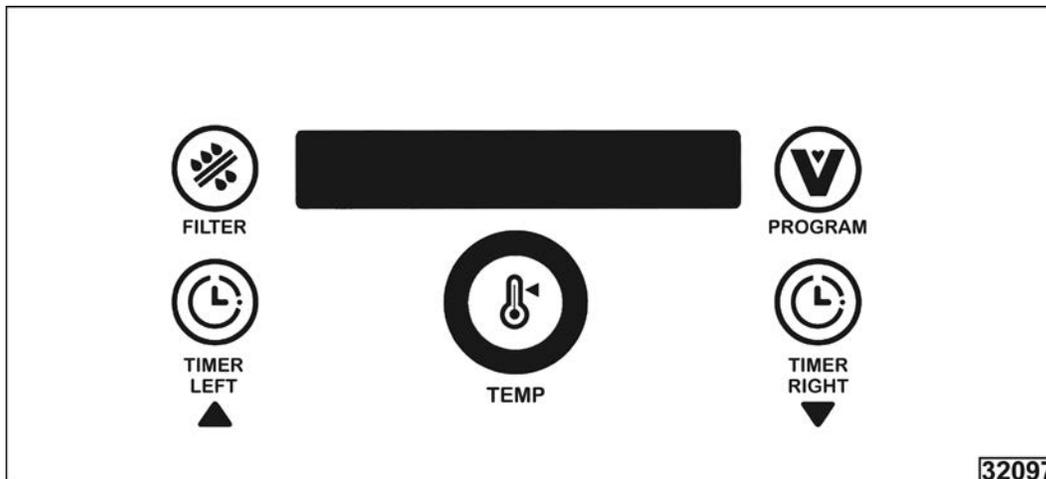
SOLID STATE CONTROL (OLDER) D MODEL



A11297

Fig. 3

SOLID STATE CONTROL (NEWER) D MODEL



32097

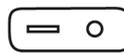
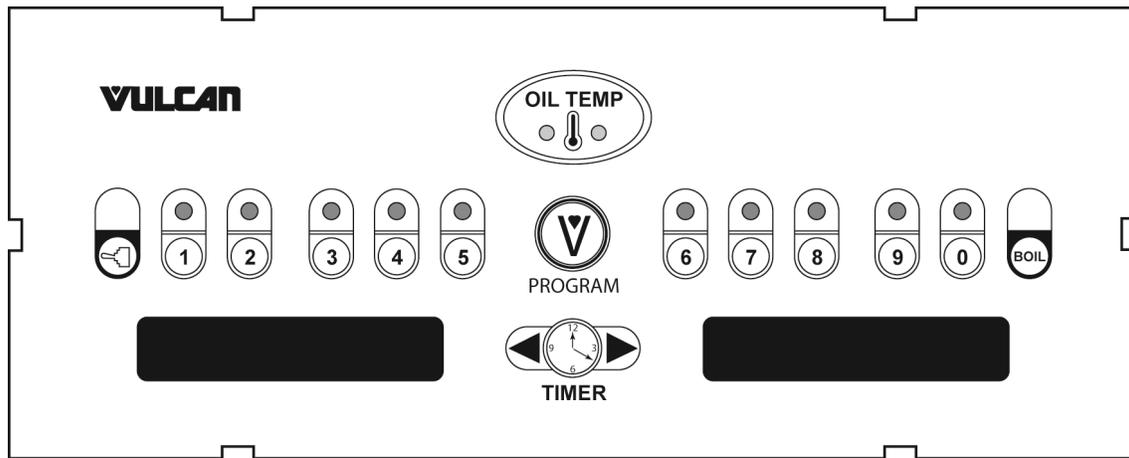
Fig. 4

Computer

- OLDER CONTROLS: Fifteen product/programming keys allow individual product cooking times for up to ten different products: Product/Programming keys 1 through 0, Toggle, Boil, Oil Temp, Program (V), and two Timer (arrow) keys.
- NEWER CONTROLS: Fifteen product/programming keys allow individual product cooking times for up to ten different products: Product/Programming keys 1 through 0, Toggle, Filter, Left and Right basket selection keys, Oil Temp, Program (V), and two Arrow keys.

- NEWER CONTROLS: Left and Right Basket selection keys that select which basket lift to use with the product/programming keys, and initiate the program cooking cycle (for units without basket lifts).
- Left and Right Arrows that initiate programming of time and checking stored values (left 1-5 and right 6-0).
- Left and Right displays that indicate actual or set point temperature, remaining times, operating mode, and completion of preheat period.
- Two LED lamps on the "OIL TEMP" key that indicate "heat on" and ten individual LED lamps above each of the ten product/programming keys: LED's blink when a product key is activated, and remain solid when using a key for programming.

COMPUTER CONTROL (OLDER) C MODEL



AI1298

Fig. 5

COMPUTER CONTROL (NEWER) C MODEL



31108

Fig. 6

REMOVAL AND REPLACEMENT PARTS

COVERS AND PANELS



WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.

Control Panel

1. Remove screws at top of control panel, and rotate panel downward.

SOLID STATE "D" MODEL SHOWN



Fig. 7

2. Disconnect wiring harness, then lift off panel.

NOTE: The cooking control, control box, interface board, and wiring harness are now accessible.

3. Reverse procedure to install.

Basket Lift Covers



WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

WARNING

All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

1. Disconnect gas line at fryer.
2. Move fryer out from wall to access basket lift covers.

3. Remove basket assembly lift arms from support rods.
4. Remove screws securing upper cover to flue wrap.

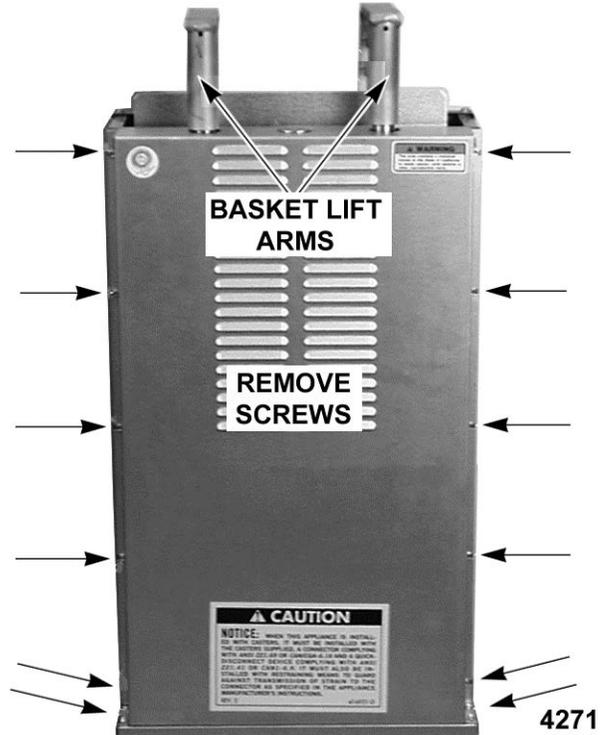


Fig. 8

- A. Lift upper cover over support rods and place cover to the side.

5. Remove screws securing lower cover to motor mounting base.



Fig. 9

6. Reverse procedure to install.

COOKING CONTROLS



⚠ WARNING

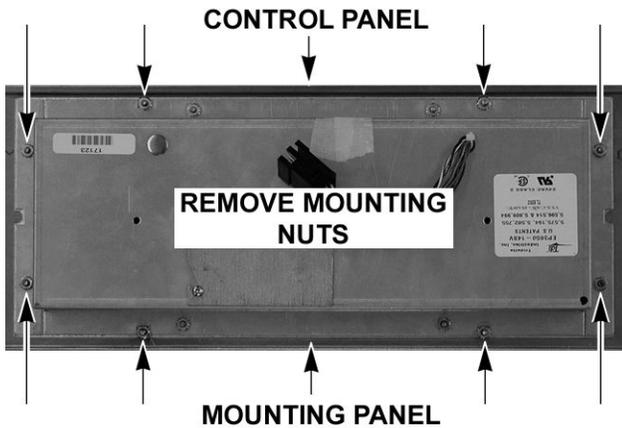
Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.

NOTICE

Certain components in this system are subject to damage by electrostatic discharge (ESD) during field repairs. An ESD kit is required to prevent damage. The ESD kit must be used anytime the circuit board is handled.

1. Remove the control panel as outlined in Control Panel under COVERS AND PANELS.
2. To remove:
 - A. Solid State Control: proceed to Step 3.
 - B. Computer Control: Remove mounting nuts securing computer control and mounting panels to front control panel. Proceed to Step 4.

COMPUTER CONTROL "C" MODEL

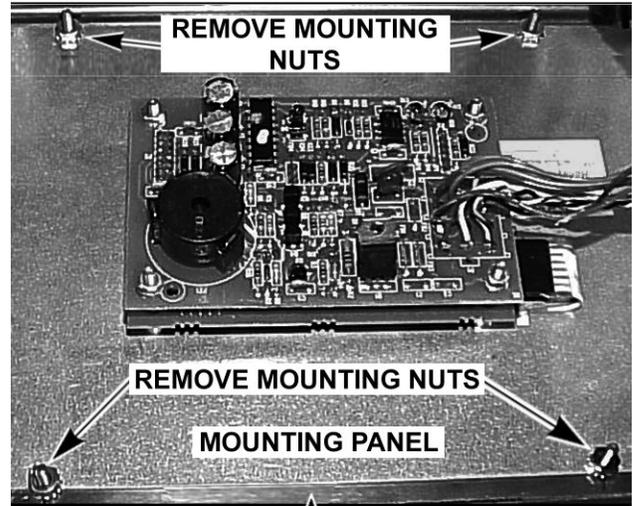


7395

Fig. 10

3. Remove mounting nuts securing solid state control to mounting panel.

SOLID STATE CONTROL "D" MODEL



CONTROL PANEL

7396

Fig. 11

4. Lift control (with mounting panel attached) off front control panel.
5. Reverse procedure to install, and check for proper operation.

NOTE: If a replacement control was installed, program the control with customers' settings and products.

FILTER VALVE AND DISCARD VALVE SWITCHES



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.

1. Open the door to the fryer section being serviced.
2. Remove burners closest to the switch being serviced (if applicable) as outlined under GAS BURNERS.
3. Disconnect lead wire connector (2-pin) from the appropriate switch.
4. Remove switch mounting screws.

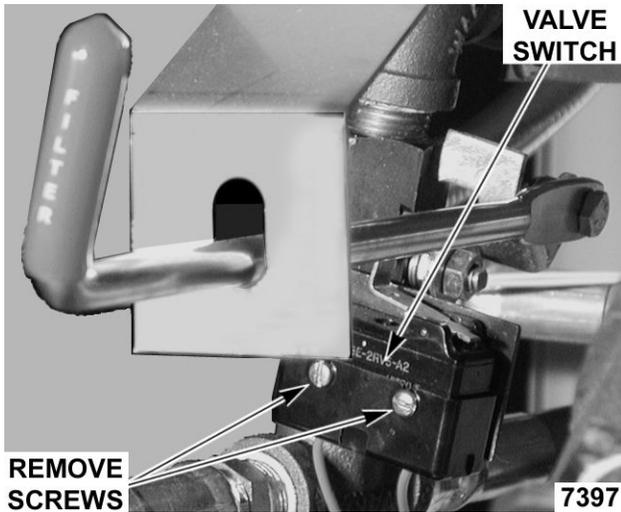


Fig. 12

- Reverse procedure to install, and check for proper operation.

NOTE: Switches are not adjustable.

GAS BURNERS



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.



⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

- Open door to fryer section being service.
- Remove gas burner shipping ties (if installed).



Fig. 13

- Lift up gas burner, and tilt top of burner toward fryer until it clears gas orifice at the bottom.

NOTE: The burners mount to the fryer's burner mounting bracket by shoulder bolts that rest in the keyway slot.

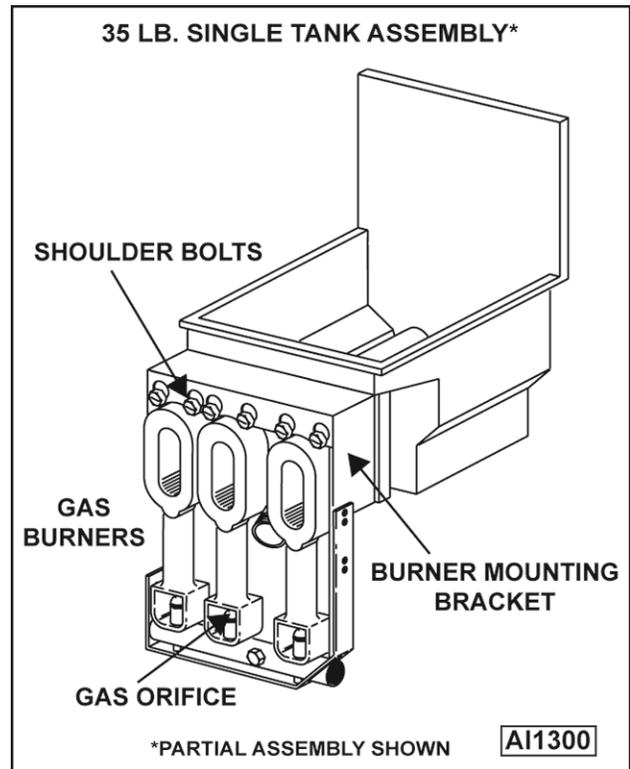


Fig. 14

- Reverse procedure to install.

GAS ORIFICES



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.



⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

1. Remove gas orifice spud from orifice extension.

NOTE: The spud screws into orifice extension. When installing, do not overtighten the spud, or damage to the threads may occur.

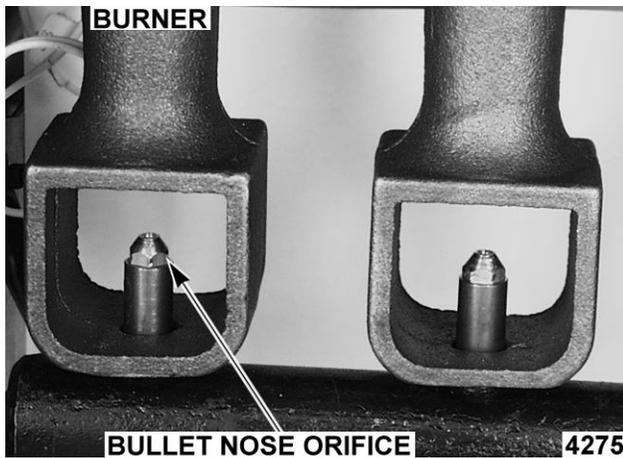


Fig. 15

2. Reverse procedure to install.

GAS COMBINATION VALVE



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.



⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

⚠ WARNING

All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

NOTE: Gas combination valves are not serviceable, and should not be disassembled. Once the problem has been isolated to this control, replace it. Do not attempt to repair the assembly.

1. Remove burners as outlined in [GAS BURNERS](#).
2. Disconnect lead wires from gas combination valve.
3. Remove cotter pin securing handle to gas valve ON/OFF knob. Pull handle (with knob bracket attached) away from valve assembly.
4. Disconnect pilot tube compression fitting.
5. Disconnect gas inlet compression fitting.
6. Separate the gas line union at gas outlet on the gas valve, then remove valve.

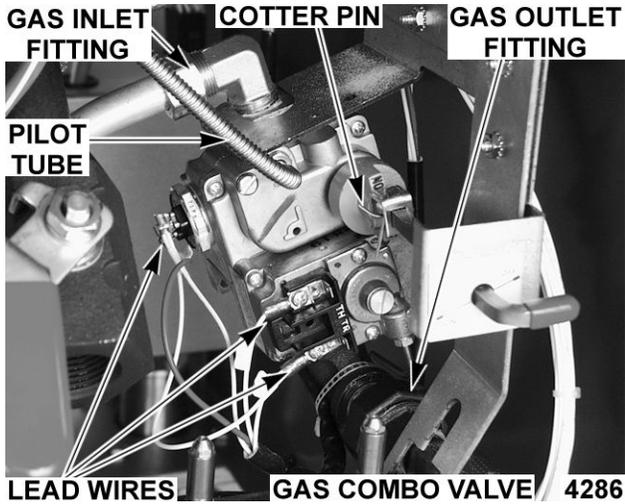


Fig. 16

NOTE: Remove fittings on gas valve and install (in same orientation) on the replacement valve.

- Reverse procedure to install, and check for proper operation.

GAS PILOT



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.



⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

⚠ WARNING

All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

- Remove burners as outlined in GAS BURNERS.
- Disconnect ignitor cable (at boot) from ignitor/ flame sense electrode on the gas pilot.
- Disconnect ground wire from pilot bracket.
- Disconnect pilot tube compression fitting.
- Remove screws securing gas pilot to mounting bracket, and remove pilot.

Gas Pilot for Electronic Ignition Shown

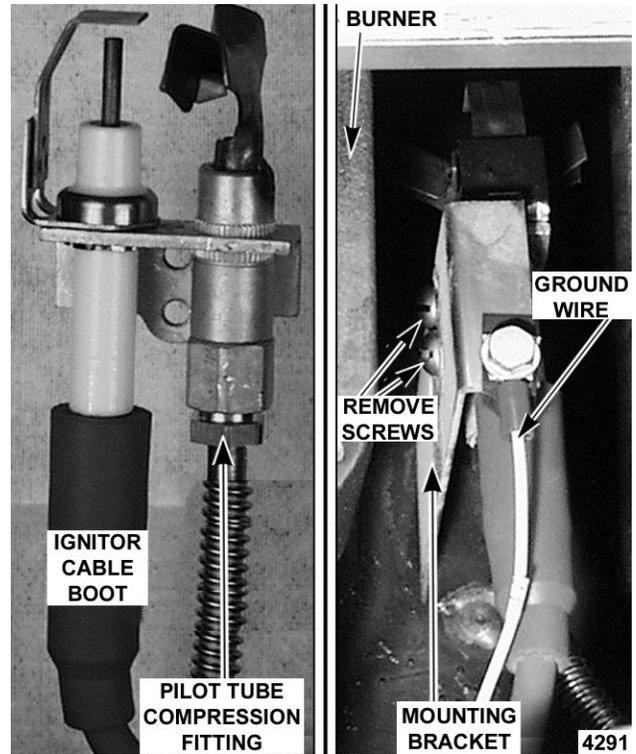


Fig. 17

- To remove gas orifice from pilot for inspection or cleaning, disconnect the gas orifice fitting from pilot body.

NOTICE

If orifice is clogged with debris, clean with air or liquid only.

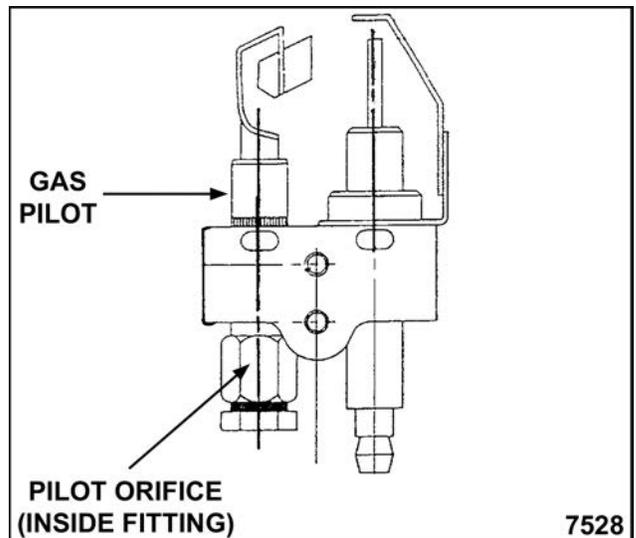


Fig. 18

- Reverse procedure to install, and check for proper operation.

TEMPERATURE PROBE



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.



⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

NOTICE

Do not sharply bend and kink the temperature probe or damage may occur.

1. Drain frying oil from fryer tank.
2. Disconnect temperature probe and drain valve interlock (DVI) connector.

3GRD85F RIGHT SIDE FRYER SECTION SHOWN

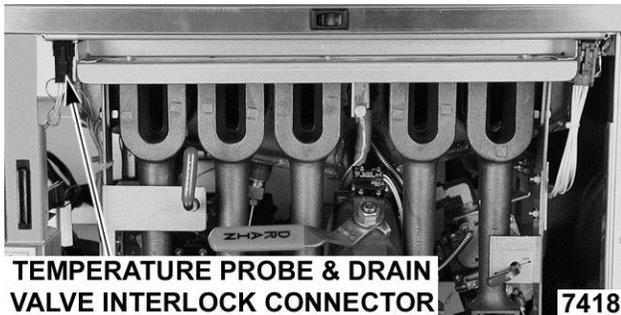


Fig. 19

NOTE: The connector has six pin positions, and is labeled "G" on the wiring diagram.

3. Remove the temperature probe lead wires from the 6-pin female connector.

PIN NO.	DESCRIPTION
G-1	Probe High (red)
G-2	Empty
G-3	Probe Low (white)
G-4	Empty
G-5	DVI Switch (24VAC) N.O. IN
G-6	DVI Switch (24VAC) OUT

4. Remove the burners as outlined in GAS BURNERS in order to access the probe retaining and packing nuts at the bottom of the tank.
5. Remove the probe retaining and packing nuts.

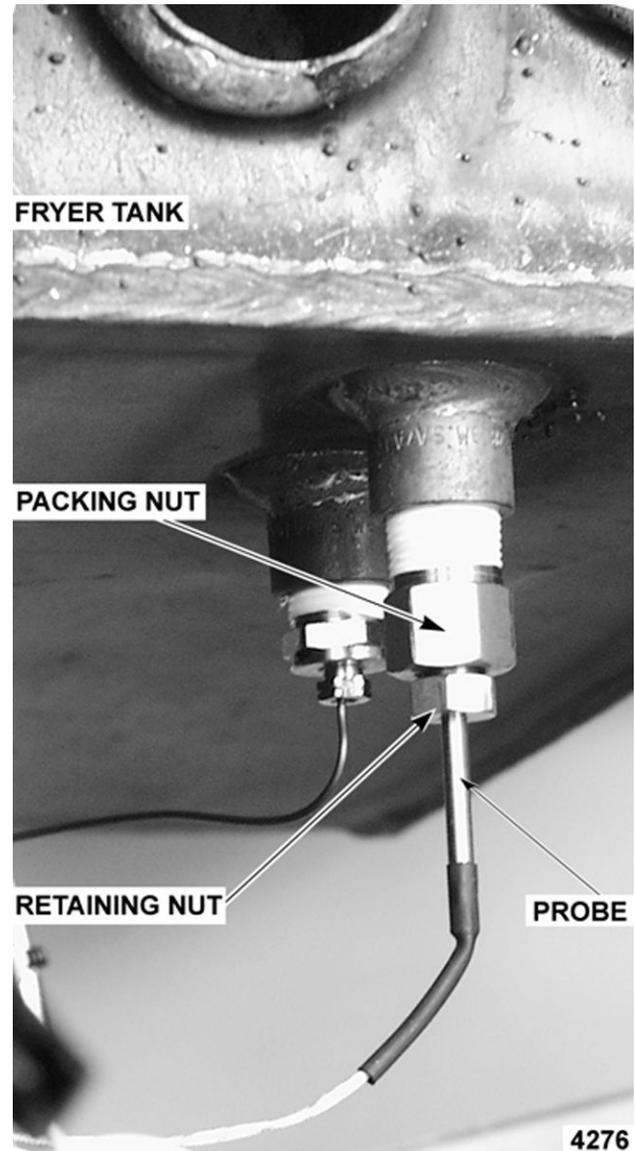


Fig. 20

6. Remove screws securing probe mounting clips and probe to fryer heat tube (inside tank), then remove probe.

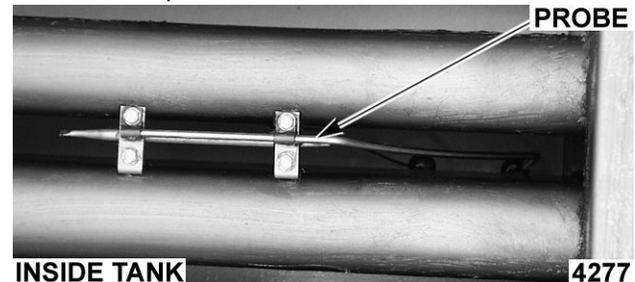


Fig. 21

7. Reverse procedure to install.
8. Check cooking controls calibration as outlined in COOKING CONTROL CALIBRATION.

HIGH LIMIT THERMOSTAT



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.



⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

NOTICE

Do not sharply bend and kink the temperature probe, or damage may occur.

1. Drain frying oil from fryer tank.
2. Remove burners as outlined in GAS BURNERS.
3. Disconnect lead wires from high limit thermostat.
4. Remove screws securing the high limit to mounting bracket.

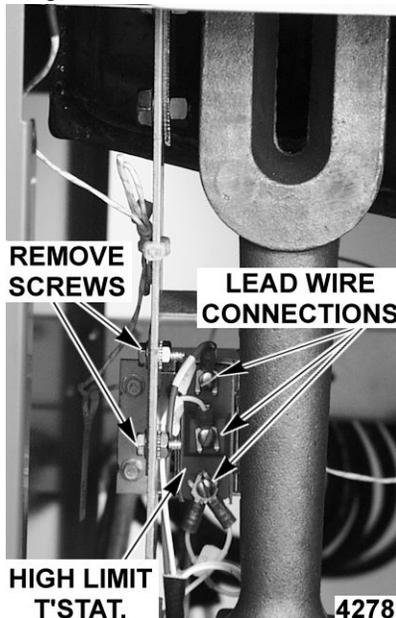
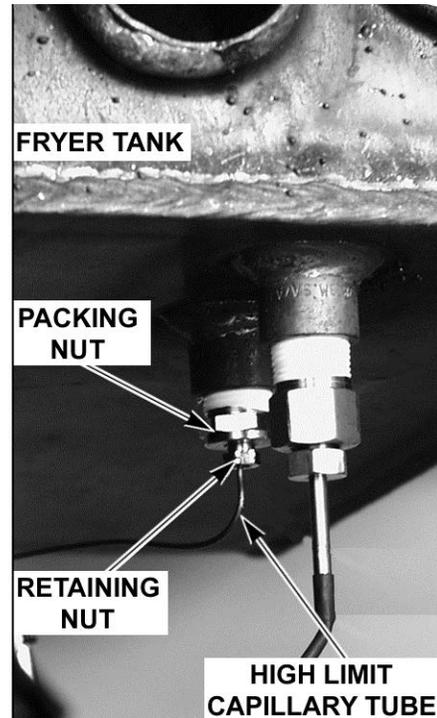


Fig. 22

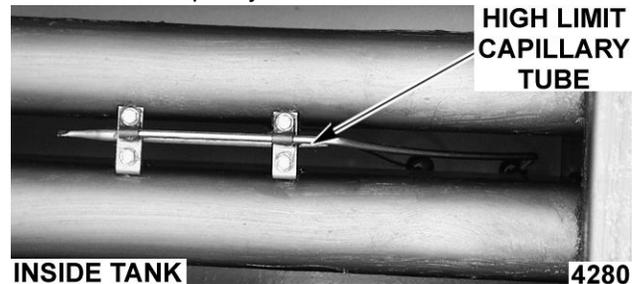
5. Remove the capillary tube retaining and packing nuts from bottom of fry tank.



4279

Fig. 23

6. Remove screws securing mounting clips and capillary tube to fryer heat tube (inside tank), then remove capillary tube.



4280

Fig. 24

7. Reverse procedure to install.

POWER SUPPLY BOX



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.



⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

⚠ WARNING

All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

1. Disconnect gas line at rear of fryer.
2. Move fryer out from wall to access rear of fryer.
3. Open door to fryer section being serviced.
4. Disconnect ignitor cable (at boot) from ignitor/ flame sense electrode on gas pilot.
5. Disconnect ground wire from pilot bracket.
6. From rear of fryer:
 - A. Disconnect wire harness connectors and power from power supply box.
 - B. Remove mounting bolts securing power supply box to fryer. Access bolts from bottom of rear support channel frame.

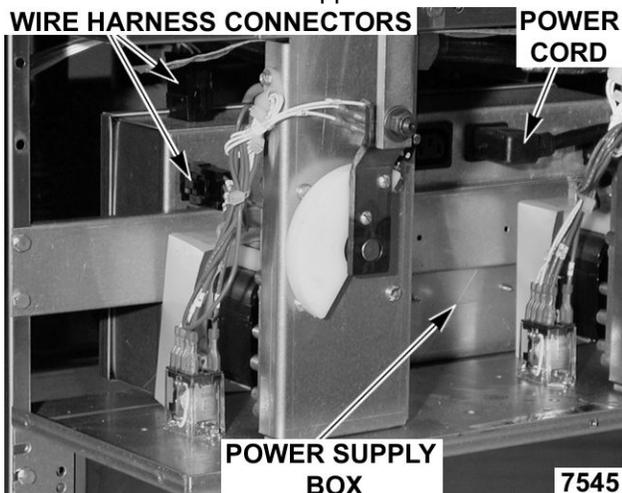


Fig. 25

7. Bring power supply box out from bottom of fryer.

8. To access components in power supply box, remove screws securing cover, and lift from box.

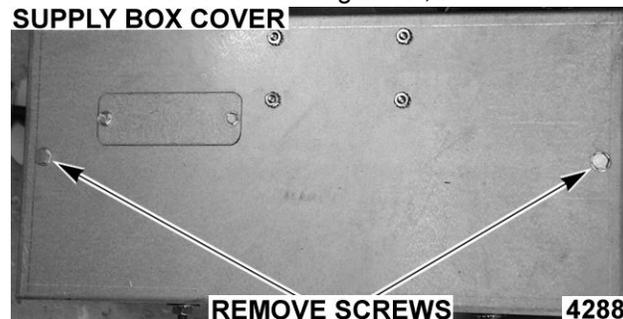


Fig. 26

9. Reverse procedure to install.

IGNITION CONTROL MODULE



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.



⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

1. Remove power supply box as outlined in POWER SUPPLY BOX.
2. Access ignition control module, and remove all lead wires and ignitor cable from module. Take note of individual wire positions.
3. Remove screws securing ignition module, and lift it out of power supply box.

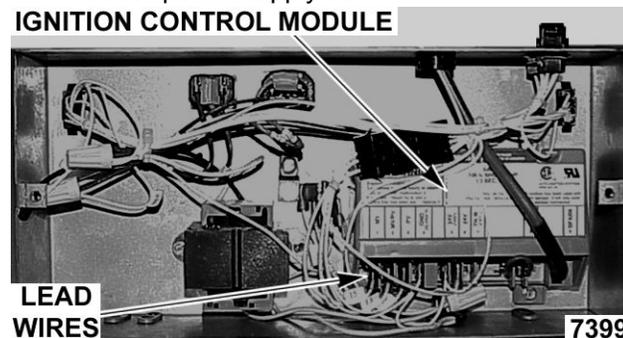


Fig. 27

4. Reverse procedure to install, and check for proper operation.

BASKET LIFT TUBE



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.

1. Remove basket lift cover as outlined in Basket Lift Covers under COVERS AND PANELS.
2. Remove nut securing lift bar to lift tube.
3. Remove screws securing lift tube bracket to fryer, then remove bracket and lift tube.

BASKET LIFT TUBE REAR VIEW

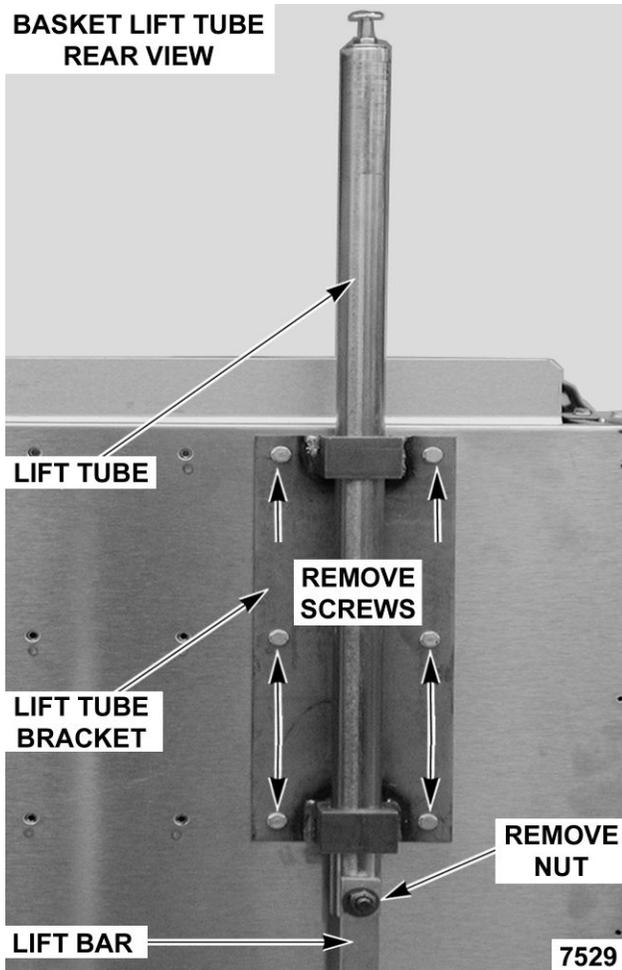


Fig. 28

4. Reverse procedure to install.

BASKET LIFT MOTOR



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.

1. Remove basket lift covers as outlined in Basket Lift Covers under COVERS AND PANELS.
2. Remove basket lift tube as outlined under BASKET LIFT TUBE.
3. Disconnect lead wires from cam switch and basket lift motor.
4. Loosen set screws securing crank arm assembly to the basket lift motor shaft.

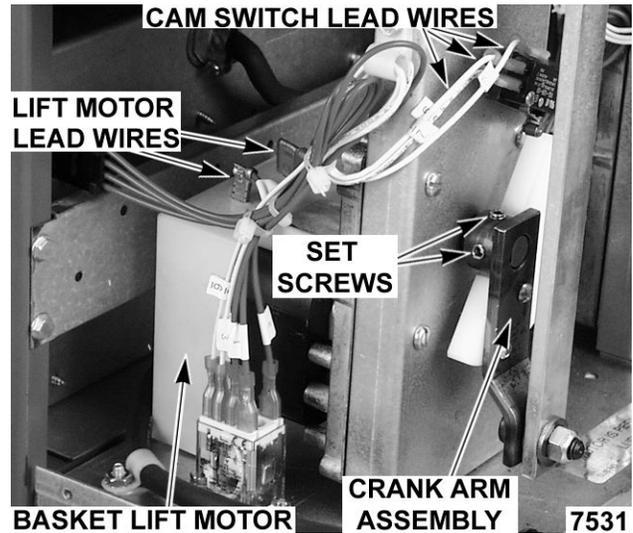


Fig. 29

5. Remove screws securing basket lift motor to cam bracket, then remove motor from bracket.

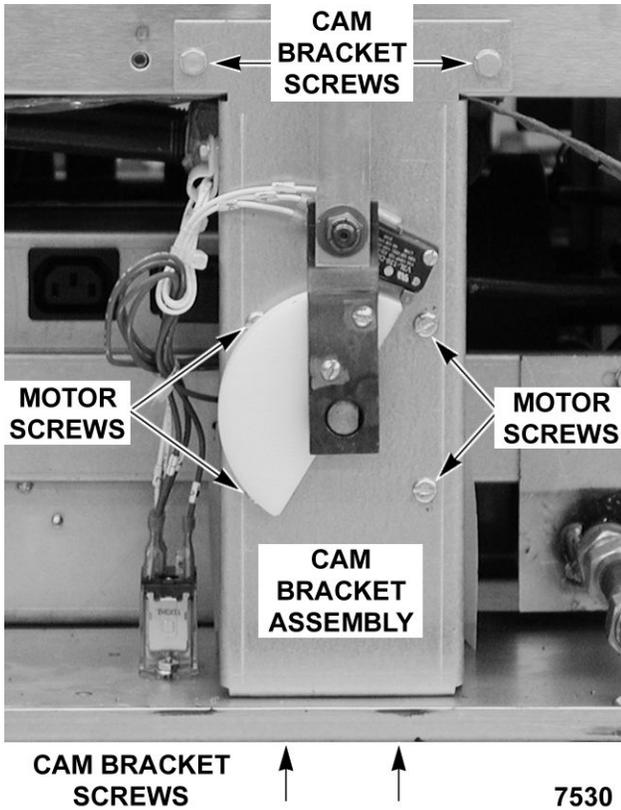


Fig. 30

- Reverse procedure to install, and check for proper operation.

NOTE: After reinstalling motor, make sure all wire leads are clear of moving parts.

BASKET LIFT CAM SWITCH



WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.

- Remove basket lift cover as outlined in Basket Lift Covers under COVERS AND PANELS.
- Remove basket lift tube as outlined under BASKET LIFT TUBE.
- Disconnect lead wires from cam switch.
- Remove screws securing cam switch to cam bracket.

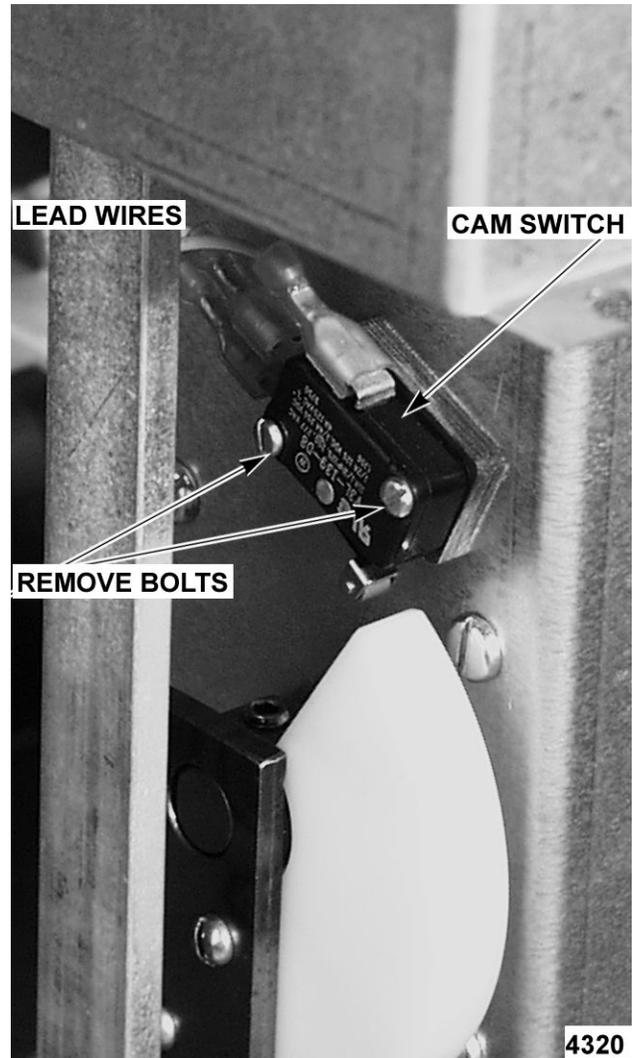


Fig. 31

- Reverse procedure to install.

BASKET LIFT CAM



WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.

- Remove basket lift covers as outlined in Basket Lift Covers under COVERS AND PANELS.
- Remove nut securing lift bar to cam assembly.
- Loosen cam set screw.
- Remove screws securing cam to crank arm assembly.

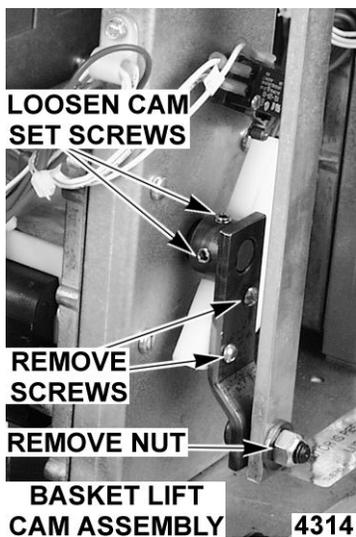


Fig. 32

5. Reverse procedure to install.

PUMP AND MOTOR



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.

1. Open both fryer cabinet doors above the filter tank drawer.
2. Pull out filter drawer, remove filter tank assembly, and push tank support arms back underneath fryer.

NOTE: The remaining steps are written for front removal of pump assembly. If access to back of fryer is available, it may be easier to remove pump from the rear.

3. Remove burners from right side fryer section above filter tank drawer as outlined under GAS BURNERS.
4. Disconnect the electrical connection to motor.
5. Separate swivel hose connections at pump.

NOTE: When viewed from pump end, the right side is the intake port, and the left side is the discharge port.

6. Remove motor mounting bolts.
7. Remove motor and pump (pipe fittings attached) from fryer.

- A. If replacing pump and motor, remove existing pipe assemblies and reuse.

8. Reverse procedure to install.

NOTE: Ensure rubber vibration pad or grommets are installed under motor mounting plate.

FRY TANK ASSEMBLY



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.



⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

⚠ WARNING

All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

1. Drain frying oil from fryer tank.
2. Disconnect gas supply line to allow access to fryer from all sides.
3. Remove fryer baskets, crumb screen, and basket hanger.

NOTE: If fryer is equipped with automatic basket lifts, remove "lift arms" from support rods before fry tank removal.

NOTE: If fryer is a battery section, remove grease strip, and split the silicone seal between fryer section tanks with utility knife.

4. Remove control panel as outlined in Control Panel under COVERS AND PANELS.
5. On battery fryer sections only, remove bolts securing drain pipe flange to manual drain valve.
6. Disconnect temperature probe and drain valve interlock switch (DVI) connector (6-pin) on the left.
7. Disconnect the following lead wire connectors: main control harness (right), gas combination valve, and power supply box.
8. Disconnect ignitor cable and ground wire from gas pilot assembly.

9. Remove gas manifold and frame assembly.
 - A. For fryer section above filter drawer assembly on battery fryers or single floor model fryers, remove mounting nuts securing gas manifold and frame assembly to fryer's base frame.
 - B. For all other fryer sections in a battery only, remove mounting nuts securing gas manifold and frame assembly to V-shaped frame support bracket.
10. Separate oil return line (hose or flexible tubing) fitting at the elbow.
11. Separate gas line compression fitting at top of gas combination valve (inlet).
12. Remove bolts securing gas line support bracket on left side of gas manifold and frame assembly. Allow gas line support bracket to swing out of the way, then replace bolts in frame. Hand-tighten only.
13. Remove screws securing the top of fry tank to flue wrap.
14. Grasp fry tank at top (by flue) and front lip, then lift fry tank assembly from fryer body. Place assembly on floor or table for removal of components.
15. Remove gas pilot assembly as outlined under GAS PILOT.
16. Remove temperature probe as outlined under TEMPERATURE PROBE.
17. Remove high limit thermostat as outlined under HIGH LIMIT THERMOSTAT.
18. Remove filter valve assembly and oil return line piping from fryer. If removing left side fryer tank above filter drawer assembly, disconnect oil line, and remove discard valve assembly from fryer.
19. Remove bolts securing gas manifold and frame assembly to fry tank.
20. Pull gas manifold assembly from fry tank.
21. Disconnect drain valve interlock switch (DVI) connector (2-pin), and remove manual drain valve.
22. Remove screws securing flue box to fry tank, then remove flue box.
23. Reverse procedure to install all parts removed from original fry tank onto replacement fry tank, then install assembly.

SERVICE PROCEDURES AND ADJUSTMENTS

TEMPERATURE PROBE TEST

The temperature probe is used for both the solid state control and the computer control. The probe is an RTD (resistance temperature detector) of the thermistor type. As temperature increases, resistance value decreases.

Probe Fault

If temperature probe fault or high temperature condition occurs, a fault message will be displayed, and the electronic alarm will sound continuously. Heat demand and basket lift outputs are deactivated. If a cooking cycle is in process (timer active), it will be canceled, and the keypad disabled.

This will continue until the fault clears, power is cycled, or problem is resolved.

Control Type	Display Message
SOLID STATE	An open will display "Prob," and a short or a high temperature condition will display "HI."
COMPUTER	An open will display "PROBE OPEN," and a short or a high temperature condition will display "PROBE SHORT."

To Check:

1. Disconnect temperature probe and drain valve interlock (DVI) connector.

3GRD85F RIGHT SIDE FRYER SECTION SHOWN

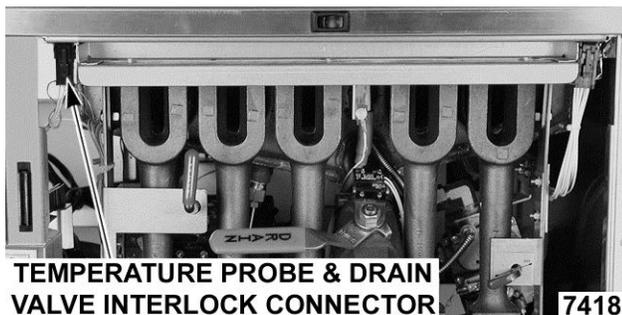


Fig. 33

NOTE: The connector has six pin positions, and is labeled "G" on wiring diagram.

2. Test probe using a VOM to measure resistance. Place meter probe leads in pins 1 and 3.
 - A. If measured resistance values are within the allowable range, probe is functioning properly. Reverse procedure to reinstall.

- B. If measured resistance values are outside the allowable range, install replacement probe, and check for proper operation.

Temperature (°F)	Resistance (Ω)
77	90,000 - 110,000
350	604 - 836
415 ¹	302 - 369
460 ²	191 - 233
NOTE: ¹ High temperature alarm level for cooking controls. ² Shorted probe equivalent temperature.	

COOKING CONTROL CALIBRATION

1. Check level of frying oil in tank. Level must be between the MIN and MAX fill lines before proceeding.
2. Allow the oil to cool to below 300°F.
3. Place a thermocouple in the geometric center of fry tank one inch below oil surface.
4. Set cooking control to 350°F, and turn on fryer.
5. Allow frying oil temperature to stabilize (normally three cycles).

NOTE: Agitate frying oil to eliminate any cold zones.

6. Record temperature reading from meter when gas burners turn off, and when they turn on for at least two complete heating cycles.
7. Calculate average temperature by adding two temperature readings: when gas burners turn off and when gas burners turn on, and then divide this sum by two.

$$[\text{Temp. (burners off)} + \text{Temp. (burners on)}] / 2 = \text{Average Temp.}$$

$$\text{Example: } 360^\circ + 340^\circ = 700^\circ; 700^\circ / 2 = 350^\circ\text{F}$$

The average temperature should be 350°F (±5°F).

- A. If average temperature reading is within tolerance, cooking control is properly calibrated.
- B. If average temperature reading is out of tolerance, perform the following:

- 1) Solid State Control - Adjust offset temperature accordingly as outlined under SOLID STATE CONTROL - OLDER CONTROLS in Service Procedures and Adjustments section.
- 2) Computer Control - Adjust offset temperature accordingly as outlined under COMPUTER CONTROL - OLDER CONTROLS or COMPUTER CONTROL - NEWER CONTROLS in Service Procedures and Adjustments section.

C. Allow fryer to cycle twice, and calculate average temperature.

8. If the above adjustment cannot be obtained, check temperature probe as outlined under TEMPERATURE PROBE TEST.

ELECTRONIC IGNITION SYSTEM

Operation

When the main power switch is turned on, the ignition control module is energized with 24 volts between terminals 5 and 6.

An output of 24 volts is sent from terminals 2 and 3 to the pilot coil on the combination valve, allowing gas flow to pilot. Spark voltage is sent from terminal 9 to begin sparking at ignitor/ flame sense electrode. The sparking will continue until an adequate pilot flame is sensed, or for a maximum of 90 seconds.

If pilot ignition is not established within the first several seconds of ignition trial time, the cooking control displays a message indicating "pilot out" or "ignition failure" as the ignition module continues to generate a spark at the ignitor/ flame sense electrode.

If pilot is not established within the 90-second ignition trial time, the ignition module locks out power to the gas valve. A message is displayed by the control indicating "ignition lockout," keypad is disabled, and the electronic alarm will sound continuously.

The system remains locked out until the power switch is cycled to reset the system and restart the ignition trial cycle.

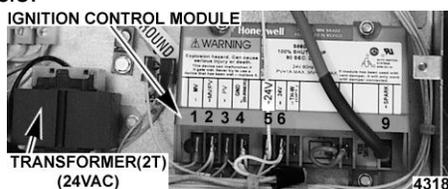


Fig. 34

Once the pilot flame is confirmed, a 24-volt output from terminal 1 will provide the ignition status input signal

to the cooking control. When the cooking control calls for heat, the heat output is activated, and power is applied to the heat control Triac on the Control Interface Board. With the Triac powered, the main valve coil on the combination valve is then energized, allowing gas flow to the burners.

Terminal	Description
1	MV (main voltage) - 24VAC output will be present, provided the ignitor/ flame sense electrode is sensing an adequate pilot flame.
2	MV/PV (common).
3	PV (pilot voltage) - 24VAC output will be present after the ignition module is powered. The voltage will remain present, provided an adequate pilot flame is sensed. If the pilot flame is not sensed within the ignition trial time, the ignition module locks out, which removes the output voltage.
4	Burner ground.
5	24VAC ground.
6	24VAC hot (input).
9	Spark voltage output to ignitor/ flame sense electrode and for pilot flame current "rectification."

FLAME SENSE CURRENT CHECK

1. Turn off power switch.
2. Access ignition control module in power supply box.
3. Remove jumper wire between terminals marked with an asterisk (*) and an 8.

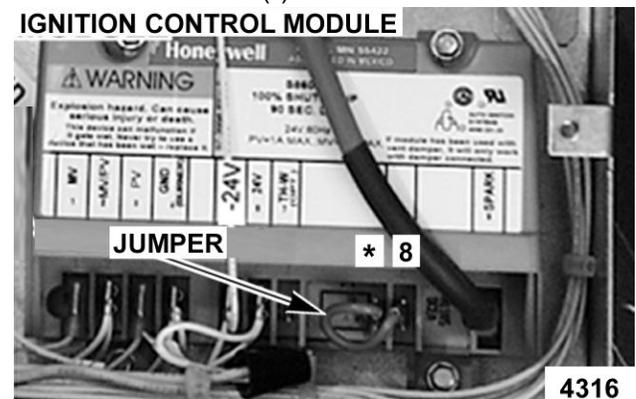


Fig. 35

4. Set VOM to micro amp scale (DC) and connect meter leads at the same terminals. Negative (-) meter lead to asterisk (*) terminal, and positive (+) meter lead to terminal 8.
5. Turn on power switch, and set cooking control to call for heat.
6. Meter reading should be above 1.0 micro amp (minimum) and steady.
 - A. If reading is greater than or equal to the value stated in Step 6, then flame sense current is within tolerance.
 - 1) Turn off power switch, and replace jumper wire.
 - B. If reading is less than the value stated in Step 6, turn of power switch and replace jumper wire.
 - 1) Perform ELECTRONIC IGNITION CONTROL TEST.

ELECTRONIC IGNITION CONTROL TEST

If ignition control module is not generating a spark to ignite gas pilot, perform the following checks.

1. Turn on power switch, and verify ignition control module is receiving power from transformer.
 - A. If 24VAC is present between terminals 5 and 6 on ignition control module, then module is receiving power. Turn off power switch, and proceed to Step 2.
 - B. If 24VAC is not present, then find the source of the problem.



⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.



⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

⚠ WARNING

All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

2. Verify all electrical connections on ignition control module are secure.
3. Verify ground wire connection on ignition control module and gas pilot mounting bracket are clean and secure. The gas pilot should have good metal-to-metal contact to pilot mounting bracket on fryer.
4. Remove gas pilot, and check the following:
 - A. Inspect ceramic insulator on ignitor/flame sense electrode for cracks or evidence of exposure to extreme heat, which can allow leakage to ground. If either of these conditions exists, install a replacement gas pilot.
 - B. Inspect ignitor electrode and ground clip for contaminates or corrosion. Clean those surfaces as necessary.
 - C. The gap between ignitor/flame sense electrode and ground clip should be 1/8 inch. If gap is outside of this dimension, bend ground clip as necessary to make the adjustment.

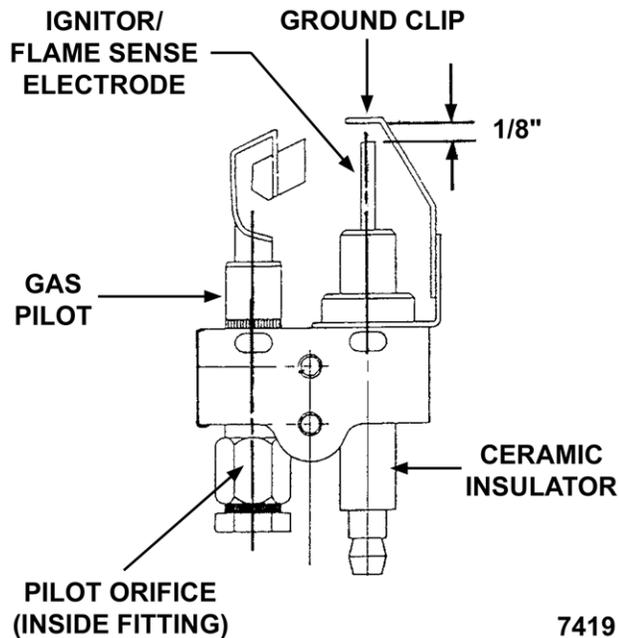


Fig. 36

7419

- D. Check ignitor cable connection for tightness and damaged insulation. If ignitor cable appears to be damaged, then install a replacement ignitor cable.
5. With gas pilot installed, and ignitor cable connected, reconnect power and turn on gas supply.
6. Turn on power switch, and observe spark from ignitor.
 - A. If spark from ignitor is present and ignites gas for pilot, lighting burners, then the system is working properly.
 - B. If gas pilot lights but does not maintain an adequate flame during the trial for ignition (90 seconds), check pilot orifice for clogging.

NOTICE

If orifice is clogged with debris, clean with air or liquid only.

- C. If spark from ignitor is present but does not ignite pilot gas before ignition control module locks out, there may not be enough gas in the line for ignition.

Turn off power switch to reset the module. Wait 5 minutes between ignition tries for unburned gas to vent. Turn on power switch. Sparking should resume to ignite pilot. Module may need to be reset several times before ignition takes place.

- D. If ignitor is still not sparking, turn off power switch, disconnect power, and turn off gas supply.

7. Install a replacement ignition control module, and check for proper operation.

GAS MANIFOLD PRESSURE ADJUSTMENTS

**WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.

**WARNING**

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

1. Open doors and turn off gas combination valve.
 2. To measure manifold pressure, remove the 1/8-inch NPT plug (pressure tap) on the outlet side of valve, and attach a manometer.
- NOTE:** Gas manifold pressure can also be measured at pressure tap in manifold. However, the fryer drain pipe may need to be removed for access.
3. Turn on gas supply, gas combination valve, and main power switch.
 - A. Verify burners light.
 4. Observe manometer pressure reading, and compare to pressure chart near the end of this procedure.
 - A. If other appliances are connected to the same gas line, turn on all of them, and check manometer pressure reading again. If a pressure drop of 1/2" W.C. or more is observed, then gas supply needs to be checked by gas line installer, or the local gas company for adequate sizing.
 - B. If adjustment is necessary, proceed to Step 5.
 5. Remove adjustment screw cap to access pressure adjustment screw.
 - A. To increase pressure, turn screw clockwise. To decrease pressure, turn screw counterclockwise.

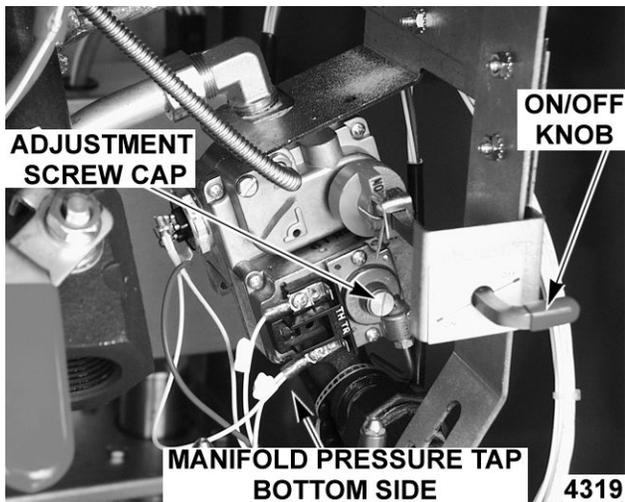


Fig. 37

NOTE: Accurate gas pressure adjustments can be made only with gas on and burner lit.

6. Set pressure as outlined below:

GAS TYPE	PRESSURE READINGS (INCHES W.C.)			
	MANIFOLD	LINE		
		RECOMMENDED	MIN	MAX
Natural	4	7	5	14
Propane	10	11	11	14

NOTE: If incoming line pressure is less than minimum stated, then manifold pressure cannot be set correctly.

7. Once correct pressure has been set, turn off power switch, replace adjustment screw cap and 1/8-inch NPT plug (pressure tap) on outlet side of the valve.
8. Check for proper operation.

BASKET LIFT ARM ADJUSTMENT

1. With frying oil at room temperature, verify oil level is between MIN and MAX lines in fry tank. Add frying oil as needed.

NOTE: Frying oil will expand when heated. Do not fill fry tank past the MAX line.

2. Turn on power switch, and set temperature to 350°F. Allow frying oil to reach set temperature.
3. Check basket lift operation.
 - A. If necessary, adjust as outlined below.

4. When basket is in the up position, the bottom of the basket should be out of the oil. When basket is in the down position, the bottom of the basket should clear the crumb screen, and the product should be submerged.

- A. To adjust, remove basket arm from lift shaft, loosen stop nut and turn height adjustment bolt to raise or lower basket arm as required. Both baskets should be same height.
- B. Retighten stop nut when complete.

NOTE: If adjustment is too low when the basket is lowered, it will disengage from basket arm.

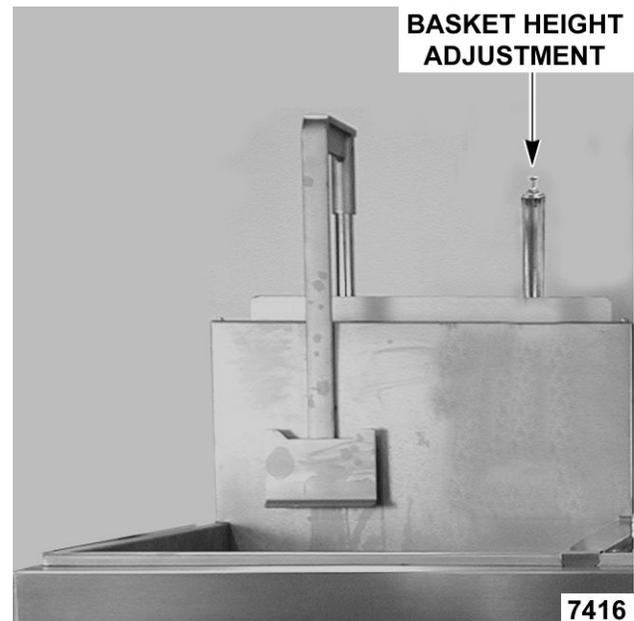


Fig. 38

SOLID STATE CONTROL - OLDER CONTROLS

Operation

Refer to the Installation & Operations manual for specific operating instructions.

Error Messages

For information on solid state control error messages, refer to SOLID STATE CONTROL under TROUBLESHOOTING.

Programming

The solid state control's programming mode is used to set the control's operational parameters.

NOTE: If a product key is active (timing), programming mode cannot be entered.

1. Press V key to enter Program Mode.

If the Parameter Lock feature is disabled, Program Mode entry is immediate. If the Parameter Lock feature is enabled "LoC" will be displayed.

Use the following key sequence (password) to enter Program Mode: Left basket/up; Left basket/up; Right basket/down; Right basket/down.

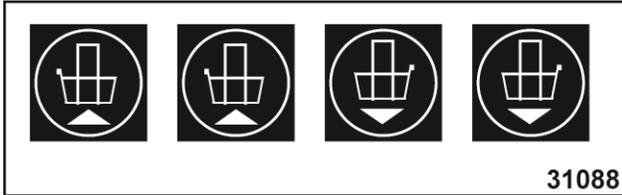


Fig. 39

NOTE: If the proper key sequence is not entered within 6 seconds, the controller exits Program Mode.

2. Beeper chirps on each successful key press. If a key is not pressed within 2 minutes, the control will automatically exit programming.
3. To scroll through each of the Program items, press V and release.
4. To exit Program Mode at any time, press V and hold for 1 second.

Program Item	Key Sequence	Display ⁴
Left Timer	<ul style="list-style-type: none"> • Press Left Basket to increase, or Right Basket to decrease cook time.¹ 	LED above left basket is on. 15:00 time value with flashing colon (MM:SS).
Right Timer	<ul style="list-style-type: none"> • Press Left Basket to increase, or Right Basket to decrease cook time.¹ 	LED above right basket is on. 15:00 time value with flashing colon (MM:SS).
Set Point Temperature	<ul style="list-style-type: none"> • Press Left Basket to increase, or Right Basket to decrease set point temperature.² 	340F or 171C Current set point with flashing F or C.
Calibration Offset	<ul style="list-style-type: none"> • Press Left Basket to increase, or Right Basket to decrease offset temperature (range -20 to +20).² 	00F or -00F Always in °F.
Melt Options	<ul style="list-style-type: none"> • Press Left Basket or Right Basket to scroll through Melt Options. 	CY 0 CY L = Liquid. CY S = Solid. CY 0 = No.
Parameter Lock	<ul style="list-style-type: none"> • Press Left Basket or Right Basket to select desired Parameter Lock condition.³ 	LoC parameter lock enabled or flashing. Uloc parameter lock disabled.
Degrees F or C	<ul style="list-style-type: none"> • Press Left Basket or Right Basket to select desired Temperature scale. 	F or C
NOTES:	<ol style="list-style-type: none"> ¹ Time will change in 1-second increments, accelerating if the button is held. ² Temperature will change in 1-degree increments, accelerating if the button is held. ³ Selecting Parameter Lock enabled will take effect on the next Program Mode entry. ⁴ Default value shown in bold. 	

SOLID STATE CONTROL - NEWER CONTROLS

Operation

Refer to the Installation & Operations manual for specific operating instructions.

Error Messages

For information on solid state control error messages, refer to SOLID STATE CONTROL under TROUBLESHOOTING.

Programming

The solid state control's programming mode is used to set the control's operational parameters.

NOTE: If a product key is active (timing), programming mode cannot be entered.

1. Press V key to enter Program Mode.

NOTE: Key must be pressed during power-up, when the display shows the revision level. **VULCAN** will be displayed when Program Mode is entered.

NOTE: Beeper chirps on each successful key press. If a key is not pressed within 2 minutes, the control will automatically exit Program Mode.

2. Scroll through the Program items by pressing and releasing V key.
3. Exit Program Mode at any time by pressing and holding V key for 1 second. **MELT L** will be displayed when Program Mode is exited.

NOTE: Do not change any settings beyond those listed in this chart.

Program Item	Key Sequence	Display ¹
Brand	Press TIMER RIGHT to change brand. Press V key to select and move to next item.	VULCAN, HOBART
Degrees Type	Press TIMER RIGHT to change unit of measurement type. Press V key to select and move to next item.	DEG F, DEG C
Tank Cleaning Mode	Press TIMER RIGHT to change tank cleaning mode. FILTER is for fryer with filtration system. BOIL is for fryer without built-in filtration system. Press V key to select and move to next item.	FILTER, BOIL
Heat Type	Press TIMER RIGHT to change heat type. GAS is for GR fryer. GAS* is for VK high-efficiency fryer. ELECTRIC is for ER fryer. Press V key to select and move to next item.	ELECTRIC, GAS, GAS*
Degrees Offset	Press TIMER LEFT to scroll through degrees plus, up to +14. ² Press TIMER RIGHT to scroll through degrees minus, down to -12. ² Press V key to select and move to end of program item selection.	00F
¹ Default shown in bold.		
² Temperature will change in 1-degree increments, accelerating if key is held.		

COMPUTER CONTROL - OLDER CONTROLS

Operation

Refer to the Installation & Operation Manual for specific operating instructions.

Service Programming

The computer control's "service programming" mode is used to perform system diagnostic tests or edit "program items" that affect the fryer's operation.

NOTE: If a product key is active (timing), service programming cannot be entered.

Error Messages

For information on computer control error messages, refer to "COMPUTER CONTROL" under "TROUBLESHOOTING."

Enter Service Mode

1. Press "V" key, and enter password (default: **1972**). Use product keys (1-9, 0) to enter values.
 - A. SERVICE is displayed in left window, and LED's above product keys 1, 2, 4, 5, 6, 7, and 8 come on.

- B. Beeper will chirp on each successful key press. If a key is not pressed within 2 minutes, the computer will automatically exit service programming (except in diagnostic or more service programming).
2. To exit a PROGRAM ITEM after making a selection, press "V" to accept and return to service programming.
3. To exit SERVICE PROGRAMMING and return to operation mode, press "V" key twice.

Program Item	Key Sequence	LED Status		Display ⁵	
		On	Off	Left	Right
Temperature Offset	Press "1" and enter offset temperature. Press "V" to accept selection. Press "TOGGLE" to display direction of offset (positive or negative).		All	OFF 00 F POSITIVE OR NEGATIVE	DEGREES DEGREES
Melt Cycle On/Off Times	Press "2" and set melt cycle ON time. Press LEFT or RIGHT "TIMER" key arrow and set melt OFF time.		All	MLTON:08 MLTOFF:26	MELT ON MELT OFF
Diagnostic Mode	Press "5" to enter diagnostic mode (outputs for heat, basket lifts, and cooking timers turned off). Press "1" to toggle left basket lift output. Left basket lift lowers. LED toggles on/off. Press "2" to toggle right basket lift output. Right basket lift lowers. LED toggles on/off. Press and hold "3" to temporarily activate heat demand (heat on). Release to deactivate heat demand (heat off). LED toggles on/off. ¹ Press "5" to test drain valve interlock. • If drain valve closed. • If drain valve open. Press and hold "6" to light all display elements. Press "7" to test ignition status input. ² • If gas valve on. • If gas valve off or ignition module lockout.	5, 7 5, 7 5, 7 5, 7 5, 7 5, 7 7 All 5, 7 5, 7 5		DIAGNOST L BASKET R BASKET HEAT DEM DRN ON DRN OFF *****	DIAGNOST L BASKET R BASKET HEAT DEM DRN ON DRN OFF *****
Temperature Ready Level	Press "6" to view the cooking cycle lockout temperature (always °F). To edit, enter the two-digit number desired. ³		All	READY40F	
More Service Programming Level	Press "8" to enter More Service Programming. To edit one of the selection, enter the two-digit number desired. To exit a selection, press "V" to accept and return to More Service Programming. Press "4" to view or edit the Shake Alarm duration: 0-98 seconds; 99-continuous alarm until canceled manually.	4, 5, 6		MORE DT-DUR13	SERVICE DURATION

Program Item	Key Sequence	LED Status		Display ⁵	
		On	Off	Left	Right
	Press "5" to view or edit the Hold Alarm duration: 0-98 seconds; 99-continuous alarm until canceled manually. Press "6" to view or edit the Cooking cycle cancel delay: 0-10 seconds. ⁴			HD-DUR. :05	DURATION
				CANCEL. :01	DELAY
NOTES:	<p>1 Oil temp LED's cycle on/off with heat.</p> <p>2 If gas valve is turned to ON, PILOT ON is displayed to indicate gas valve position is on, and computer is receiving input status signal from valve. If gas valve is turned to OFF, PILOT OFF is displayed, and gas ignition sequence starts. If pilot does not light within ignition trial time, PILOT OFF is displayed, and ignition module locks out. Service programming can still continue, but upon exit, PILOT OUT is displayed. Turn off power to reset.</p> <p>3 If the cooking temperature is below set point by this number, a cooking cycle cannot be started.</p> <p>4 The number of seconds to hold a product key during a cooking cycle in order to cancel the cycle.</p> <p>5 Default values are shown.</p>				

Display, LED, and Keypad Test

1. Initiate test by pressing and holding "5" while turning on power. Release key during display of software version level.
2. For each number key (1-9, 0) pressed, the corresponding value is displayed in each character position in the left and right displays. (Example: pressing "5" key will display "55555555" "55555555.")

NOTE: Beeper will chirp for as long as the key is held.

3. For each function key pressed, the following values are displayed in each character position on the left and right displays.

PROGRAM (V): "V"
 TEMPERATURE: "T"
 TOGGLE: "L"
 BOIL: "B"
 LEFT TIME: "<"
 RIGHT TIME: ">"

4. Turn off power to exit test.

COMPUTER CONTROL - NEWER CONTROLS

Operation

For operating instructions and programming, refer to OPERATOR MANUAL and computer controls programing start guide.

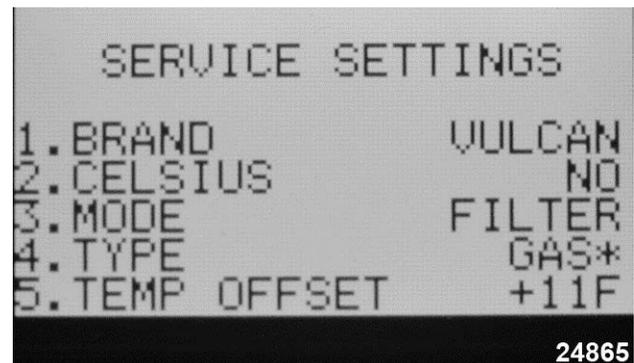


Fig. 40

Service Programming

The computer controls service settings mode is used to select the settings that affect fryer operation and to perform fryer diagnostic tests.

Enter Service Setting Mode



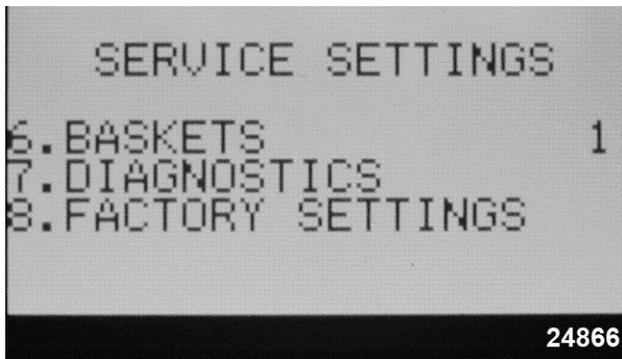


Fig. 42

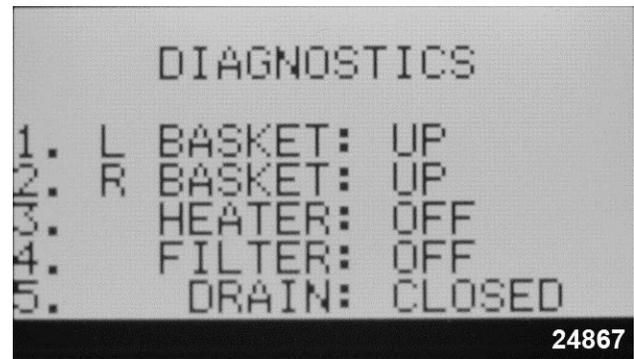


Fig. 43

NOTE: The controls heat demand output signal is off and the heat/ignition status input signal is ignored if the fryer is in cook mode or idling.

1. Turn power switch on and when the program revision is displayed, press PROGRAM to enter Service Setting Mode.
 - A. The SERVICE SETTINGS are shown on the left and right display screens.
2. Verify the settings shown on the display screen are correct for the fryer being serviced.
3. To change a service setting.
 - A. Press the desired product number key (1 thru 6) on the control panel that corresponds to the service setting number on the display screen.
 - 1) Beeper chirps on each successful key press and all LED's are off. When a service item is selected, only the keys required to change the setting are active.
 - B. Press toggle key to alternate between available selections, or use product number keys where indicated to enter a value. The current selection will be "blinking".
 - C. Press PROGRAM key to save the selection - "Blinking" stops.
 - D. Access the other service settings as necessary.
4. To enter DIAGNOSTICS mode, press product number key 7 on the control panel.

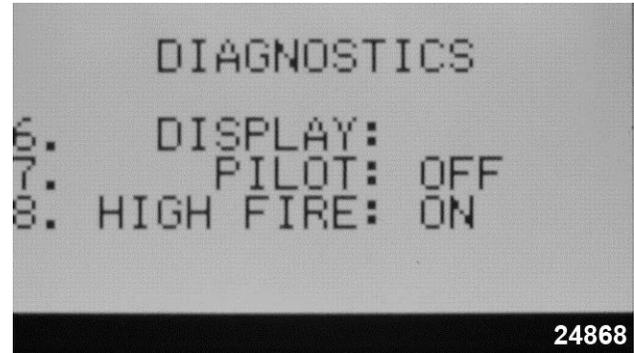


Fig. 44

- A. Press the desired product number key (1, 2, 3, 4, & 6) on the control panel that corresponds to the diagnostic test number on the display screen to check the output signal to the component.
 - 1) Press the same product number key again to turn the output off.

NOTE: Item 5 (drain) displays the real time status and does not require pressing the corresponding product number key. Item 3 (heater) - The output signal will be active for 3 seconds (heat on) then turn off.

- B. For item 6 DISPLAY: - change the setting as desired.
 - 1) Press product number key 6 to access the display screen adjustment settings.
 - 2) Press the left or right arrow key on the PROGRAMMING MENU SELECTION screen to select the screen to adjust. Display shows "THIS LCD SELECTED".



Fig. 45

- 3) To adjust the selected screen:
 - a. BACKLIGHT - Press toggle key to turn display backlight ON or OFF.
 - b. PIXEL MODE - Press product key number 1 two times to change display from white background with black letters to black background with white letters. Press the key again to change it back to original setting.

- c. CONTRAST - Press the L key on the keypad to lower the contrast or press the R key on the keypad to raise the contrast.
- 4) Press PROGRAM key to return to DIAGNOSTICS MODE.
5. To exit SERVICE SETTINGS MODE and return to normal operation, keypress PROGRAM key.
 - A. Display reverts to product menu items.

SERVICE SETTINGS	KEY SEQUENCE	DISPLAY ITEM FLASHES ¹	DESCRIPTION
1. Brand	Press 1 to change brand name. Press toggle key to select HOBART or VULCAN. Press PROGRAM Key to save the selection.	VULCAN	Brand name at power on.
2. Celsius	Press 2 to change temperature scale. Press toggle key to select NO or YES. Press PROGRAM Key to save the selection.	NO	Temperature °F/°C No = Fahrenheit Yes = Celsius
3. Mode	Press 3 to change fryer mode. Press toggle key to select BOIL or FILTER. Press PROGRAM Key to save the selection.	Boil	Boil or Filter Boil key = Standalone fryer Filter key = Filter system battery
4. Type	Press 4 to change energy source. Press toggle key to select ELECTRIC, GAS or GAS*. NOTE: VK and TR Gas Fryers <u>MUST</u> be set to GAS*. Press PROGRAM Key to save the selection.	ELECTRIC	Electric or Gas

SERVICE SETTINGS	KEY SEQUENCE	DISPLAY ITEM FLASHES ¹	DESCRIPTION
5. Temp Offset	<p>Press 5 to change offset temperature.</p> <p>Press toggle key to change offset value to (+) or (-) (positive or negative).</p> <p>Enter the offset value using the number keys on the keypad.</p> <p>NOTE: Offsets the actual oil temp sensed by the temperature probe during calibration. Enter a positive number to decrease the actual oil temperature; or a negative number to increase the oil temperature.</p> <p>Press PROGRAM Key to save the selection.</p>	OFF 00 F (always in °F)	Degrees Fahrenheit and positive zero are the defaults.
6. Baskets	<p>Press 6 to change the number of basket lifts.</p> <p>Press toggle key to select 0, 1, or 2.</p> <p>Press PROGRAM Key to save the selection.</p>	2	Display shows 0, 1 or 2.
7. Diagnostics	Press 7 to enter diagnostic mode (outputs for heat, basket lifts and cooking timers remain off).	—	DIAGNOSTICS (Shown on display screen.)
1.) L Basket	Press 1 to toggle left basket lift output to lower the lift.	DOWN	Lowers basket.
	Press 1 again to raise the lift.	UP	Raises basket.
2.) R Basket	Press 2 to toggle right basket lift output to lower the lift.	DOWN	Lowers basket.
	Press 2 again to raise the lift.	UP	Raises basket.
3.) Heater	Press 3 to turn heat output ON for 3 seconds only. OIL TEMPERATURE LED's light with heat demand.	On then OFF	Gas burner or heating elements turn on then off.
4.) Filter	Press 4 to turn filter output ON.	ON	Pump motor on.
	<p>NOTE: Filtering system fryer batteries only.</p> <p>Press 4 again to turn output OFF.</p>	OFF	Pump motor off.
5.) Drain	Display indicates the position of the drain valve. (DVI switch input to control.) (Keypress not required.)	CLOSED	
	Manually change valve position to test, and display will update.		
	Drain valve open.	OPEN	
	Drain valve closed.	CLOSED	

SERVICE SETTINGS	KEY SEQUENCE	DISPLAY ITEM FLASHES ¹	DESCRIPTION
6.) Display	<p>Press 6 to adjust the left and right display screen settings. Refer to LCD display screen picture under ENTER SERVICE SETTINGS MODE.</p> <p>Press the left or right arrow key on control panel to select the screen to adjust.</p> <p>To adjust the selected screen:</p> <ul style="list-style-type: none"> • BACKLIGHT - Press toggle key to turn display backlight ON or OFF. • PIXEL MODE - Press product key number 1 two times to change display from white background with black letters to black background with white letters. Press the key again to change it back to original setting. • CONTRAST - Press the L key on the keypad to lower the contrast or press the R key on the keypad to raise the contrast. 	N/A	THIS LCD SELECTED
Exit Diagnostic and Service Mode	Press PROGRAM Key to exit the selected DIAGNOSTICS test and return to Service Settings Mode.	N/A	SERVICE SETTINGS (Shown on display screen.)
NOTES:	¹ Default values shown in bold.		

Alarm Messages

The alarms take precedence over any other controller mode or function (outputs off, active timers canceled).

ALARMS	DESCRIPTION
PROBE FAULT	<p>If a temperature probe fault occurs, the alarm sounds continuously and the display shows PROBE on the left display and either OPEN or SHORT on the right display. This alarm state will remain until the fault clears or power switch is cycled.</p> <ul style="list-style-type: none"> • OPEN - Probe detects temperature less than 40°F. • SHORTED - Probe detects temperature greater than 460°F.
IGNITION STATUS GAS -Selected under service settings - Type.	<p>If the ignition status input is not present, both displays show IGNITION LOCKOUT. If the input comes back in less than 8 seconds, the displays will revert to normal operation.</p> <p>If the input remains inactive for more than 90 seconds, IGNITION LOCKOUT will be shown on the left display and CHECK GAS SUPPLY will be shown right display, and the alarm will sound continuously. This alarm state will remain until power switch is cycled.</p>
IGNITION STATUS GAS Selected incorrectly under service settings - Type.	<p>After 20 seconds in normal operation mode, IGNITION LOCKOUT will be shown on the left display and CHECK GAS SUPPLY will be shown right display, and the alarm will sound continuously.</p> <p>Enter SERVICE SETTINGS and select GAS* as the type.</p>

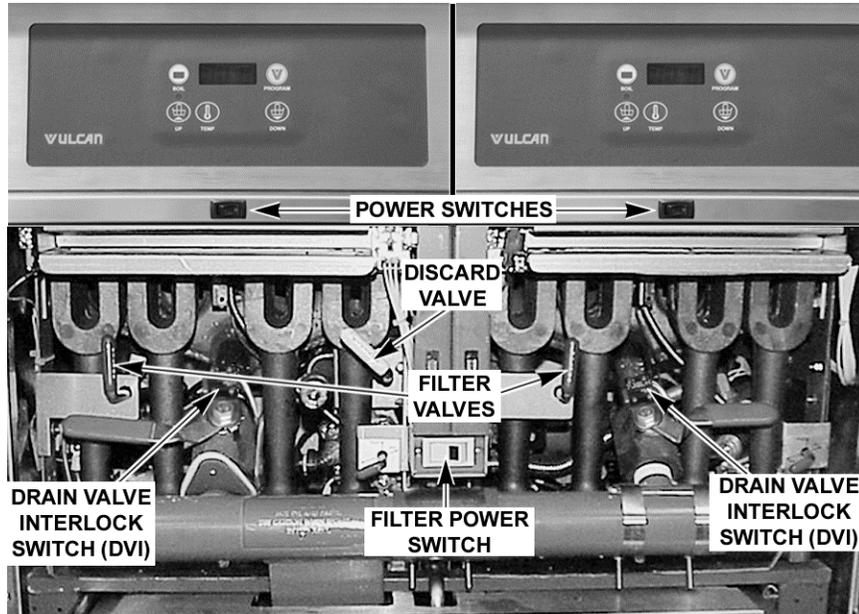
ELECTRICAL OPERATION

COMPONENT FUNCTION

Solid State or Computer Cooking Controls ("D" or "C" Models)	Monitors and evaluates input signals to the control. Controls the cooking cycle: Activates the heat output signal to maintain frying oil temperature, counts product cook time(s), signals the electronic alarm at the end of a cooking cycle, and activates the left and right lift output signal to operate the basket lift(s). NOTE: By utilizing the same wiring harness connections, the two control types are interchangeable between fryers.
Control Interface Board	Provides the output signal interface from the cooking control to regulate gas heating and basket lift operation. The board components consist of a heat control Triac and two single pole N.O. relays.
Transformer	Supplies 24VAC to the cooking control. If equipped with electronic ignition, also supplies power to ignition control module. Transformer is energized when power switch is turned on.
Power Switch	Supplies power to control circuit.
Gas Combination Valve	Allows gas flow to pilot when pilot valve coil is energized, and allows gas flow to burners when main valve solenoid is energized. Also, regulates gas manifold pressure.
High Limit Thermostat	Prevents frying oil from reaching temperatures over 450°F (auto reset at 415°F). Serves as a backup to the cooking control's high temperature alarm setting of 415°F (normal operation resumes when temperature falls below this point).
Temperature Probe ...	Senses temperature of frying oil. Converts temperature into a resistance valve, which is monitored by the cooking control. The probe is an RTD (resistance temperature detector) of the thermistor type. As temperature increases, the resistance value decreases.
Ignition Control Module	Controls and monitors gas pilot ignition. Energizes pilot valve coil on the combination control valve, and generates spark for pilot ignition. Monitors the presence of a flame, and supplies an ignition status input signal to the cooking control. Electronic ignition models only.
Ignitor/Flame Sense	Ignites gas pilot and senses the presence of a flame. The flame presence generates a micro-amp flame sense current that is rectified to the ignition control module. The spark ignitor/flame sense is a component for the gas pilot with electronic ignition only.
Drain Valve Interlock Switch (DVI)	A magnetic reed switch mounted on the manual drain valve that supplies a drain valve position signal (open/closed) to the cooking control. When drain valve is open, the drain interlock input to the control is removed. This prevents the gas burners from coming on with the fry tank empty.
Filter Power Switch ...	Supplies 120VAC to pump motor. Filter valve switch or discard valve switch must be closed (valve handle extended).
Pump Motor	Operates pump to circulate frying oil through filtering system.
Filter Valve Switch	Energizes pump motor to filter the frying oil when switch is closed (valve handle extended). Filter power switch must be turned on. When oil filtering is complete, close the manual drain valve to the fryer and allow the fry tank to refill. Return the switch to the N.O. position (valve handle retracted) when all filtered oil is returned to fry tank.
Discard Valve Switch	Energizes pump motor to discard the frying oil from filter tank when switch is closed (valve handle extended). Filter power switch must be turned on. Oil is discarded through the discard hose into a separate container. When filter tank is empty, return the switch to the N.O. position (valve handle retracted) when all frying oil is discarded.

COMPONENT LOCATION

**2GRD45F KLEENSCREEN FRYER SHOWN
SOLID STATE CONTROLS ("D" MODEL)**



* PUMP MOTOR LOCATION - RIGHT SIDE FRYER SECTION ABOVE FILTER DRAWER.
* POWER SUPPLY BOX LOCATION - LEFT FRYER SECTION AT THE REAR.

7401

Fig. 46

COMPONENT AREA BEHIND CONTROL PANEL

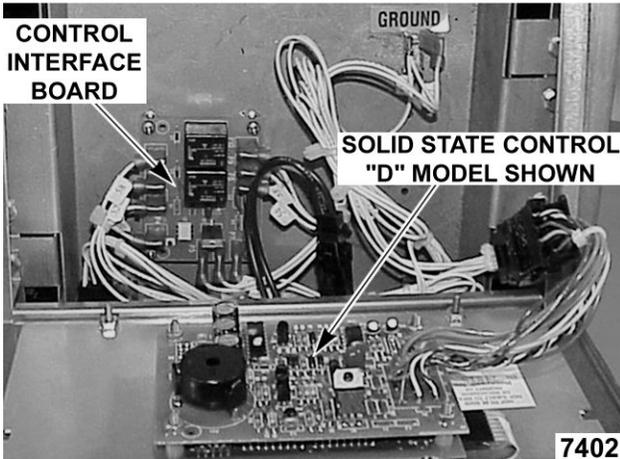


Fig. 47

7402

**DUAL BASKET LIFT COMPONENTS
(REAR VIEW SHOWN)**

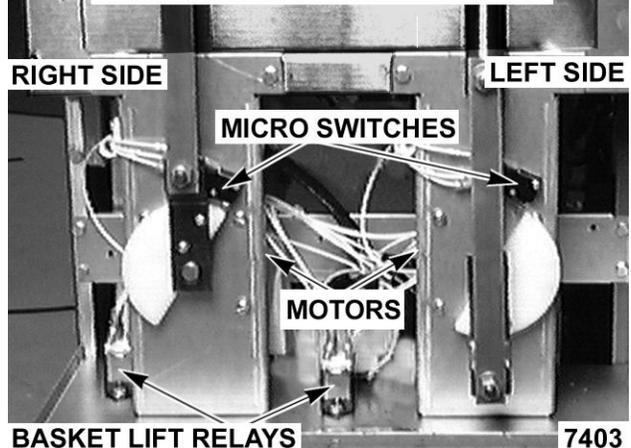
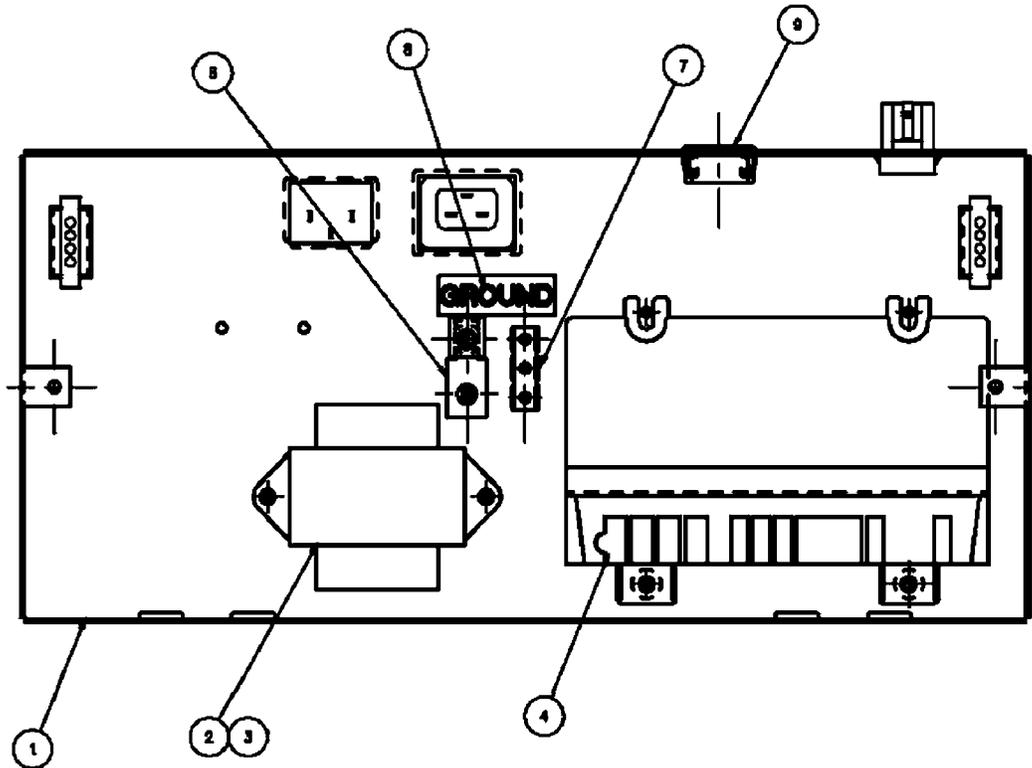


Fig. 48

7403

POWER SUPPLY BOX

POWER SUPPLY BOX



9	RESTRAINT, CORD
8	DECAL, GROUND
7	TERMINAL
6	GROUND LUG
4	MODULE, IGNITION
3	TRANSFORMER 240V
2	TRANSFORMER 120V
1	BOX, POWER SUPPLY
G2	** BOX, POWER SUPPLY 240V
G1	* BOX, POWER SUPPLY 120V
IT.	DESCRIPTION

* G1 120V WITH ELECTRONIC IGNITION

** G2 240V WITH ELECTRONIC IGNITION

NOTE: POWER SUPPLY BOX FOR ELECTRONIC IGNITION SHOWN.
FOR MANUAL IGNITION, THE IGNITION CONTROL MODULE
IS REMOVED.

7400

Fig. 49

SEQUENCE OF OPERATION

Solid State or Computer, Cooking Control

Refer to schematic diagram 7411 for Cooking Control operation.

FRY CYCLE - LIQUID FRYING OIL

If using solid shortening, the control should be programmed to use the MELT CYCLE. In the MELT CYCLE, the control will "cycle" the heat ON/OFF in short intervals. This will gradually heat and liquify the shortening until it reaches a temperature of 135°F. Melt cycle default times are:

- Liquid (CY L) = 16 seconds on, 18 seconds off.
- Solid (CY S) = 8 seconds on, 26 seconds off.

- No melt (CY 0) = 100% on.

The control then resumes normal operation as described in this sequence.

1. Conditions.

- A. Fryer battery connected to correct supply voltage and properly grounded.

NOTE: Separate connections are required for fryer controls and filtering system controls.

- B. Gas supply valve on, and gas combination valve "knob" turned to ON.
- C. Power switch to fryer section in the OFF position.
- D. Frying oil at proper level in fry tank, and below last set point temperature used.
- E. Cooking control is set up properly and ready to use.
- F. Manual drain valve closed (drain valve interlock switch N.O. is closed).
- G. High limit thermostat closed.

2. Press Power On switch.

- A. Power to terminal 5 (com) on left and right basket relays.
- B. 24VAC transformer 1T energized.

3. Cooking control powers on, initializes, and performs a diagnostic self-check.

NOTE: If the control passes self-check, then the outputs are energized, and operation sequence continues. If control does not pass self-test, the control will display the appropriate message for the problem, disable the keypad, and the electronic alarm will sound continuously. Refer to TROUBLESHOOTING.

- A. Ignition module is powered (24VAC), initializes, and generates spark at ignitor.
- 1) Pilot voltage (PV) N.O. contacts close, pilot valve energized at positive (+) terminal, and opens for gas flow to pilot.
 - a. Pilot flame established. A micro amp "flame sense" current is rectified to ignition module through ignitor cable, and sparking stops.
 - b. Main voltage (MV) N.O. contacts close, and provide ignition status input signal (24VAC) to cooking control at pin E1-6.

NOTE: If pilot ignition is not established within the first several seconds of ignition trial time, the cooking control displays a message indicating "pilot out" or "ignition failure" as the ignition module continues to generate a spark at the ignitor. If pilot is not established within 90 seconds of the ignition module being energized, the ignition module locks out power to gas valve. A message is displayed by the control indicating "ignition lockout," keypad is disabled, and electronic alarm sounds continuously. The system remains locked out until power switch is cycled to reset the system and restart the ignition trial cycle.

4. Cooking control evaluates the input from: ignition status at pin E1-6, drain valve interlock at pin E1-5, and temperature probe at pins E1-3 and E1-4 (high and low).

- A. If the inputs to the control are valid, and the frying oil temperature is below set point, the heat output (24VAC) at pin E1-8 is then activated, and power is applied to heat control Triac.

- 1) Heat control Triac energized and supplies voltage to gas valve TH terminal.

- a. Main gas valve energized and opens for gas flow to burners.
- b. Burners light and begin heating frying oil in fry tank.

NOTE: As long as the ignition control module senses a pilot flame, the internal main voltage (MV) contacts (N.O.) on the ignition module remain closed, and main gas valve stays on.

5. Frying oil reaches set temperature.

- A. Cooking control deactivates the heat output (24VAC) at pin E1-8, and power is removed from heat control Triac.

- 1) Main gas valve de-energized and closes.
 - a. Gas flow stops and burners go out.

6. Cooking control cycles heat output on frying oil temperature until power switch is turned off, ignition input status is removed, drain valve interlock input status is removed, temperature probe input is outside acceptable limits, or a high limit condition occurs.

NOTE: Step 6A and 6B discuss open high limits. For additional information on cooking control error messages, refer to TROUBLESHOOTING.

- A. If frying oil reaches 415°F or higher, the cooking control deactivates the heat output and basket lift outputs, cooking timers are canceled (if active), keypad is disabled, display indicates "HI," and the electronic alarm sounds continuously. Turn power switch off to silence the alarm. Normal operation resumes when temperature drops below 415°F.
- B. If frying oil reaches 450°F, the high limit thermostat opens, power is removed from the pilot valve, and then closes to stop pilot gas flow.

- 1) Ignition trial cycle will start but pilot will be unable to light. After several seconds of ignition trial time, the cooking control displays a message indicating "pilot out" or "ignition failure" as the ignition module continues to generate a spark at the ignitor. After 90 seconds, the ignition module locks out power to the gas valve. With the ignition status input removed from cooking control, a message is displayed by the control indicating "ignition lockout," keypad is disabled, and electronic alarm sounds continuously. Turn power switch off to silence alarm and reset the system. Normal operation will resume when temperature drops below 415°F.

Kleenscreen Filtering System

Refer to wiring diagram [7410](#).

The filter valve handle and discard valve handle are connected to a mechanical valve and switch assembly to route the flow of oil in the filtering system, and supply power to the pump motor.

NOTE: The computer control contains a program feature that allows the operator to program a specific number of timed cooking cycles to complete, then alert the operator to filter the frying oil/shortening. When the actual cooking count reaches the filter count setting, "FILTER" will flash in the right display when fryer is idle. Normal fryer operation continues without a cooking lockout. This feature can also be disabled. Refer to Installation & Operation Manual for specific instructions on filtering.

1. Conditions.
 - A. Fryer connected to correct supply voltage and is properly grounded.

NOTE: Separate connections are required for the fryer controls and the filtering system controls.

- B. Power switch to fryer section turned off.
- C. Frying oil between 300°F and 350°F.
- D. Filter drawer assembly installed properly.
- E. Filter power switch turned off.
- F. Filter valve handle (red) retracted.
 - 1) Filter valve switch N.O. contacts open.
- G. Discard valve handle (white) retracted.
 - 1) Discard valve switch N.O. contacts open.

NOTE: On computer control fryers, control should be set up properly, ready to use.

2. Turn on the power switch for the fryer section to be filtered.
3. Set cooking control between 300°F (minimum) and 350°F (maximum).

NOTE: Oil should not be filtered outside of this temperature range. At lower temperatures, the oil is thicker, which may increase filtering time, and place a greater load on the pump. At higher oil temperatures, oil seal life is decreased.

- A. Allow oil to cycle at set temperature for approximately 10 minutes.

NOTE: If using solid shortening, after it has melted, stir the oil to eliminate any solid shortening in cold zone of the fry tank.

4. Solid State Control:
 - A. Turn off power switch to fryer section to be filtered.
 - B. Open drain valve to fryer section in need of filtering, and drain the frying oil/shortening into filter tank.

NOTE: If using solid shortening, allow hot shortening to stand in filter tank for approximately 6 minutes prior to filtering.

NOTE: Drain valve interlock contacts open, and the position of drain valve is indicated to the cooking control.

- C. Turn on filter power switch.
 - 1) Switch pilot light comes on.
- D. Extend filter valve handle of same fryer section.
 - 1) Filter valve switch N.O. contacts close.
 - a. Power supplied to pump motor.
- E. Pump motor circulates oil through filter until power is removed.

- F. When the oil filtering process is complete, close the manual drain valve to the fryer, and allow the fry tank to refill.

NOTE: Drain valve interlock contacts close, and the position of the drain valve is indicated to the cooking control.

- G. When all filtered oil is returned to the fryer, retract the filter valve handle.
- 1) Power is removed from pump motor.
- H. Turn off filter power switch.

NOTE: If using solid shortening, when all filtered oil is returned to the fry tank and filter power switch is off, open the filter drawer approximately 1 inch. Allow the remaining shortening in the line to drain into the filter tank to prevent possible clogging after the shortening cools and solidifies. Close the filter drawer when complete.

5. Computer Control:

- A. The number of cooking cycles reaches the filter count setting.
- B. The right side display indicates "FILTER" and flashes when the fryer is idle.

NOTE: A manual filter cycle can also be done at any time by following the procedure outlined steps 4B through 4H in this section (Step 4B). Display will show "DRAINING" "TURN OFF." The filter timer can still be initiated, if desired.

- C. Open drain valve to fryer section in need of filtering, and drain the frying oil/shortening into filter tank.

NOTE: If using solid shortening, allow hot shortening to stand in filter tank for approximately 6 minutes prior to filtering.

NOTE: Drain valve interlock contacts open, and the position of the drain valve is indicated to the cooking control.

NOTE: Steps 5D through 5G should be performed in immediate succession to start the filtering process and the filter timer.

- D. Turn on filter power switch.

- 1) Switch pilot light comes on.

- E. Extend filter valve handle of the same fryer section.

- 1) Filter valve switch N.O. contacts close.
 - a. Power supplied to pump motor.

- F. Pump motor circulates oil through filter until power is removed.

- G. Press either "TIME" key to start filter timer countdown.

- 1) "FILTER" and the remaining filter time are displayed.

- H. Filter time expires:

- 1) "FILTER" "DONE" is displayed, and the electronic alarm sounds for approximately 5 seconds. Display then changes to "CLOSE" "DRAIN."

- I. Close drain valve:

- 1) "TURN OFF" is displayed.

NOTE: Closing drain valve before filter time expires will stop filter timer but will not reset filter counts. The "FILTER" prompt can only be reset by completing a filtering cycle or disabling the function in programming mode. Cycling the power will not reset this prompt.

NOTE: Drain valve interlock contacts close, and the position of drain valve is indicated to the cooking control.

- J. When all filtered oil is returned to fryer, retract filter valve handle.

- 1) Power is removed from pump motor.

- K. Turn off filter power switch.

NOTE: If using solid shortening, when all filtered oil is returned to fry tank and filter power switch is off, open filter drawer approximately 1 inch. Allow the remaining shortening in the line to drain into the filter tank to prevent possible clogging after the shortening cools and solidifies. Close the filter drawer when complete.

- L. Turn off power switch.

SCHEMATIC DIAGRAMS

Electronic Ignition, Solid State or Computer Control

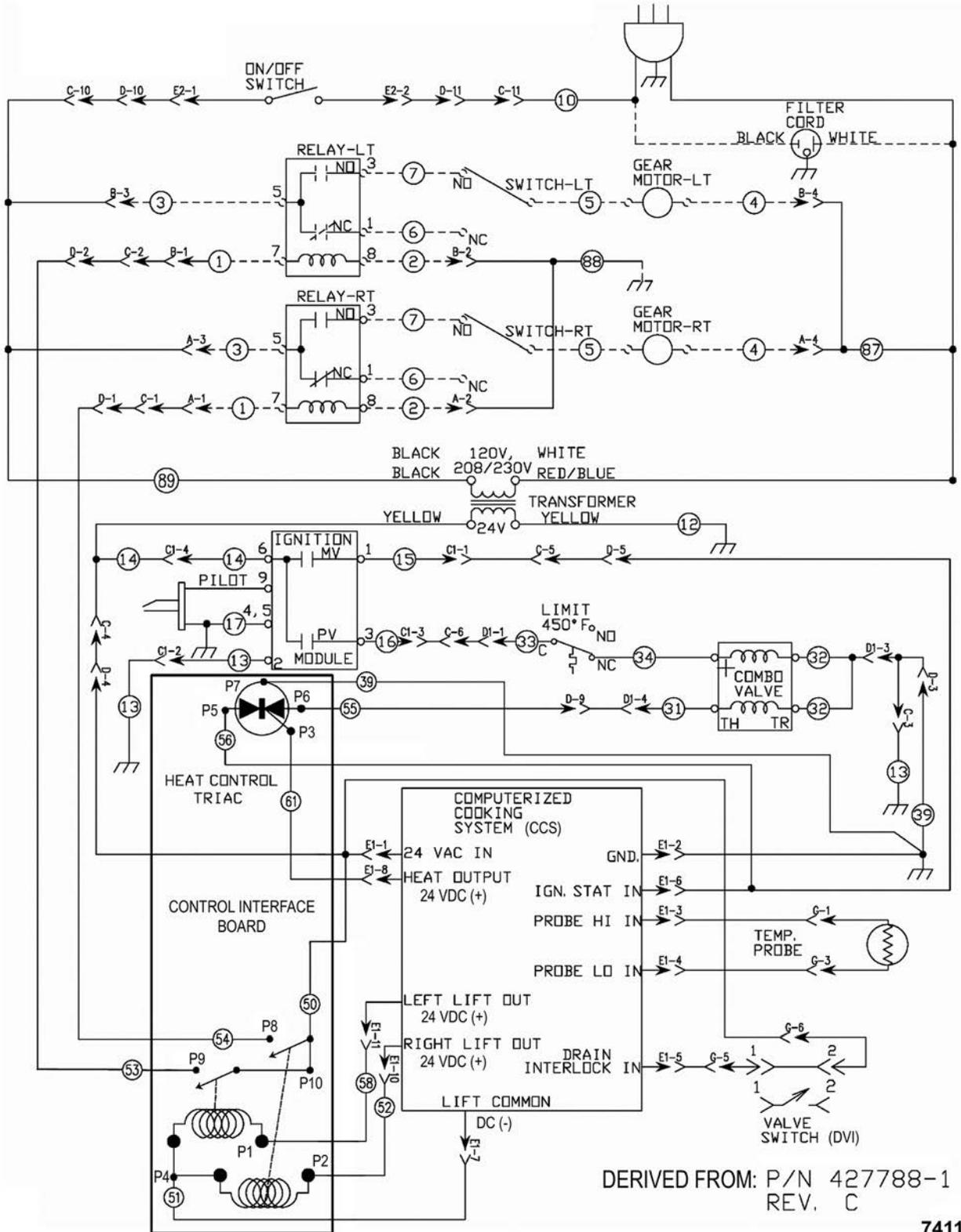
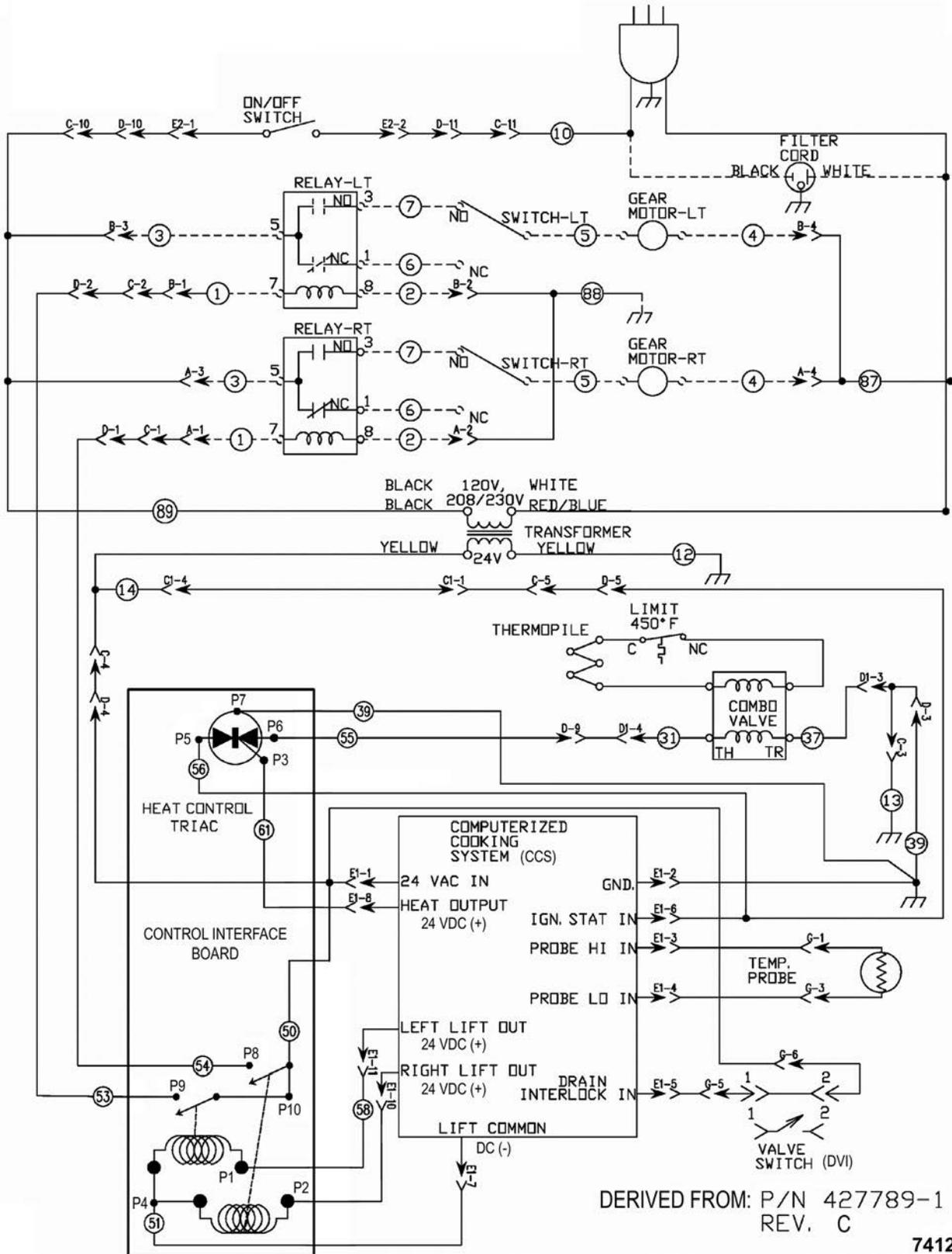


Fig. 50

Manual Pilot Ignition, solid State or Computer Control



7412

Fig. 51

WIRING DIAGRAMS

Electronic Ignition, Solid State or Computer Control

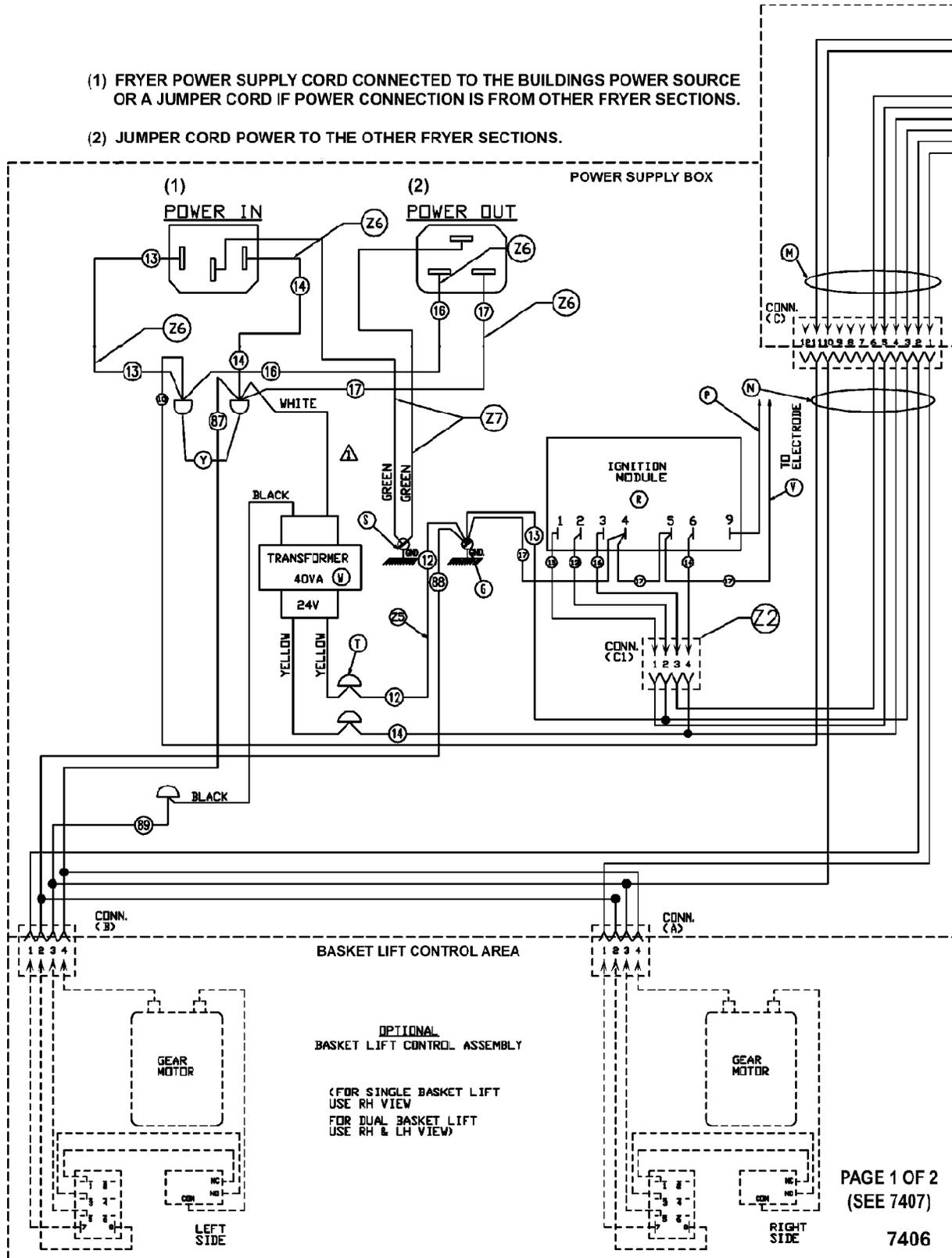
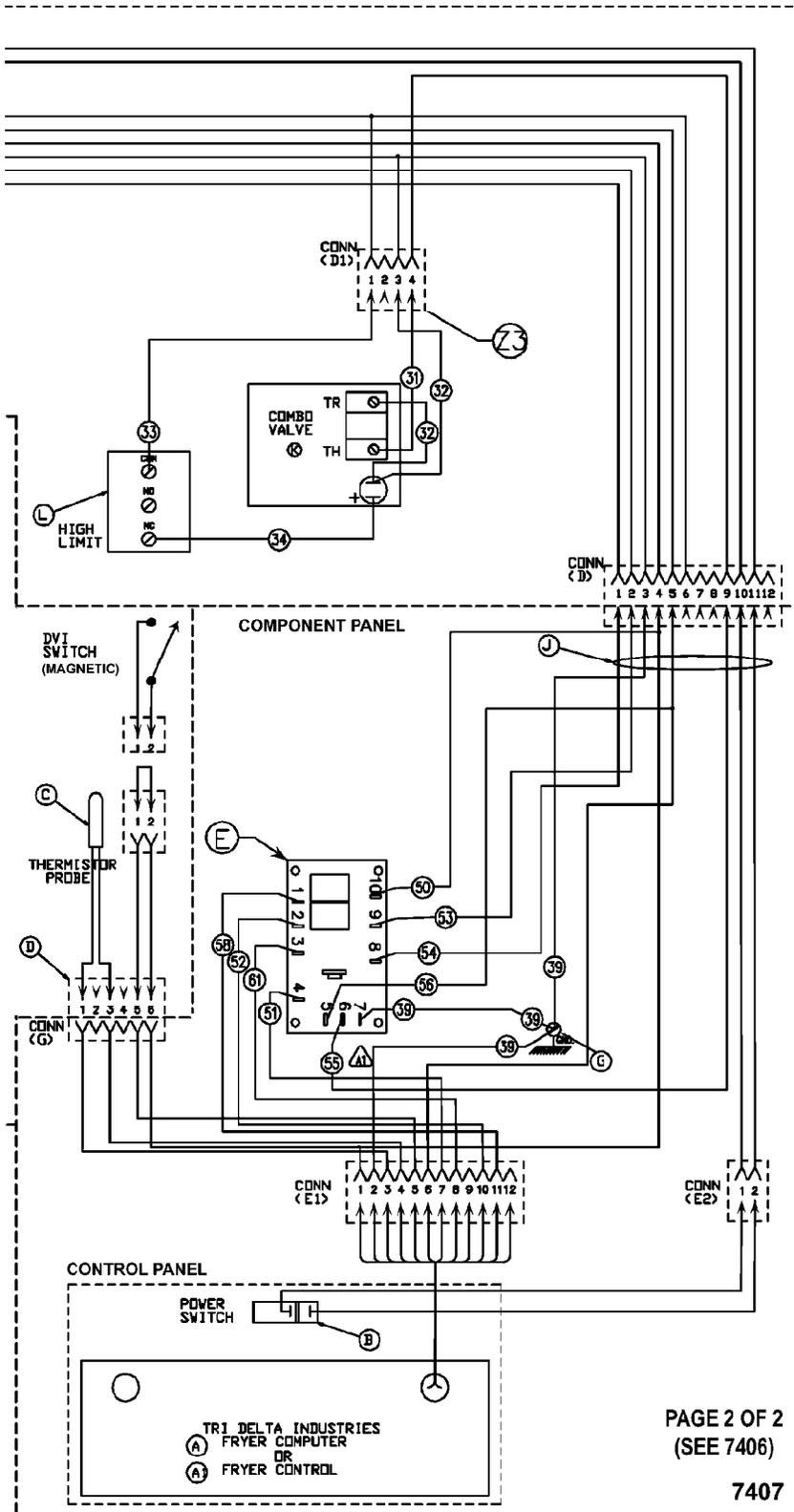


Fig. 52
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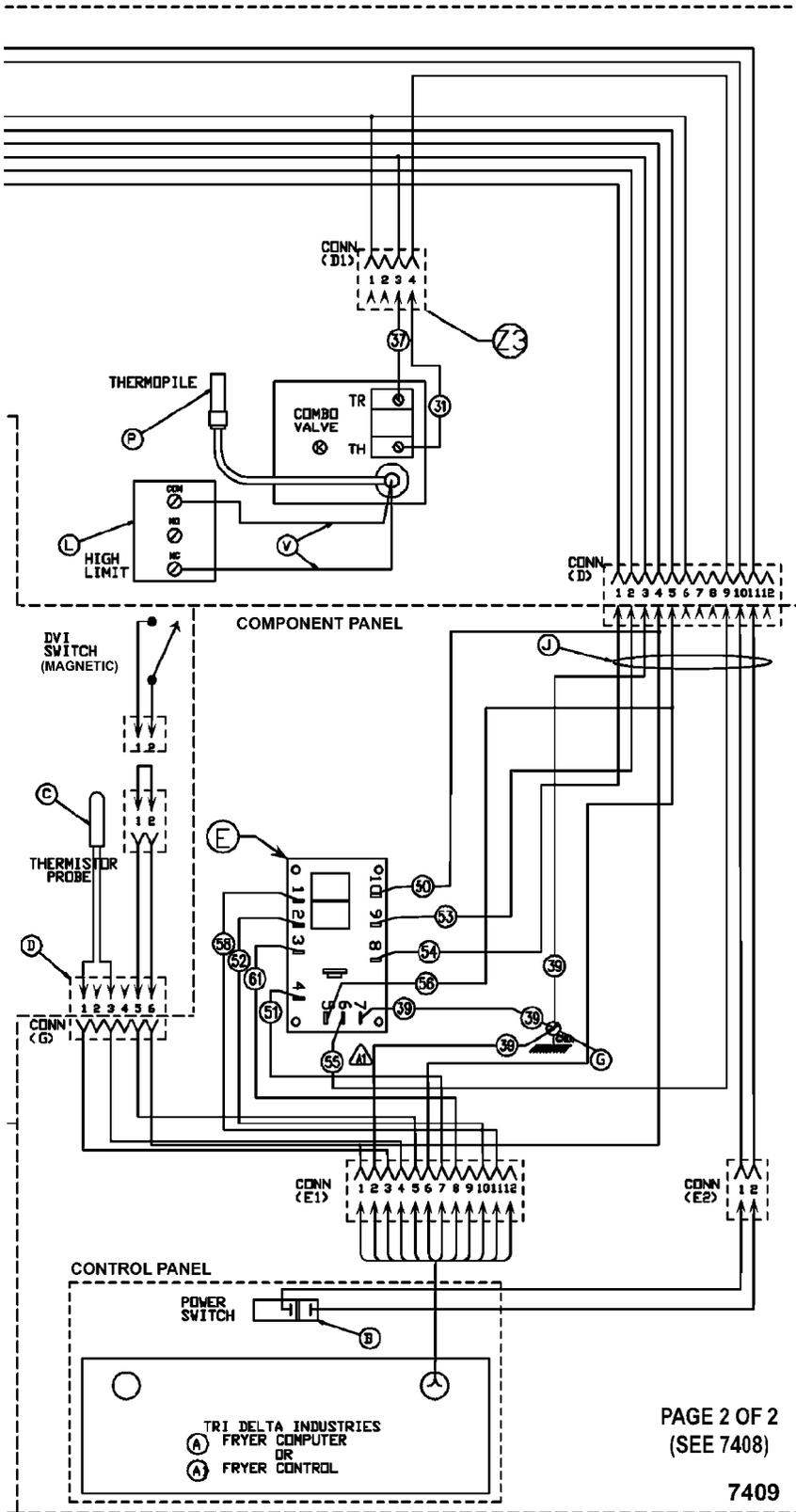


2	2	Z7	WIRE ASSEMBLY (GREEN)	-
4	4	Z6	WIRE ASSEMBLY [13,14,16,17]	-
1	1	Z5	WIRE ASSEMBLY [12]	-
2	2	Z4	WIRE ASSEMBLY [8,9]	-
1	1	Z3	MANIFOLD HARNESS	-
1	1	Z2	HARNESS-IGNITION MODULE	-
1	1	Z1	OPTIONAL FILTER SUPPLY CORD	-
2	2	Y	WIRE NUT YELLOW	-
1	1	W	24V 40VA TRANSFORMER	120 VOLT 240 VOLT
1	1	V	LEAD ASSEMBLY [17]	-
3	3	T	WIRE NUT	-
1	1	S	GROUND LUG	-
1	1	R	IGNITION MODULE	-
1	1	P	IGNITOR CABLE	-
1	1	N	POWER HARNESS	-
1	1	M	MAIN HARNESS	-
1	1	L	HI-LIMIT	-
1	1	K	COMBO VALVE	NAT LP
1	1	J	INTERFACE HARNESS	-
1	2	G	TERMINAL STATIONARY	-
1	1	E	CONTROL INTERFACE TRIDELTA	-
1	1	D	D.V.I. HARNESS ASSEMBLY	-
1	1	C	THERMISTOR	-
1	1	B	ROCKER SWITCH ASSEMBLY	-
1	-	AI	TDI CONTROL	-
-	1	A	TDI COMPUTER	-
REQ	QTY		DESCRIPTION	W/L
WIRING INFORMATION				
FOR UNITS LISTED				
CCS FRYERS W/E.L. W & WO/UETS				
WIRING DIAGRAM				
RD MODELS	DRAWN BY			SCALE NONE
RC MODELS	APPROVED BY			DERIVED FROM:
	SERIES 1 OF 1			D 427616-1 REV B

PAGE 2 OF 2
(SEE 7406)

7407

Fig. 53



2	2	Z7	WIRE ASSEMBLY (GREEN)	-
4	4	Z6	WIRE ASSEMBLY [13,14,16,17]	-
1	1	Z5	WIRE ASSEMBLY [12]	-
2	2	Z4	WIRE ASSEMBLY [8,9]	-
1	1	Z3	MANIFOLD HARNESS	-
1	1	Z2	HARNESS-IGNITION MODULE	-
1	1	Z1	OPTIONAL FILTER SUPPLY CORD	-
2	2	Y	WIRE NUT YELLOW	-
1	1	W	24V 40VA TRANSFORMER 120 VOLT 240 VOLT	-
1	1	V	CABLE ASSEMBLY [BUTTERFLY]	-
3	3	T	WIRE NUT	-
1	1	S	GROUND LUG	-
1	1	P	THERMOPILE	-
1	1	N	POWER HARNESS	-
1	1	M	MAIN HARNESS	-
1	1	L	HI-LIMIT	-
1	1	K	COMBO VALVE NAT LP	-
1	1	J	INTERFACE HARNESS	-
1	2	G	TERMINAL, STATIONARY	-
1	1	E	CONTROL INTERFACE, TRIDELTA	-
1	1	D	D.V.I. HARNESS ASSEMBLY	-
1	1	C	THERMISTOR	-
1	1	B	ROCKER SWITCH ASSEMBLY	-
1	-	A1	TDI CONTROL	-
-	1	A	TDI COMPUTER	-
req	REQ	IT	DESCRIPTION	PIN
WIRING INFORMATION				
FOR UNITS LISTED				
WIRING DIAGRAM				
CCS FRYER WO/ELECT. IGN. & W & WO/DUAL B.L.				
RD MODELS	DRAWN BY		SCALE NONE	
	APPROVED BY		DERIVED FROM	
	SHEET 1 OF 1		D 427616-2 REV B	

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7409

Fig. 55

Frymate (Dump Station)

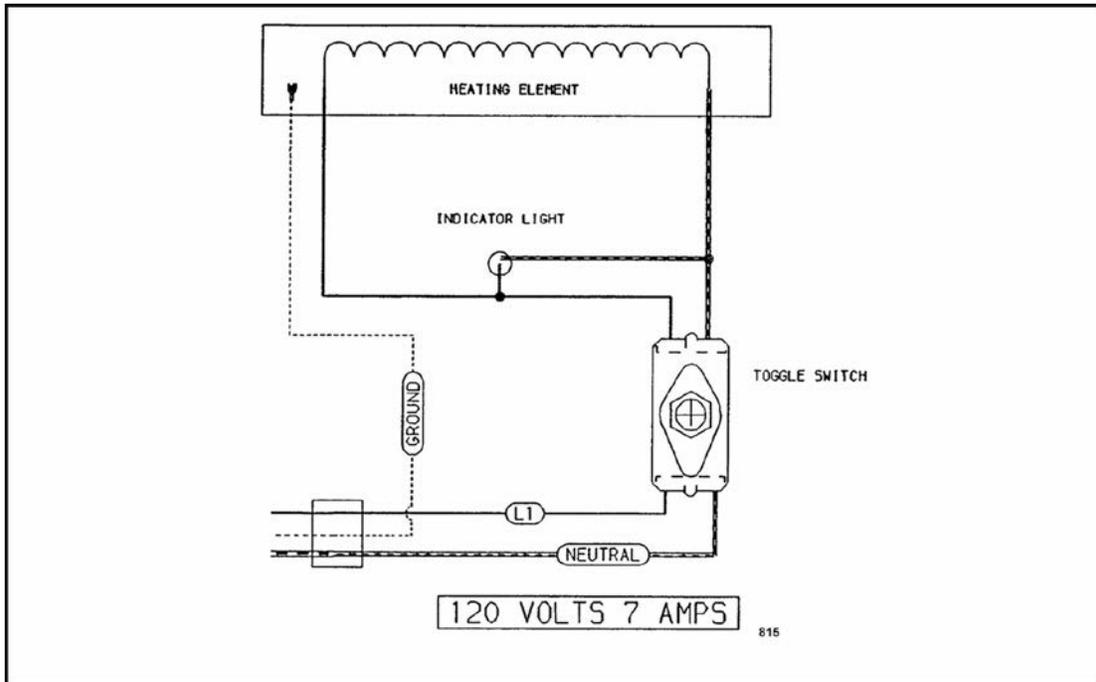


Fig. 57

TRUBLESHOOTING

ALL MODELS

Symptoms	Possible Causes
No spark to ignite pilot gas; display lit.	<ol style="list-style-type: none"> 1. Drain valve switch open (alarm message displayed), or switch malfunction. 2. Shorted electrode, or an improper ground on ignitor/flame sense. 3. Ignitor cable open. 4. Interconnecting wiring malfunction. 5. Ignition module malfunction.
Sparks, but gas does not ignite; display lit.	<ol style="list-style-type: none"> 1. Gas combination valve off or inoperative. 2. Manual gas valve closed. 3. Gas supply off or insufficient gas pressure. 4. High limit thermostat open. 5. Interconnecting wiring malfunction. 6. Ignition module malfunction.
Gas pilot ignites, but will not maintain flame.	<ol style="list-style-type: none"> 1. Ignitor lead connections malfunction. 2. Ignitor ground inoperative. 3. Ignitor/flame sense misaligned or malfunction. 4. Insufficient gas pressure. 5. Incorrect polarity from transformer to ignition module.
Gas burner(s) ignite, but will not maintain flame.	<ol style="list-style-type: none"> 1. Gas pressure incorrect. 2. Gas orifice obstructed or incorrect. 3. Burner malfunction. 4. Gas pilot malfunction.
Excessive or low heat.	<ol style="list-style-type: none"> 1. Incorrect temperature offset selected. 2. Temperature probe malfunction. 3. cooking control malfunction. 4. Interface board malfunction. 5. Gas pressure incorrect. 6. Gas orifice obstructed or incorrect.
Intermittent problems.	<ol style="list-style-type: none"> 1. High ambient temperatures. 2. Wiring connections loose.

Symptoms	Possible Causes
No power to cooking control; fryer does not heat.	<ol style="list-style-type: none"> 1. Power switch off or malfunction. 2. Main circuit breaker off. 3. Transformer inoperative. 4. Interconnecting wiring malfunction.
High limit thermostat shutting off gas burner.	<ol style="list-style-type: none"> 1. Frying oil level below minimum fill line. 2. Probe malfunction. 3. Control malfunction.
Excessive time to melt shortening (more than 45 minutes).	<ol style="list-style-type: none"> 1. Melt cycle timing incorrect. 2. Insufficient gas pressure. 3. Gas orifice pugged or obstructed. 4. Probe malfunction. 5. Control malfunction.

SOLID STATE CONTROL

Alarms	Description
Open Probe	<p>If an open probe is detected, the heat demand (heat on) and basket lift outputs are disabled. Any cooking in progress is canceled, and all operator buttons are disabled. The display shows "Prob," and the electronic alarm sounds continuously.</p> <p>NOTE: A temperature of less than 40°F is an open probe equivalent.</p>
Shorted Probe	<p>If a shorted probe is detected, the heat demand (heat on) and basket lift outputs are disabled. Any cooking in progress is canceled, and all operator buttons are disabled. The display shows "HI," and the electronic alarm sounds continuously.</p> <p>NOTE: A temperature of 460°F or greater is a shorted probe equivalent.</p>
High Temperature	<p>If the temperature is greater than or equal to 415°F, the heat demand (heat on) is disabled. Any cooking in progress is canceled, and all operator buttons are disabled. The display shows "HI," and the electronic alarm sounds continuously. Normal fryer operation resumes when the temperature drops below the high temperature alarm level.</p>
Ignition Status	<p>If this input is not active (24VAC = active), the display will show "FIR" "OUT" (for gas pilot out). If the input remains inactive for greater than 90 seconds, the display will show "Ign" "LoC" (for ignition lockout), the electronic alarm will sound continuously, and the controller will be disabled (all outputs including heat demand off) until power is cycled.</p>
Drain Valve Interlock (DVI)	<p>When drain valve is opened, the DVI switch contacts open, and the 24VAC input to the controller is removed. The heat demand (heat on) and basket lift outputs are disabled. Any cooking in progress is canceled, and all operator buttons are disabled. The display will alternate between "drn" "tUrn "oFF" for 3 seconds each in a continuous loop.</p> <p>When the drain valve is closed, the DVI switch contacts close, and the 24VAC input to the controller is restored. The heat demand (heat on) and all operator buttons will remain disabled. The display will alternate between "tUrn "oFF" for 3 seconds each in a continuous loop until power is cycled.</p>

COMPUTER CONTROL

Alarms	Description
Open Probe	<p>If an open probe is detected, the heat demand (heat on) and basket lift outputs are disabled. Any cooking in progress is canceled, and all operator buttons are disabled. The display shows "PROBE OPEN," and the electronic alarm sounds continuously.</p> <p>NOTE: A temperature of less than 40°F is an open probe equivalent.</p>
Shorted Probe	<p>If an open probe is detected, the heat demand (heat on) and basket lift outputs are disabled. Any cooking in progress is canceled, and all operator buttons are disabled. The display shows "PROBE SHORT," and the electronic alarm sounds continuously.</p> <p>NOTE: A temperature of 450°F or greater is a shorted probe equivalent.</p>
High Temperature	<p>If the temperature is greater than or equal to 415°F, the heat demand (heat on) is disabled. Any cooking in progress is canceled, and all operator buttons are disabled. The display shows "HI TMP," and the electronic alarm sounds continuously. Normal fryer operation resumes when the temperature drops below the high temperature alarm level.</p>
Ignition Status	<p>If this input is not active (24VAC = active), the display will show "PILOT OUT" (for gas pilot out). If the input remains inactive for greater than 90 seconds, the display will show "Ign" "LoC" (for ignition lockout), the electronic alarm will sound continuously, and the controller will be disabled (all outputs including heat demand off) until power is cycled.</p>
Drain Valve Interlock (DVI)	<p>When drain valve is opened, the DVI switch contacts open, and the 24VAC input to the controller is removed. The heat demand (heat on) and basket lift outputs are disabled. Any cooking in progress is canceled, and all operator buttons are disabled. The display will show "DRAINING" "TURN OFF." If the filter prompt is active, "DRAINING" "FILTER" is displayed. If the dispose prompt is active, "DRAINING" "DISPOSE" is displayed.</p> <p>When the drain valve is closed, the DVI switch contacts close, and the 24VAC input to the controller is restored. The heat demand (heat on) and all operator buttons will remain disabled. The display will show "TURN OFF" until power is cycled.</p>

SOLID STATE OR COMPUTER CONTROL HARNESS PIN-OUTS

Pin No.	Inputs	Pin No.	Outputs ³
E1-1	24VAC Hot	E1-8	24VDC (+) Heat Demand
E1-2	24VAC Neutral ¹	E1-9	Not used at this time ²
E1-3	Probe High (red)	E1-10	24VDC (+) Left Basket Lift
E1-4	Probe Low (white)	E1-11	24VDC (+) Right Basket Lift
E1-5	Drain Valve Interlock (24VAC) N.O.	E1-12	No Connection
E1-6	Ignition Status (24VAC)	—	—
E1-7	Relay DC (-) Common	—	—
NOTES:	<p>¹ Connected to ground internally.</p> <p>² Available for external buzzer output (24VAC).</p> <p>³ Outputs to interface control board.</p>		

INTERFACE CONTROL BOARD PIN-OUTS

Pin. No.	Inputs	Pin No.	Outputs
P1	24VDC Left Basket Lift	P6	Heat Demand Triac (24VAC) ²
P2	24VDC Right Basket Lift	P7	System Ground
P3	24VDC Heat Demand Control	P8	24VAC Left Basket Lift ³
P4	Control Common (-)	P9	24VAC Right Basket Lift ³
P5	Heat Demand Triac (24VAC)	—	—
P10	Relay Contacts (24VAC) ¹	—	—
NOTES:	¹ Relays connected internally. ² To "TH" terminal on gas valve (main). ³ To basket lift relay coils.		

FRYMATE (DUMP STATION) WITH OPTIONAL HEATER

Symptom	Possible Causes
No heat.	<ol style="list-style-type: none"> 1. Unplugged. 2. Power switch off or inoperative. 3. Main circuit breaker off or open. 4. Malfunctioning heat assembly.

KLEENSCREEN FILTERING SYSTEM

Symptom	Possible Causes
Oil not filtering, pump motor is on.	<ol style="list-style-type: none"> 1. Filter screen plugged. 2. Clog in filter system lines. NOTE: If using solid shortening, when all filtered oil is returned to fry tank, and filter power switch is off, open filter drawer approximately 1 inch. Allow the remaining shortening in the line to drain into filter tank to prevent possible clogging after the shortening cools and solidifies. Close filter drawer when complete. 3. Frying oil/shortening below 300°F too "thick." 4. Filter valve switch malfunction. 5. Filter valve mechanical malfunction. 6. Pump is inoperative.

Symptom	Possible Causes
Frying oil not discarding, pump motor on.	<ol style="list-style-type: none">1. Filter screen plugged.2. Clog in filter system lines. NOTE: If using solid shortening, when all filtered oil is returned to fry tank, and filter power switch is off, open filter drawer approximately 1 inch. Allow the remaining shortening in the line to drain into filter tank to prevent possible clogging after the shortening cools and solidifies. Close filter drawer when complete.3. Frying oil/shortening below 300°F too "thick."4. Discard valve switch malfunction.5. Discard valve mechanical malfunction.6. Discard hose connection not fully engaged.7. Pump is inoperative.
Pump motor is not running.	<ol style="list-style-type: none">1. Filter power switch inoperative.2. Filter/discard handle not extended.3. Filter/discard valve switch malfunction.4. Filter relay malfunction.5. Pump motor inoperative.

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VULCAN

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GR SERIES GAS FRYER

<i>MODEL</i>	<i>ML NUMBER</i>
1GRD35	ML-052080
1GRD45	ML-052081
1GRD65	ML-052082
1GRC35	ML-052083
1GRC45	ML-052084
1GRC65	ML-052085
GR25	ML-126988
GR35	ML-126989
GR45	ML-126990
GR65	ML-126991
GR85	ML-126992

PRIOR MLS COVERED IN THIS CATALOG

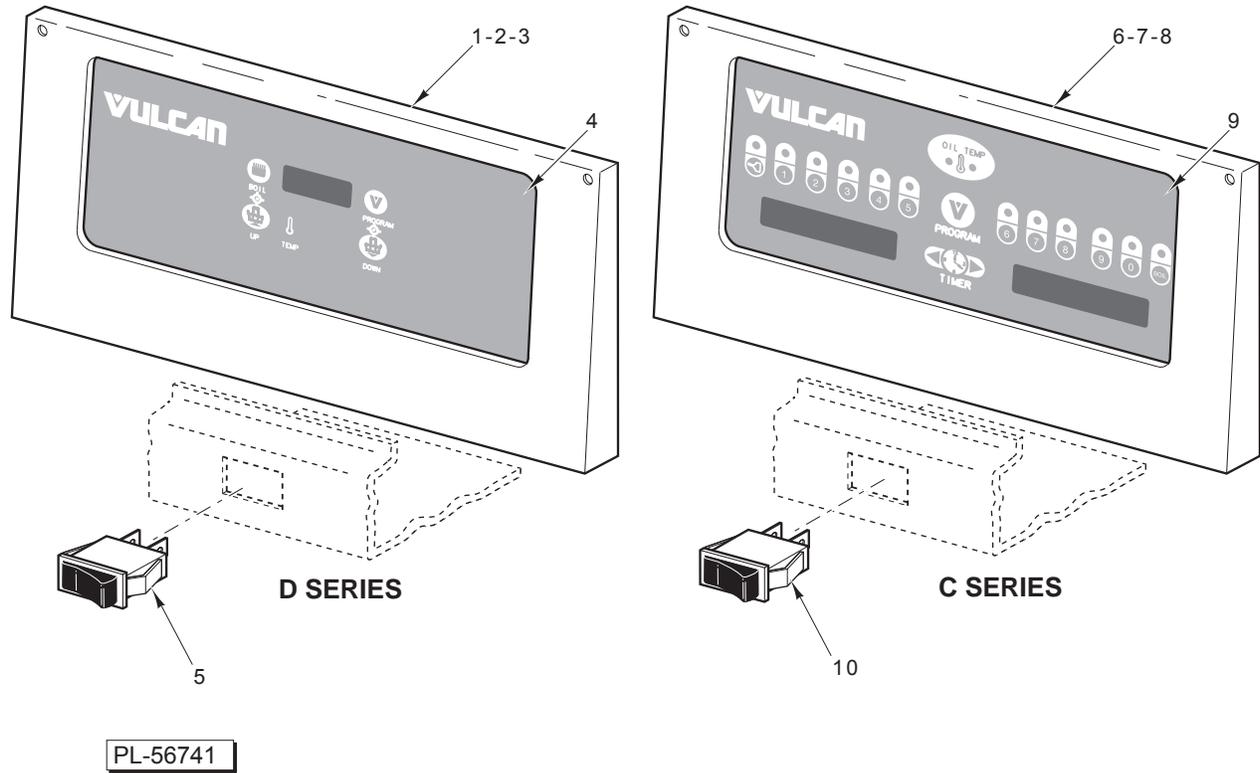
1GRS35	ML-052077
1GRS45	ML-052078
1GRS65	ML-052079



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5	Control Panel (GRC Series) (Previous Construction)
7	Control Panel (GRS Series)
8	Control Panel (GRS Series W/Basketlift)
11	Control Panel (GRD Series) (Previous Construction)
13	Power Supply Box (Previous Construction)
15	Power Supply Box (Current Construction)
17	Body Unit
19	Body Unit - Left Side and Front (GR Series)
21	Body Unit - Right Side and Back (GR Series)
23	Basketlift Components
24	Burner Components and Tank
27	Burner Components and Gas Manifold (GR Series) (Non-Filter-Ready Units)
29	Burner Components and Gas Manifold (GR Series) (Filter-Ready Units)
31	Gas Inlet Manifold
33	Drain Components
35	Oil Return and Accessories

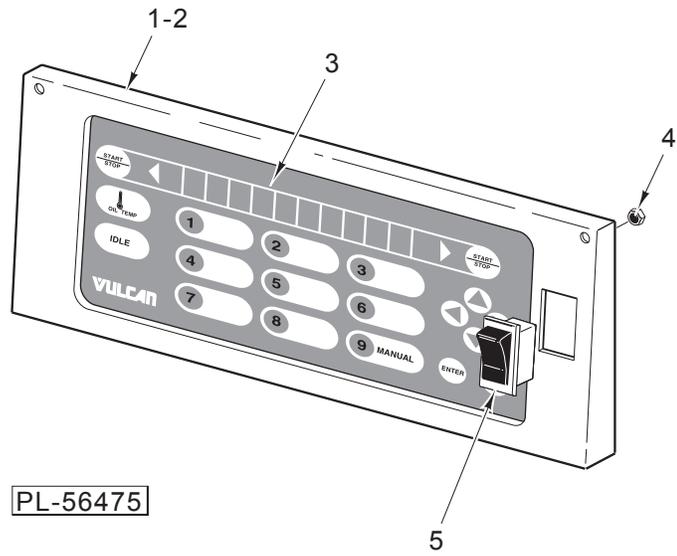


PL-56741

**CONTROL PANEL* (TRIDELTA)
(CURRENT CONSTRUCTION)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56741			
1	00-427757-00001	Control Assy. – Solid State	1
2	00-426815-000G1	Plate Assy. – Mounting (GRD35 & GRD45)	1
3	00-426815-000G2	Plate Assy. – Mounting (GRD65 & GRD85)	1
4	00-427820-00001	Overlay – Control Panel	1
5	00-427755-000G1	Rocker Switch Assy.	1
6	00-427758-00001	Computer Cooking Assy.	1
7	00-426815-000G1	Plate Assy. – Mounting (GRC35 & GRC45)	1
8	00-426815-000G2	Plate Assy. – Mounting (GRC65 & GRC85)	1
9	00-426732-00001	Overlay – Control Panel	1
10	00-427755-000G1	Rocker Switch Assy.	1
	00-426251-00002	Plug	1

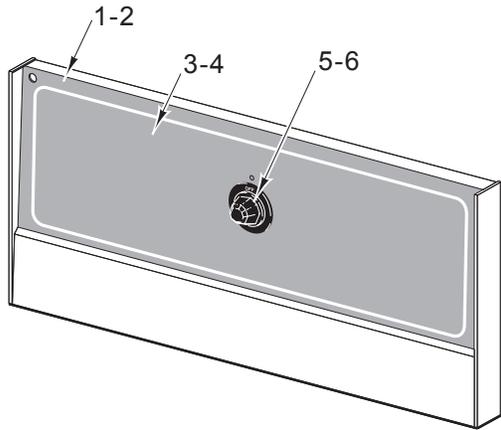
*Used on fryers built after June 2002.



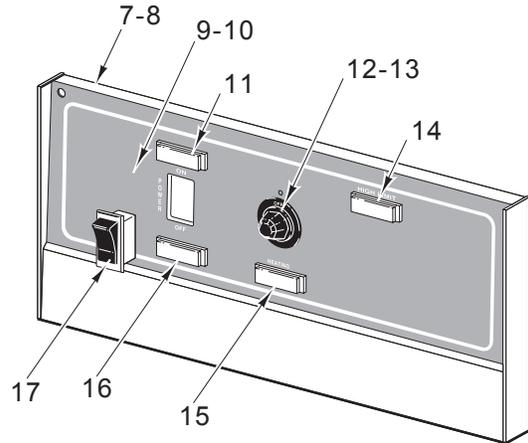
**CONTROL PANEL* (GRC SERIES)
(PREVIOUS CONSTRUCTION)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56475			
1	00-419385-000G1	Control Panel (GRC35 & GRC45)	1
2	00-419386-000G1	Control Panel (GRC65)	1
3	00-419557-00007	Board & Panel Assy.	1
4	NS-046-89	Nut Assy. 6-32 Hex KEPS	6
5	00-411496-000B8	Switch – Rocker	1

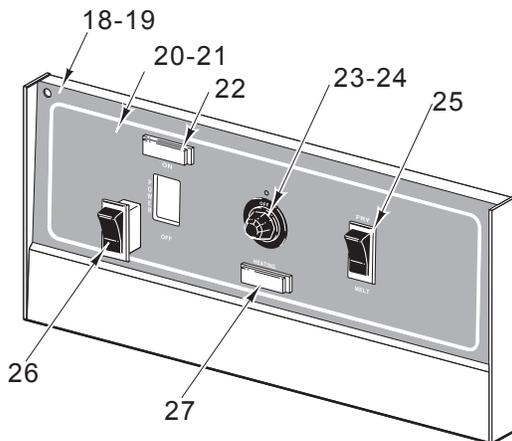
*Used on fryers built prior to June 2002.



WITH KX THERMOSTAT

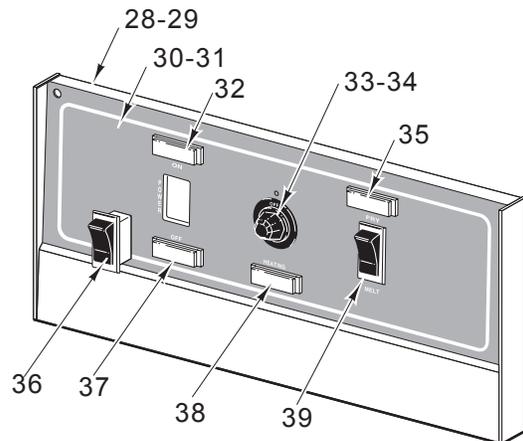


WITH ELECTRONIC IGNITION



WITH MELT CYCLE

PL-50655

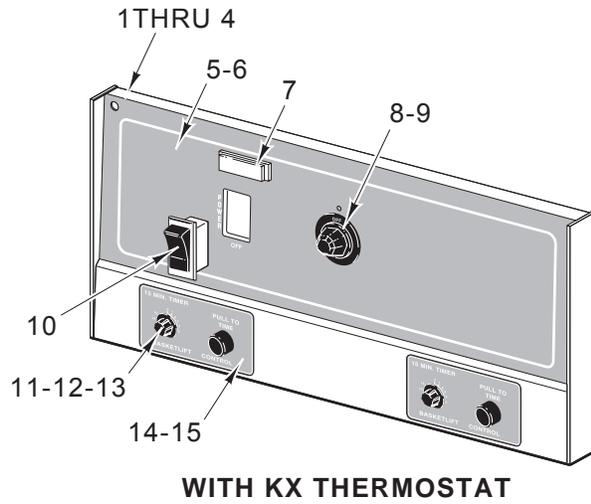


WITH ELECTRONIC IGNITION & MELT CYCLE

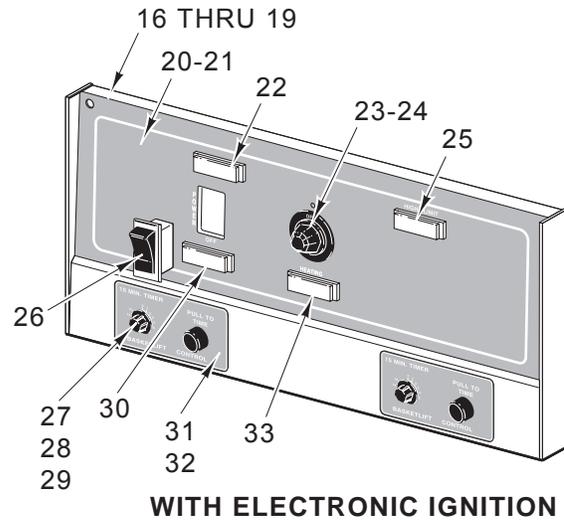
**CONTROL PANEL
(GRS SERIES)**

CONTROL PANEL (GRS SERIES)

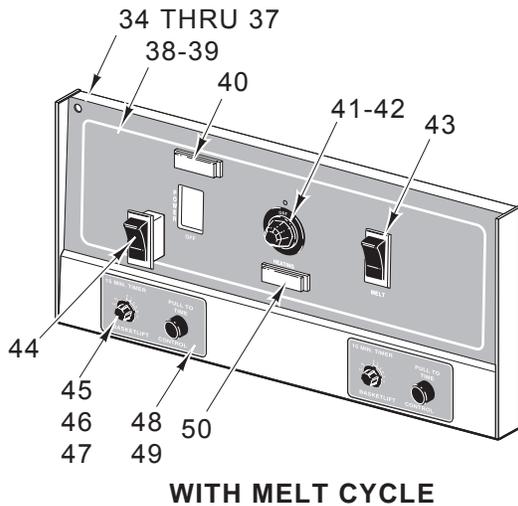
ILLUS. PL-50655	PART NO.	NAME OF PART	AMT.
1	00-418526-000G1	Display Panel Assy. (GRS35 & GRS45) (Complete)	1
2	00-418527-000G1	Display Panel Assy. (GRS65) (Complete)	1
3	00-418456	Overlay – Control Panel (GRS35 & GRS45)	1
4	00-418461	Overlay – Control Panel (GRS65)	1
5	00-408659-00006	Knob – Thermostat	1
6	00-419999-00002	Thermostat – Millivolt	1
7	00-418530-000G1	Display Panel Assy. (GRS35 & GRS45) (Complete)	1
8	00-418531-000G1	Display Panel Assy. (GRS65) (Complete)	1
9	00-418457	Overlay – Control Panel (GRS35 & GRS45)	1
10	00-418463	Overlay – Control Panel (GRS65)	1
11	00-411496-000E8	Light – Indicator (Red)	1
12	00-408659-00006	Knob – Thermostat	1
13	00-419999-00002	Thermostat – Millivolt	1
14	00-411496-000E8	Light – Indicator (Red)	1
15	00-411496-000E9	Light – Indicator (Amber) (Heat)	1
16	00-411496-000E10	Light – Indicator (Trouble)	1
17	00-411496-000B1	Switch – Rocker	1
18	00-418524-000G1	Display Panel Assy. (GRS35 & GRS45) (Complete)	1
19	00-418525-000G1	Display Panel Assy. (GRS65) (Complete)	1
20	00-418455	Overlay – Control Panel (GRS35 & GRS45)	1
21	00-418460	Overlay – Control Panel (GRS65)	1
22	00-411496-000E8	Light – Indicator (Red)	1
23	00-408659-00006	Knob – Thermostat	1
24	00-419999-00002	Thermostat – Millivolt	1
25	00-411496-000B2	Switch – Rocker (DTDP)	1
26	00-411496-000B1	Switch – Rocker	1
27	00-411496-000E9	Light – Indicator (Amber) (Heat)	1
28	00-418258-000G1	Display Panel – (GRS35 & GRS45) (Complete)	1
29	00-418529-000G9	Display Panel – (GRS65) (Complete)	1
30	00-418454	Overlay – Control Panel (GRS35 & GRS45)	1
31	00-418462	Overlay – Control Panel (GRS65)	1
32	00-411496-000E8	Light – Indicator (Red)	1
33	00-408659-00006	Knob – Thermostat	1
34	00-419999-00002	Thermostat – Millivolt	1
35	00-411496-000E8	Light – Indicator (Red)	1
36	00-411496-000B1	Switch – Rocker	1
37	00-411496-000E10	Light – Indicator (Trouble)	1
38	00-411496-000E9	Light – Indicator (Amber) (Heat)	1
39	00-411496-000B2	Switch – Rocker (DTDP)	1
	00-416535-00004	Relay SPDT 24 V. Coil (Electronic Ignition) (Located on Rear of Panel)	1
	NS-009-07	Mach. Nut 6-32 Hex (Use With Relay)	2
	WL-003-09	Lockwasher #6 (Use With Relay)	2
	00-414247-00007	Timer – Melt Cycle (Solid State) (Located on Rear of Panel)	1
	NS-046-52	Nut Assy. 1/4-20 KEPS (Use With Timer)	1



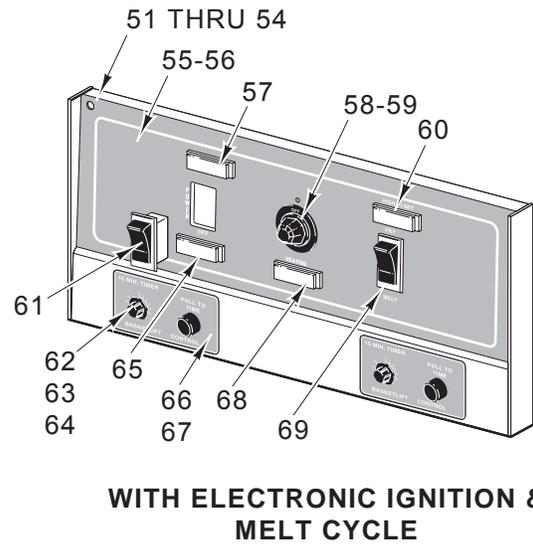
WITH KX THERMOSTAT



WITH ELECTRONIC IGNITION



WITH MELT CYCLE



WITH ELECTRONIC IGNITION & MELT CYCLE

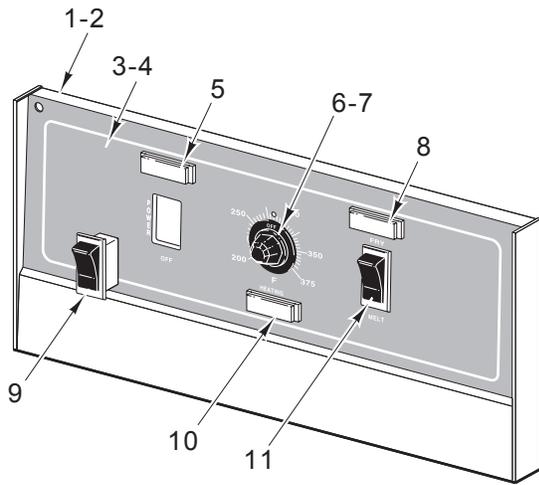
PL-56474

**CONTROL PANEL
(GRS SERIES W/BASKETLIFT)**

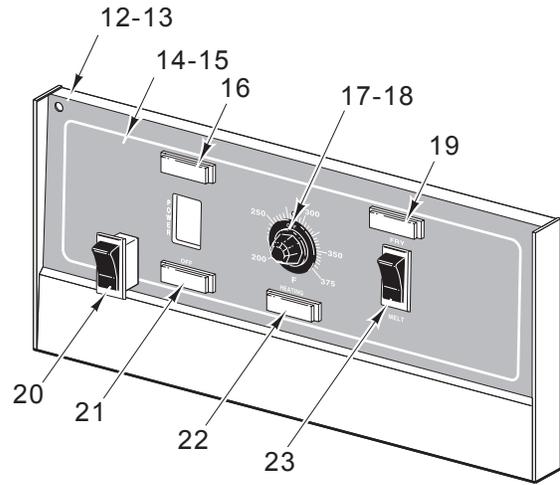
ILLUS.	PART NO.	NAME OF PART	AMT.
1	00-418532-000G1	Display Panel Assy. (GRS35 & GRS45) (1 Basketlift) (Complete)	1
2	00-418532-000G2	Display Panel Assy. (GRS35 & GRS45) (2 Basketlift) (Complete)	1
3	00-418533-000G1	Display Panel (GRS65) (1 Basketlift) (Complete)	1
4	00-418533-000G2	Display Panel (GRS65) (2 Basketlift) (Complete)	1
5	00-418458	Overlay – Control Panel (GRS35 & GRS45)	1
6	00-418464	Overlay – Control Panel (GRS65)	1
7	00-411496-000E8	Light – Indicator (Red)	1
8	00-408659-00006	Knob – Thermostat	1
9	00-419999-00002	Thermostat – Millivolt	1
10	00-411496-000B1	Switch – Rocker	1
11	00-415269-00001	Knob – Basketlift Timer	AR

CONTROL PANEL (GRS SERIES W/BASKETLIFT) (Cont.)

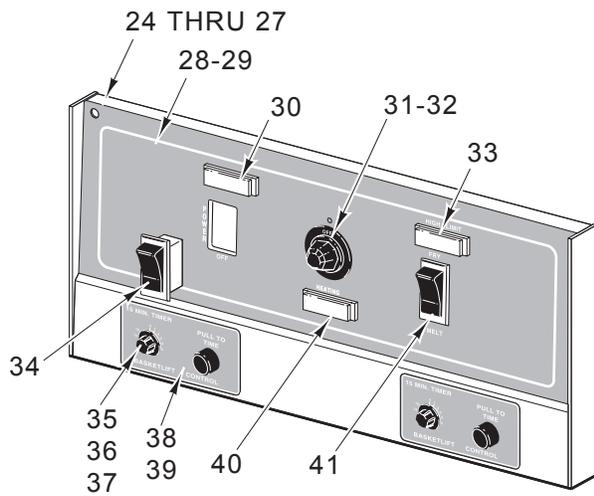
ILLUS. PL-56474	PART NO.	NAME OF PART	AMT.
12	00-415254-00002	Timer – Basketlift (Solid State) (15 Min.)	AR
13	00-415254-00003	Timer – Basketlift (7 Min.)	1
14	00-415255-00001	Overlay – Basketlift (15 Min.)	1
15	00-415255-00003	Overlay – Basketlift (7 Min.)	1
16	00-419377-000G1	Display Panel Assy. (GRS35 & GRS45) (1 Basketlift) (Complete)	1
17	00-419377-000G2	Display Panel Assy. (GRS35 & GRS45) (2 Basketlift) (Complete)	1
18	00-419378-000G1	Display Panel Assy. (GRS65) (1 Basketlift) (Complete)	1
19	00-419378-000G2	Display Panel Assy. (GRS65) (1 Basketlift) (Complete)	1
20	00-418457	Overlay – Control Panel (GRS35 & GRS45)	1
21	00-418463	Overlay – Control Panel (GRS65)	1
22	00-411496-000E8	Light – Indicator (Red)	1
23	00-408659-00006	Knob – Thermostat	1
24	00-419999-00002	Thermostat – Millivolt	1
25	00-411496-000E8	Light – Indicator (Red)	1
26	00-411496-000B1	Switch – Rocker	1
27	00-415269-00001	Knob – Basketlift Timer	AR
28	00-415254-00002	Timer – Basketlift (Solid State) (15 Min.)	AR
29	00-415254-00003	Timer – Basketlift (7 Min.)	1
30	00-411496-00E10	Light – Indicator (Trouble)	1
31	00-415255-00001	Overlay – Basketlift (15 Min.)	1
32	00-415255-00003	Overlay – Basketlift (7 Min.)	1
33	00-411496-000E9	Light – Indicator (Amber) (Heat)	1
34	00-418550-000G1	Display Panel Assy. (GRS35 & GRS45) (1 Basketlift) (Complete)	1
35	00-418550-000G2	Display Panel Assy. (GRS35 & GRS45) (2 Basketlift) (Complete)	1
36	00-418560-000G1	Display Panel (GRS65) (1 Basketlift) (Complete)	1
37	00-418560-000G2	Display Panel (GRS65) (2 Basketlift) (Complete)	1
38	00-418455	Overlay – Control Panel (GRS35 & GRS45)	1
39	00-418460	Overlay – Control Panel (GRS65)	1
40	00-411496-000E8	Light – Indicator (Red)	1
41	00-408659-00006	Knob – Thermostat	1
42	00-419999-00002	Thermostat – Millivolt	1
43	00-411496-000B2	Switch – Rocker (DTDP)	1
44	00-411496-000B1	Switch – Rocker	1
45	00-415269-00001	Knob – Basketlift Timer	1
46	00-415254-00002	Timer – Basketlift (Solid State) (15 Min.)	1
47	00-415254-00003	Timer – Basketlift (7 Min.)	1
48	00-415255-00001	Overlay – Basketlift (15 Min.)	1
49	00-415255-00003	Overlay – Basketlift (7 Min.)	1
50	00-411496-000E9	Light – Indicator (Amber) (Heat)	1
51	00-418545-000G1	Display Panel Assy. (GRS35 & GRS45) (1 Basketlift) (Complete)	1
52	00-418545-000G2	Display Panel Assy. (GRS35 & GRS45) (2 Basketlift) (Complete)	1
53	00-418546-000G1	Display Panel (GRS65) (1 Basketlift) (Complete)	1
54	00-418546-000G2	Display Panel (GRS65) (2 Basketlift) (Complete)	1
55	00-418454	Overlay – Control Panel (GRS35 & GRS45)	1
56	00-418462	Overlay – Control Panel (GRS65)	1
57	00-411496-000E8	Light – Indicator (Red)	1
58	00-408659-00006	Knob – Thermostat	1
59	00-419999-00002	Thermostat – Millivolt	1
60	00-411496-000E8	Light – Indicator (Red)	1
61	00-411496-000B1	Switch – Rocker	1
62	00-415269-00001	Knob – Basketlift Timer	1
63	00-415254-00002	Timer – Basketlift (Solid State) (15 Min.)	1
64	00-415254-00003	Timer – Basketlift (7 Min.)	1
65	00-411496-00E10	Light – Indicator (Trouble)	1
66	00-415255-00001	Overlay – Basketlift (15 Min.)	1
67	00-415255-00003	Overlay – Basketlift (7 Min.)	1
68	00-411496-000E9	Light – Indicator (Amber) (Heat)	1
69	00-411496-000B2	Switch – Rocker (DTDP)	1
	00-416535-00004	Relay SPDT 24 V. Coil (Electronic Ignition) (Located on Rear of Panel)	1
	NS-009-07	Mach. Nut 6-32 Hex (Use With Relay)	2
	WL-003-09	Lockwasher #6 (Use With Relay)	2
	00-414247-00007	Timer – Melt Cycle (Solid State) (Located on Rear of Panel)	1
	NS-046-52	Nut Assy. 1/4-20 KEPS (Use With Timer)	1



WITHOUT ELECTRONIC IGNITION

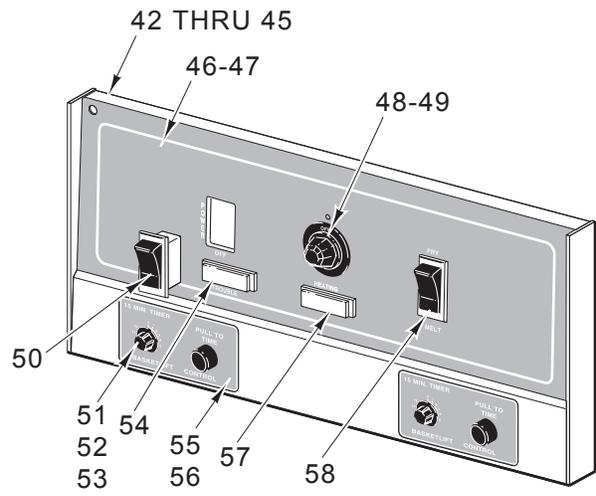


WITH ELECTRONIC IGNITION



WITHOUT ELECTRONIC IGNITION,
WITH BASKETLIFT

PL-56473



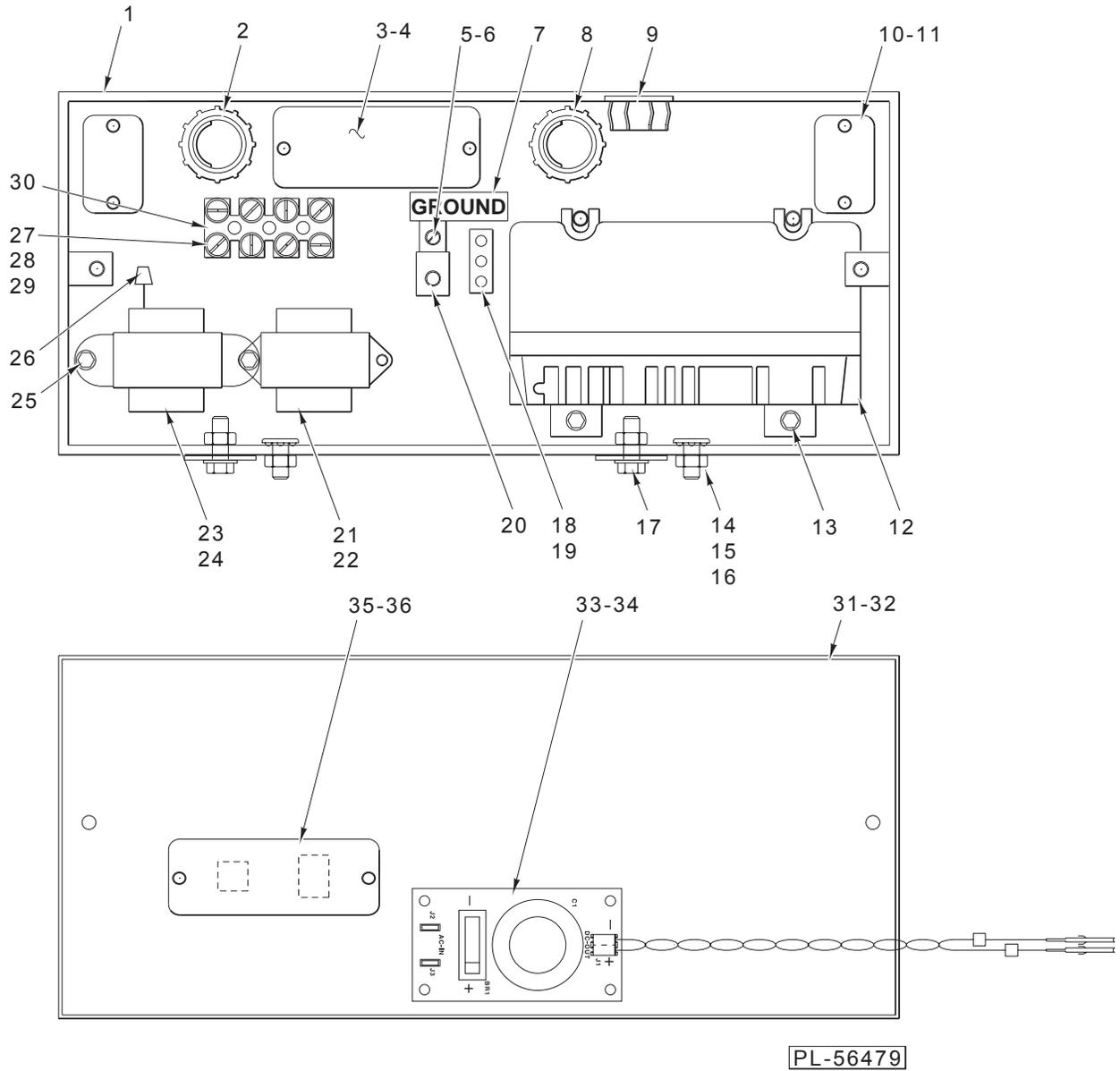
WITH ELECTRONIC IGNITION,
WITH BASKETLIFT

**CONTROL PANEL* (GRD SERIES)
(PREVIOUS CONSTRUCTION)**

**CONTROL PANEL* (GRD SERIES)
(PREVIOUS CONSTRUCTION)**

ILLUS. PL-56473	PART NO.	NAME OF PART	AMT.
1	00-418395-000G1	Display Panel Assy. (GRD35 & GRD45) (Complete)	1
2	00-418398-000G1	Display Panel Assy. (GRD65) (Complete)	1
3	00-418386-00001	Overlay – Control Panel (GRD35 & GRD45)	1
4	00-418389-00001	Overlay – Control Panel (GRD65)	1
5	00-411496-000E8	Light – Indicator (Red)	1
6	00-414254-00001	Knob – Potentiometer	1
7	00-415638-000G1	Potentiometer	1
8	00-411496-000E8	Light – Indicator (Red)	1
9	00-411496-000B1	Switch – Rocker	1
10	00-411496-000E9	Light – Indicator (Amber) (Heat)	1
11	00-411496-000B7	Switch – Rocker	1
12	00-418396-000G1	Display Panel (GRD35 & GRD45) (Complete)	1
13	00-418397-000G1	Display Panel (GRD65) (Complete)	1
14	00-418387-00001	Overlay – Control Panel (GRD35 & GRD45)	1
15	00-418388-00001	Overlay – Control Panel (GRD65)	1
16	00-411496-000E8	Light – Indicator (Red)	1
17	00-414254-00001	Knob – Potentiometer	1
18	00-415638-000G1	Potentiometer	1
19	00-411496-000E8	Light – Indicator (Red)	1
20	00-411496-000B1	Switch – Rocker	1
21	00-411496-00E10	Light – Indicator (Trouble)	1
22	00-411496-000E9	Light – Indicator (Amber) (Heat)	1
23	00-411496-000B7	Switch – Rocker	1
24	00-418405-000G1	Display Panel Assy. (GRD35 & GRD45) (1 Basketlift) (Complete)	1
25	00-418405-000G2	Display Panel Assy. (GRD35 & GRD45) (2 Basketlift) (Complete)	1
26	00-418406-000G1	Display Panel (GRD65) (1 Basketlift) (Complete)	1
27	00-418406-000G2	Display Panel (GRD65) (2 Basketlift) (Complete)	1
28	00-418386-00001	Overlay – Control Panel (GRD35 & GRD45)	1
29	00-418389-00001	Overlay – Control Panel (GRD65)	1
30	00-411496-000E8	Light – Indicator (Red)	1
31	00-414254-00001	Knob – Potentiometer	1
32	00-415638-000G1	Potentiometer	1
33	00-411496-000E8	Light – Indicator (Red)	1
34	00-411496-000B1	Switch – Rocker	1
35	00-415254-00002	Timer – Basketlift (Solid State) (15 Min.)	AR
36	00-415254-00003	Timer – Basketlift (7 Min.)	1
37	00-415269-00001	Knob – Basketlift Timer	1
38	00-415255-00001	Overlay – Basketlift (15 Min.)	AR
39	00-415255-00003	Overlay – Control Panel (7 Min.)	1
40	00-411496-000E9	Light – Indicator (Amber) (Heat)	1
41	00-411496-000B7	Switch – Rocker	1
42	00-418407-000G1	Display Panel Assy. (GRD35 & GRD45) (1 Basketlift) (Complete)	1
43	00-418407-000G2	Display Panel Assy. (GRD65) (2 Basketlift) (Complete)	1
44	00-418408-000G1	Display Panel (GRD65) (1 Basketlift) (Complete)	1
45	00-418408-00G10	Display Panel (GRD65) (2 Basketlift) (Complete)	1
46	00-418387-00001	Overlay – Control Panel (GRD35 & GRD45)	1
47	00-418388-00001	Overlay – Control Panel (GRD65)	1
48	00-414254-00001	Knob – Potentiometer	1
49	00-415638-000G1	Potentiometer	1
50	00-411496-000B1	Switch – Rocker	1
51	00-415254-00002	Timer – Basketlift (Solid State) (15 Min.)	1
52	00-415254-00003	Timer – Basketlift (7 Min.)	1
53	00-415269-00001	Knob – Basketlift Timer	1
54	00-411496-00E10	Light – Indicator (Trouble)	1
55	00-415255-00001	Overlay – Basketlift (15 Min.)	AR
56	00-415255-00003	Overlay – Control Panel (7 Min.)	1
57	00-411496-000E8	Light – Indicator (Red)	1
58	00-411496-000B7	Switch – Rocker	1

*Used on fryers built prior to June 2002



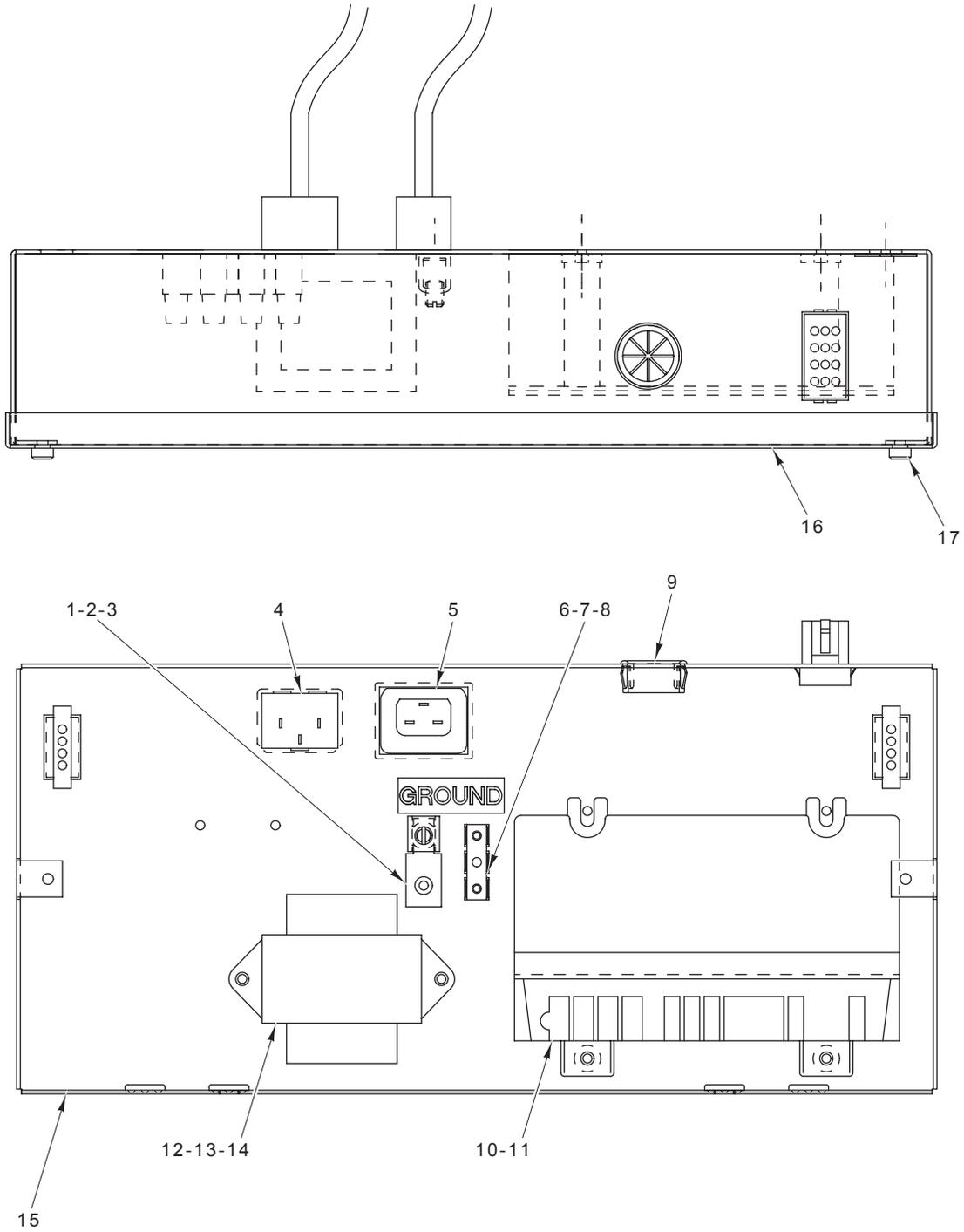
**POWER SUPPLY BOX
(PREVIOUS CONSTRUCTION)**

POWER SUPPLY BOX*
(PREVIOUS CONSTRUCTION)

ILLUS. PL-56479	PART NO.	NAME OF PART	AMT.
1	00-419302-000G1	Box – Power Supply	1
**2	FE-024-24	Bushing – Elect. Snap	1
3	00-419375-00003	Cover – Plate	1
4	SC-060-23	Mach. Screw 4-40 x 1/4 Slotted Rd. Hd.	2
5	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Slotted Hex Washer Hd., Type AB	1
6	WL-004-40	Lockwasher #10	1
7	FE-024-24	Bushing – Elect. Snap	1
8	FE-024-28	Bushing	AR
9	00-419375-00001	Cover – Plate	2
10	SC-060-23	Mach. Screw 4-40 x 1/4 Slotted Rd. Hd.	2
11	FE-024-24	Bushing – Elect. Snap	1
12	00-417980-00001	Ignitor Module (Honeywell) (Electronic Ignition)	1
13	SD-037-49	Self-Tapping Screw 8-18 x 1/2 Hex Washer Hd., Type AB	4
14	00-419580	Bracket – Power Supply Mounting (W/O E.I. / W/M.F.)	1
15	00-419580-00002	Bracket – Power Supply Mounting	1
16	SC-113-90	Mach. Screw 1/4-20 x 3/4 Slotted Hex Washer Hd. (Use With Item 14)	2
17	NS-047-72	Lock Nut Special 1/4-20 Flexloc (Use W/419580)	2
18	SC-060-23	Mach. Screw 4-40 x 1/4 Slotted Rd. Hd.	2
19	00-419317	Terminal Ground	1
20	00-417856-00001	Lug – Grounding (With Set Screw)	1
21	00-411500-00012	Transformer (120 V.)	1
22	00-411500-00013	Transformer (208/240 V.)	1
23	00-419572-000G1	Transformer 12 V. (GRC Series, 120 V.)	1
24	00-419572-000G2	Transformer 12 V. (GRC Series, 208/240 V.)	1
25	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Slotted Hex Washer Hd., Type AB	3
26	FE-006-29	Wire Nut (Use With Item 23)	4
27	SC-119-90	Mach. Screw 6-32 x 1 Slotted Pan Hd.	2
28	WL-004-40	Lockwasher #10	2
29	NS-009-07	Mach. Nut Hex	2
30	00-414208-00002	Barrier – Terminal	1
31	00-419301-00002	Cover – Power Supply Box	1
32	SD-037-07	Self-Tapping Screw 10-16 x 2 Hex Washer Hd., Type AB	2
33	00-419574-000G1	Board – Assy. Power Supply	1
34	NS-046-89	Nut Assy. 6-32 KEPS	4
35	00-419375-00002	Cover – Plate	1
36	SC-060-23	Mach. Screw 4-40 x 1/4 Slotted Rd. Hd.	2
	00-419315	Power Cord (W/O Electronic Ignition)	1
	00-421363-00002	Power Cord (W/Electronic Ignition)	1
	00-421363-00003	Power Cord (W/Electronic Ignition & Fat Melt Cycle)	1
	00-419359	Cable – Ignition	1
	00-419332-000G1	Harness – Power (GRC & GRS Series W/Electronic Ignition)	1
	00-419360-000G1	Harness – Power (GRD Series W/Electronic Ignition)	1
	00-419333-000G1	Harness – Power (GRC & GRS Series W/O Electronic Ignition)	1
	00-419361-000G1	Harness – Power (GRD Series W/O Electronic Ignition)	1

*Used on fryers built prior to June 2002.

**FE-024-24 (Bushings) will be replaced by FE-023-37 (Connector Conduit) when unit is filter ready and/or in a battery.



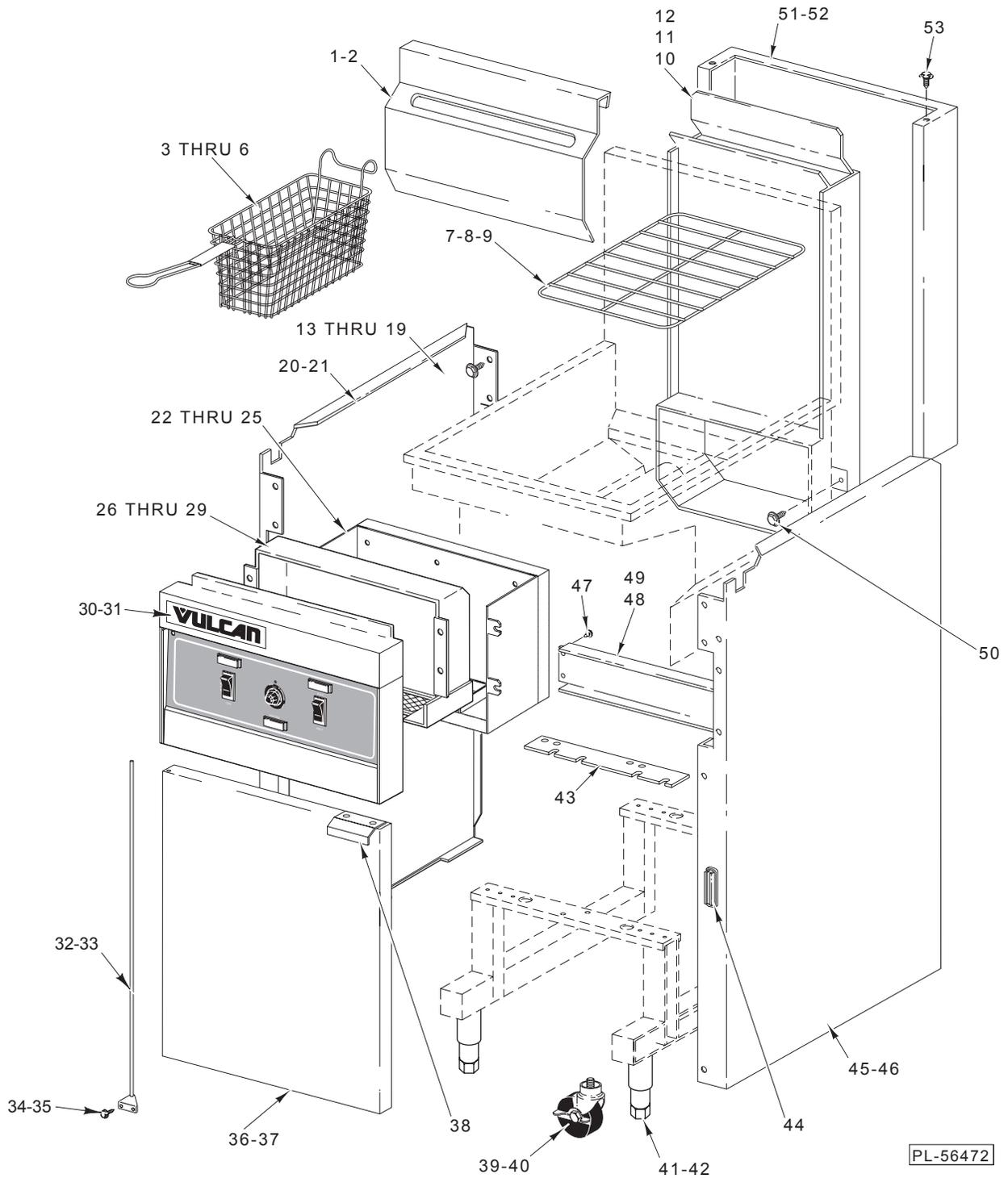
PL-56817

**POWER SUPPLY BOX
(CURRENT CONSTRUCTION)**

**POWER SUPPLY BOX*
(CURRENT CONSTRUCTION)**

ILLUS. PL-56817	PART NO.	NAME OF PART	AMT.
1	SD-036-03	Self-Tapping Screw 8-18 x ³ / ₈ Slotted Hex Hd., Type AB	1
2	WL-004-40	Lockwasher #10 Helical	1
3	00-417856-00001	Lug – Ground	1
4	00-419973-000G1	Plug – Male	1
5	00-419973-000G2	Plug – Female	1
6	SC-060-23	Mach. Screw 4-40 x ¹ / ₄ Slotted Rd. Hd.	1
7	NS-047-32	Lock Nut SP 4-40	1
8	00-419317	Terminal	1
9	FE-024-28	Cord – Restraint	1
10	00-417980-00001	Module – Ignition (E.I. Only)	1
11	SD-037-49	Self-Tapping Screw 8-18 x ¹ / ₂ Hex Hd., Type AB	4
12	00-411500-00013	Transformer (240 V.)	1
13	00-411500-00012	Transformer (120 V.)	1
14	SD-036-03	Self-Tapping Screw 8-18 x ³ / ₈ Slotted Hex Hd., Type AB	2
15	00-427814-000G1	Box – Power Supply	1
16	00-427815-00001	Lid	1
17	SD-037-07	Self-Tapping Screw 10-16 x 2 Hex Washer He., Type AB	2

*Used on fryers built after June 2002.

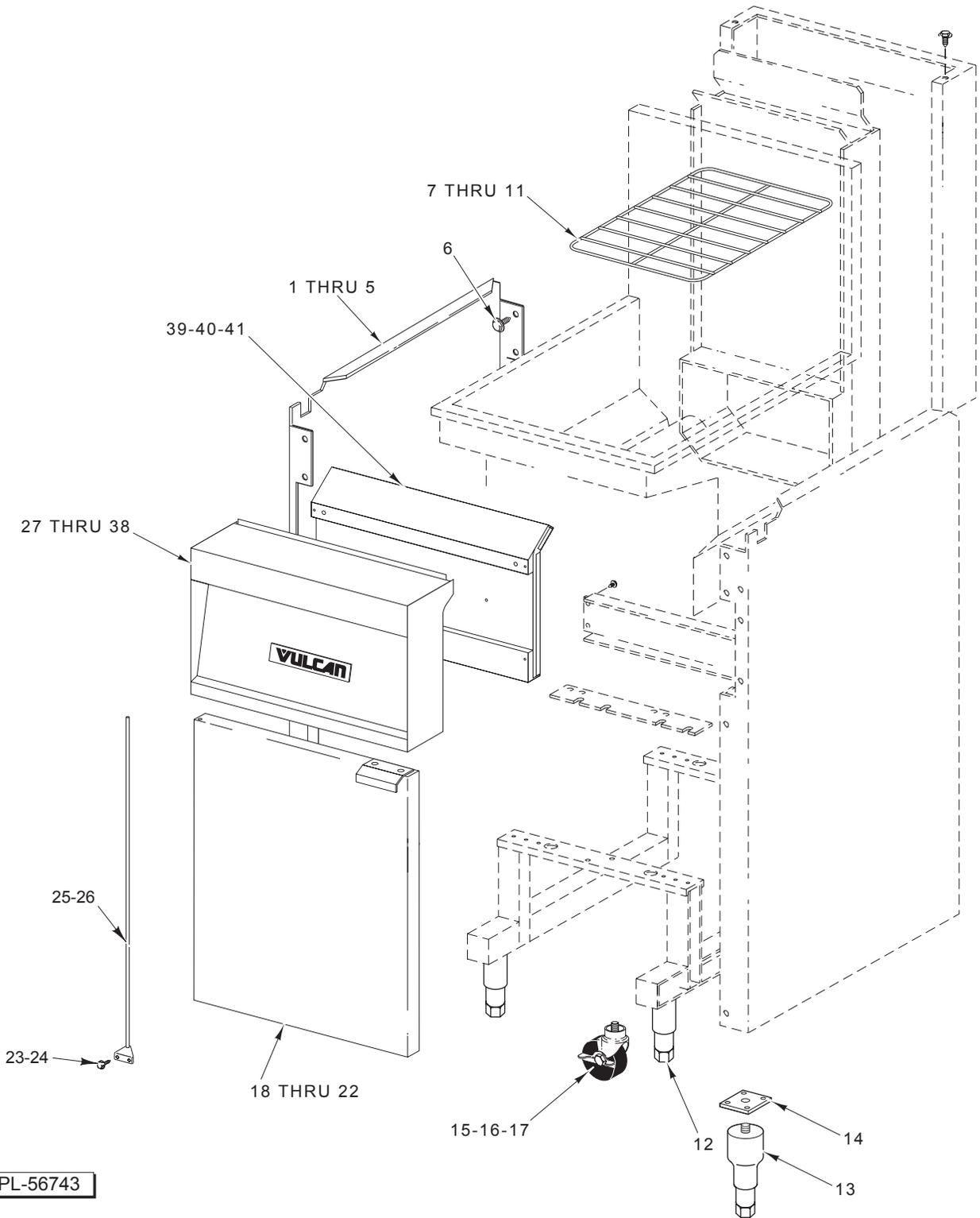


BODY UNIT

BODY UNIT

ILLUS. PL-56472	PART NO.	NAME OF PART	AMT.
1	00-417056-00002	Hanger – Basket (GRC35/45, GRD35/45, & GRS35/45)	2
2	00-418321-00002	Hanger – Basket (GRC65, GRD65, & GRS65)	2
3	00-410737-00007	Basket – Twin (Red Handle) (GRC35/45, GRD35/45, & GRS35/45)	2
4	00-418335-00001	Basket – Twin (Red Handle) (GRC65, GRD65, & GRS65)	2
5	00-411378-00002	Basket – Single Dual Handle (GRC35/45, GRD35/45, & GRS35/45)	1
6	00-418380-00001	Basket – Single (GRC65, GRD65, & GRS65)	1
7	00-427883-00001	Screen – Crumb (GRC35, GRD35, & GRS35)	1
8	00-427883-00002	Screen – Crumb (GRC45, GRD45, & GRS45)	1
9	00-427883-00003	Screen – Crumb (GRC65, GRD65, & GRS65)	1
10	00-416994-000G1	Flue Assy. (3 Tube) (GRC35, GRD35, & GRS35)	1
11	00-418201-000G1	Flue Assy. (4 Tube) (GRC45, GRD45, & GRS 45)	1
12	00-418205-000G1	Flue Assy. (5 Tube) (GRC65, GRD65, & GRS65)	1
13	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT	AR
14	SD-036-83	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type F	AR
15	NS-044-09	Nut Assy. 10-24 KEPS	AR
16	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Slotted Hex Washer Hd., Type AB	AR
17	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT	AR
18	NS-046-52	Nut Assy. 1/4-20 KEPS	AR
19	NS-047-79	Locknut Special 3/16 Stud	AR
20	00-419648-00001	Body – LH Side (SST) (Non-Filter Ready) (GRC35/45/65, GRD35/45/65, & GRS35/45/65)	1
21	00-417711-00001	Body – LH Side (SST) (GRC35/45/55, GRD35/45/65, & GRS35/45/65)	1
22	00-427018-000G1	Deflector Assy. (GRC35/45 & GRD35/45)	1
23	00-427018-000G2	Deflector Assy. (GRS35/45)	1
24	00-427044-000G1	Deflector Assy. (GRC65 & GRD65)	1
25	00-427044-000G2	Deflector Assy. (GRS65)	1
26	00-416535-00004	Switch – Relay SPDT 24 V. Coil (Electronic Ignition) (Previous Construction)	1
27	00-415144-00011	Board – Temperature (GRD Series) (Previous Construction)	1
28	00-418573-000G2	Probe – Thermistor (GRD Series) (Previous Construction)	1
29	00-418573-000G1	Probe – Thermistor (GRC Series & GR Series)	1
30	NS-047-79	Palnut 3/16	2
31	00-417700-00002	Nameplate (6 In.)	1
32	00-426502-00001	Hinge – Door, Upper (Open Right)	1
33	00-426502-00002	Hinge – Door, Upper (Open Left)	1
34	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT	2
35	NS-044-09	Nut Assy. 10-24 Hex KEPS	2
*36	00-426562-000G2	Door Assy. (GRC35/45, GRD35/45, & GRS35/45)	1
*37	00-426562-000G6	Door Assy. (GRC65, GRD65, & GRS65)	1
38	00-419653	Handle – Door	1
39	00-418906-00001	Caster – Adjustable Rigid	2
40	00-418906-00001	Caster – Adjustable Swivel	2
41	00-413112-00007	Leg (6 1/4 In.) (SST)	4
42	00-413112-00009	Leg (6 In.) (SST)	4
43	00-419580	Bracket – Power Supply Mounting	1
44	00-426573-00001	Catch – Magnet	5
45	00-419648-00002	Body RH Side (SST) (Non-Filter Ready) (GRC35/45/65, GRD35/45/65, & GRS35/45/65)	1
46	00-417711-00002	Body RH Side (SST) (GRC35/45/65, GRD35/45/65, & GRS35/45/65)	1
47	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT	2
48	00-417014-00001	Bracket – Rear Support (GRC35/45, GRD35/45, & GRS35/45)	1
49	00-418320-00001	Bracket – Rear Support (GRC65, GRD65, & GRS65)	1
50	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT	4
51	00-416959-00002	Wrap – Flue (3 Tube or 4 Tube) (GRC35/45, GRD35/45, & GRS35/45)	1
52	00-418336-00002	Wrap – Flue (5 Tube) (GRC65, GRD65, & GRS65)	1
53	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT	2

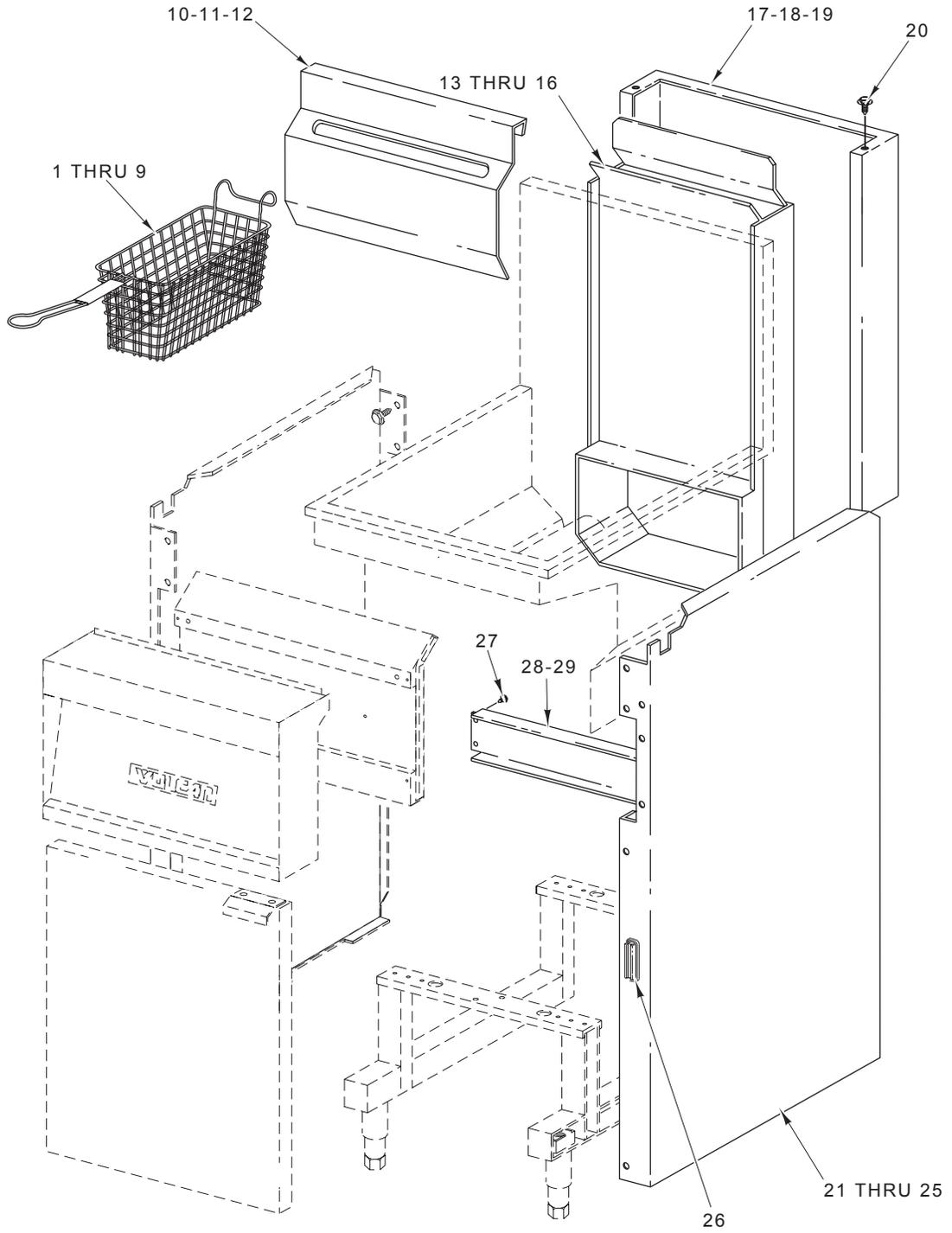
*Door Assy. give model and serial number.



**BODY UNIT - LEFT SIDE AND FRONT
(GR SERIES)**

BODY UNIT - LEFT SIDE AND FRONT (GR SERIES)

ILLUS. PL-56743	PART NO.	NAME OF PART	AMT.
1	00-419648-00001	Body – LH Side (GR25/35/45/65) (Non-Filter Ready)	1
2	00-417711-00001	Body – LH Side (GR35/45/65) (Filter Ready)	1
3	00-419893-00003	Body – LH Side (GR25/35/45/65/85) (Alum.) (4/5/6 Units)	1
4	00-420596-00003	Body – LH Side (GR85)	1
5	00-419777-00003	Body – LH Side (GR85)	1
6	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type AB	AR
7	00-427883-00001	Rack – Crumb (GR35)	1
8	00-427883-00002	Rack – Crumb (GR45)	1
9	00-427883-00003	Rack – Crumb (GR65)	1
10	00-427883-00004	Rack – Crumb (GR85)	1
11	00-427883-00005	Rack – Crumb (GR25)	1
12	00-413112-00007	Leg (6 1/4 In.) (SST)	4
13	00-413112-00009	Leg (6 In.) (SST)	4
14	00-413112-00010	Plate – Leg Base (Use With Item 13)	4
15	00-418907-00001	Caster – Adjustable (Swivel)	2
16	00-421893-00001	Caster – Plate Mount (4 In.)	2
17	00-421893-00002	Caster (4 In.) (W/O Brake)	2
18	00-426562-000G9	Door Assy. (SST) (GR25)	1
19	00-426562-000G8	Door Assy. (SST) (GR35/45) (Non-Filter Ready)	1
20	00-426562-000G2	Door Assy. (SST) (GR35/45) (Filter Ready)	1
21	00-426562-000G7	Door Assy. (SST) (GR65/85) (Non-Filter Ready)	1
22	00-426562-000G6	Door Assy. (SST) (GR65/85) (Filter Ready)	1
23	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT	2
24	NS-044-09	Nut Assy. 10-24 Hex KEPS	2
25	00-428023-000G1	Hinge Assy.	1
26	00-428023-000G2	Hinge Assy.	1
27	00-428116-000G8	Frame – Front Assy. (GR25) (1 Unit)	AR
28	00-428116-000G9	Frame – Front Assy. (GR25) (2 Unit)	AR
29	00-428116-000G10	Frame – Front Assy. (GR25) (3 Unit)	AR
30	00-428116-000G11	Frame – Front Assy. (GR25) (4 Unit)	AR
31	00-428116-000G1	Frame – Front Assy. (GR35/45) (1 Unit)	AR
32	00-428116-000G3	Frame – Front Assy. (GR35/45) (2 Unit)	AR
33	00-428116-000G5	Frame – Front Assy. (GR35/45) (3 Unit)	AR
34	00-428116-000G7	Frame – Front Assy. (GR35/45) (4 Unit)	AR
35	00-428116-000G2	Frame – Front Assy. (GR65/85) (1 Unit)	AR
36	00-428116-000G4	Frame – Front Assy. (GR65/85) (2 Unit)	AR
37	00-428116-000G6	Frame – Front Assy. (GR65/85) (3 Unit)	AR
38	00-417700-00002	Nameplate (6 In.)	1
39	00-418324-000G1	Heat Shield (GR65/85)	1
40	00-418379-000G1	Heat Shield (GR35/45)	1
41	00-428156-000G1	Heat Shield (GR25)	1

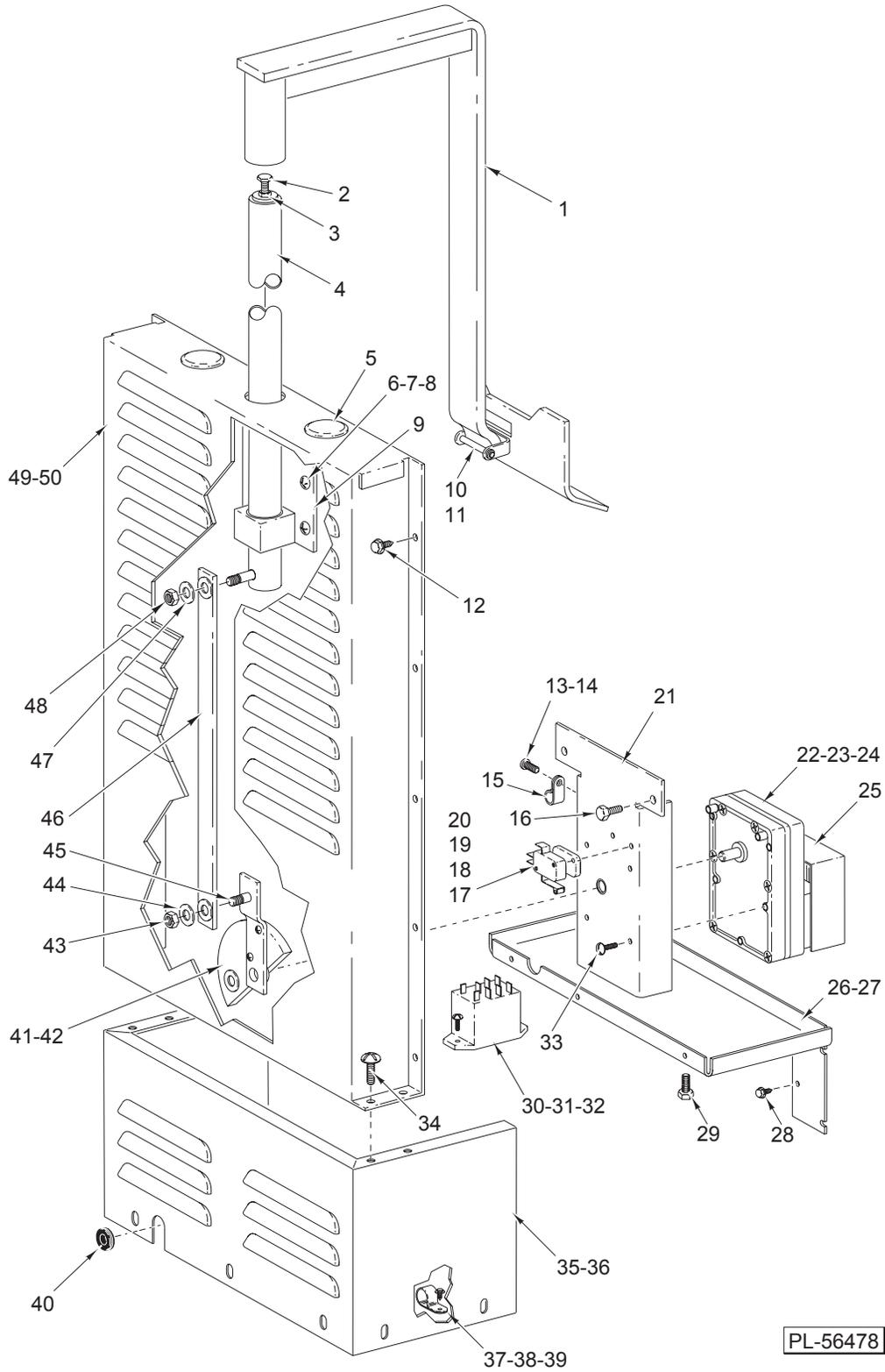


PL-56744

**BODY UNIT - RIGHT SIDE AND BACK
(GR SERIES)**

**BODY UNIT - RIGHT SIDE AND BACK
(GR SERIES)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56744			
1	00-410737-00007	Basket – Twin (Red Handle) (GR35/45)	AR
2	00-421465-00002	Basket – Twin (GR25)	1
3	00-418335-00001	Basket – Twin (Red Handle) (GR65)	AR
4	00-420580-00001	Basket – Twin (Red Handle) (GR85)	AR
5	00-411378-00002	Basket – Large Single (Full Vat) (GR35/45)	AR
6	00-418380-00001	Basket – Single (GR65)	AR
7	00-410737-00006	Basket – Triple (Red Handle) (GR65)	1
8	00-420581-00001	Basket – Single (GR85)	1
9	00-410737-00008	Basket – Triple (Red Handle) (GR85)	1
10	00-417056-00002	Hanger – Basket (GR35/45)	1
11	00-420642-00001	Hanger – Basket (GR25)	1
12	00-418321-00002	Hanger – Basket (GR65/85)	1
13	00-416994-000G1	Flue Assy. (GR35)	1
14	00-420689-000G1	Flue Assy. (GR25)	1
15	00-418201-000G1	Flue Assy. (GR45)	1
16	00-418205-000G1	Flue Assy. (GR65/85)	1
17	00-416959-00002	Wrap – Flue (GR25/35/45)	1
18	00-420644-00002	Wrap – Flue (GR25)	1
19	00-418336-00002	Wrap – Flue (GR65/85)	1
20	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT	AR
21	00-419648-00002	Body – RH Side (GR25/35/45/65) (Non-Filter Ready)	1
22	00-417711-00002	Body – RH Side (GR35/45/65) (Filter Ready)	1
23	00-419893-00004	Body – RH Side (GR25/35/45/65) (Alum.) (4/5/6 Units)	1
24	00-420596-00004	Body – RH Side (GR85)	1
25	00-419777-00004	Body – RH Side (GR85)	1
26	00-426573-00001	Catch – Magnetic	1
27	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT	AR
28	00-417014-00001	Bracket – Rear Support (GR35/45) (15.5 In.) (Filter Ready)	1
29	00-418320-00001	Bracket – Rear Support (GR65/85) (Filter Ready)	1

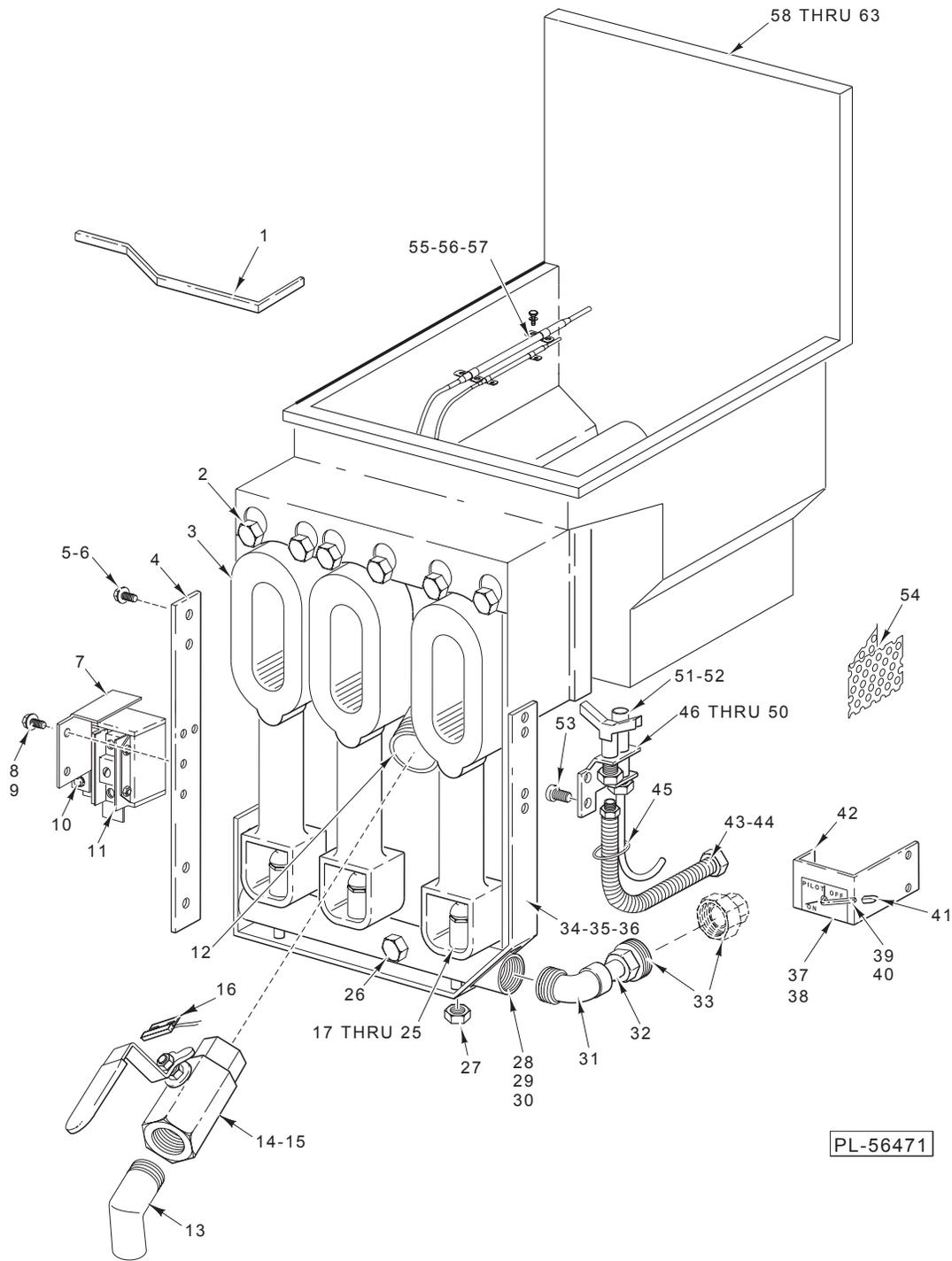


PL-56478

BASKETLIFT COMPONENTS

BASKETLIFT COMPONENTS

ILLUS.	PART NO.	NAME OF PART	AMT.
	PL-56478		
1	00-418474-000G1	Arm – Basket Assy. (Incls. Items 10 & 11)	1
2	00-418118-00001	Bolt – Adjusting	1
3	NS-018-01	Jam Nut 1/4-20 Hex (SST)	1
4	00-418479-000G1	Tube – Basketlift	1
5	PB-004-04	Plug Button 1 1/4 (Single Unit)	2
6	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT	2
7	WS-004-33	Washer	6
8	NS-047-03	Jam Nut 5/8-18 Hex (SST)	6
9	00-418478-000G1	Bearing Support Assy.	1
10	00-418487-00001	Roller	1
11	00-418488	Pin – Roller	1
12	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Slotted Hex Washer Hd., Type AB	10
13	SC-109-10	Mach. Screw 6-32 x 3/8 Slotted Pan Hd. (SST)	1
14	NS-009-07	Mach. Nut 6-32 Hex	1
15	00-078752-00012	Clamp – Cable 3/8 P	1
16	SC-037-80	Cap Screw 10-24 x 1/2 Hex Hd.	8
17	00-418159-00001	Block – Cam Switch	1
18	00-411496-000F3	Microswitch	1
19	SC-112-90	Mach. Screw 4-40 x 1 Slotted Pan Hd.	2
20	NS-009-02	Mach. Nut 4-40 Hex	2
21	00-418123-000G1	Plate – Motor	1
22	00-418156-00001	Gear – Motor (115 V., 60 Hz.)	1
23	00-418156-00002	Gear – Motor (230 V., 50/60 Hz.)	1
24	00-418156-00003	Gear – Motor (208 V., 50/60 Hz.)	1
25	00-418517-00001	Shroud – Motor	1
26	00-418484-00001	Base – Motor Mounting (GRC35/45, GRD35/45, & GRS35/45)	1
27	00-418513-00001	Base – Motor Mounting (GRC65, GRD65, & GRS65)	1
28	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT	2
29	SC-037-80	Cap Screw 10-24 x 1/2 Hex Hd.	2
30	00-416535-00004	Switch – Relay SPDT 24 V. Coil (Electronic Ignition)	1
31	SC-109-10	Mach. Screw 6-32 x 3/8 Slotted Pan Hd. (SST)	3
32	NS-009-07	Mach. Nut 6-32 Hex	3
33	SC-018-47	Mach. Screw 10-32 x 3/4 Slotted Pan Hd.	4
34	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Slotted Hex Washer Hd., Type AB	4
35	00-418480-00001	Wrap – Bottom (GRC35/45, GRD35/45, & GRS35/45)	1
36	00-418510-00001	Wrap – Bottom (GRC65, GRD65, & GRS65)	1
37	00-078752-00012	Clamp 3/8 P	1
38	SC-109-10	Mach. Screw 6-32 x 3/8 Slotted Pan Hd. (SST)	1
39	NS-009-07	Mach. Nut Hex 6-32	1
40	00-418482-00001	Grommet	1
41	00-418475-000G1	Crank – Arm Assy. (Incls. Items 42 & 43)	1
42	SC-055-02	Set Screw 1/4-20 x 1/4 Hdls., Cup Pt. (SST)	2
43	NS-047-73	Lock Nut 5/16-18 Hex	1
44	WS-004-33	Washer	1
45	SD-015-41	Self-Tapping Screw 8-32 x 1/2 Phil. Pan Hd.	2
46	00-418477-000G1	Coupler Assy.	1
47	WS-004-33	Washer	1
48	NS-047-73	Lock Nut 5/16-18 Hex	1
49	00-418481-00001	Wrap – Top (GRC35/45, GRD35/45, & GRS35/45)	1
50	00-418511-00001	Wrap – Top (GRC65, GRD65, & GRS65)	1



BURNER COMPONENTS AND TANK

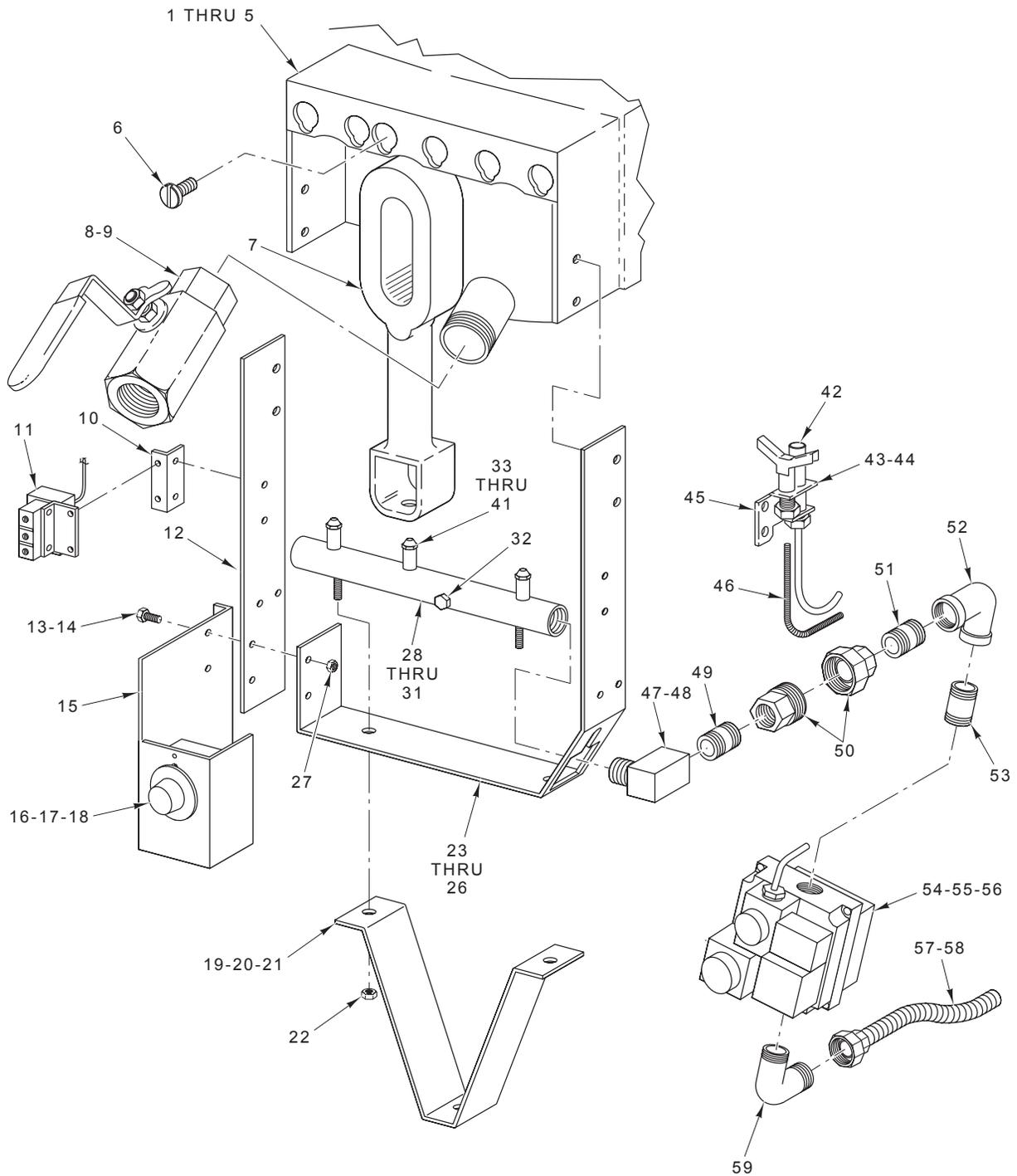
ILLUS.	PART NO.	NAME OF PART	AMT.
	PL-56471		
1	00-409300-00005	Rod – Clean-Out	1
2	SC-062-07	Cap Screw ⁵ / ₁₆ -18 x ¹ / ₂ Hex Hd.	AR
3	00-410681-00001	Burner	AR
4	00-417714-00001	Extension – Hanger	1
5	SD-037-23	Self-Tapping Screw ⁵ / ₁₆ -18 x ¹ / ₂ Hex Washer Hd., Type T	4
6	NS-013-14	Nut ⁵ / ₁₆ -18 Hex	4
7	00-419548	Bracket – High Limit	1
8	SD-015-24	Self-Tapping Screw ¹ / ₄ -20 x ¹ / ₂ Hex Washer Hd., Type TT	2
9	NS-044-14	Nut ¹ / ₄ -20 Hex	2

BURNER COMPONENTS AND TANK (Cont.)

ILLUS. PL-56471	PART NO.	NAME OF PART	AMT.
10	SD-036-80	Self-Tapping Screw 8-32 x 3/8 Hex Washer Hd., Type TT	2
11	00-419670-00002	Control – Limit with Stuffing Box	1
12	00-418191-00001	Nipple – Drain	1
13	00-421339-00001	Drain Extension	1
14	00-414212-00008	Valve – Ball	1
15	00-426803-000G1	Valve (Double Filter) (GRC & GRD Series)	1
16	00-426805-000G1	Switch Assy. (Drain Valve Interlock) (Current Construction)	1
17	00-010901-00039	Orifice – Spud (Nat. Gas) (Sea Level – 2000 Ft.)	AR
18	00-010901-00041	Orifice – Spud (Nat. Gas) (2000 – 3000 Ft.)	AR
19	00-010901-00042	Orifice – Spud (Nat. Gas) (3000 – 5000 Ft.)	AR
20	00-010901-00043	Orifice – Spud (Nat. Gas) (5000 – 7000 Ft.)	AR
21	00-010901-00044	Orifice – Spud (Nat. Gas) (7000 – 8000 Ft.)	AR
22	00-010901-00052	Orifice – Spud (L.P. Gas) (Sea Level – 3000 Ft.)	AR
23	00-010901-00053	Orifice – Spud (L.P. Gas) (3000 – 5000 Ft.)	AR
24	00-010901-00054	Orifice – Spud (L.P. Gas) (5000 – 8000 Ft.)	AR
25	00-410695-00001	Extension – Orifice	AR
26	FP-085-53	Pipe Plug 1/8 (SST)	1
27	NS-047-72	Lock Nut 1/4-20 Flexloc	2
28	00-418209-00001	Manifold – Burner (3 Tube)	1
29	00-418212-00001	Manifold – Burner (4 Tube)	1
30	00-418318-00001	Manifold – Burner (5 Tube)	1
31	FP-086-74	Elbow – Pipe 1/2 x 90 Deg.	1
32	FP-035-94	Pipe 1/2 x 1 1/2 Lg. TBE	1
33	FP-022-11	Union – Pipe	AR
34	00-418208-00001	Hanger – Manifold (3 Tube)	1
35	00-418211-00001	Hanger – Manifold (4 Tube)	1
36	00-418317-00001	Hanger – Manifold (5 Tube)	1
37	00-417896-00001	Plate – Control Valve (W/Pilot P)	1
38	00-417896-00002	Plate – Control Valve (W/O Pilot P)	1
39	00-413433-00005	Handle – Combo Valve	1
40	PC-003-24	Cotter Pin 1/16 x 1 1/2	1
41	00-418452-00001	Cap (Red)	1
42	00-418553	Bracket – Control	1
43	00-418558-00001	Tube – Pilot Flex 1/4 O.D. x 10 In. (Previous Construction)	1
44	00-426505-00012	Tube – Flex 1/2 O.D. x 12 In. Lg. (Current Construction)	1
45	00-411631-00001	Cable Tie	1
46	00-412212-00001	Pilot (Nat. Gas) (Previous Construction)	1
47	00-412212-00007	Pilot (Nat. & Mixed) (Current Construction)	1
48	00-412212-00002	Pilot (L.P. Gas)	1
49	00-419316-00001	Pilot (Nat. Gas) (W/Electronic Ignition)	1
50	00-419316-00002	Pilot (L.P. Gas) (W/Electronic Ignition)	1
51	00-410839-00004	Thermopile (GRS – No Other Option) (GR – Millivolt Control)	1
52	00-410839-00001	Thermopile W/Manual Ignition (GRC & GRD Series)	1
53	SC-018-32	Mach. Screw 8-32 x 3/8 Slotted Pan Hd.	2
54	00-419871-00001	Baffle Assy.	1
55	00-402558-00006	Clamp	2
56	00-417522-00001	Clip – Capillary	2
57	SD-035-02	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB	4
*58	00-416942-000G5	Tank Assy. (3 Tube) (SST) (GRC35, GRD35, & GRS35) (Previous Construction)	1
*59	00-418192-000G2	Tank Assy. (4 Tube) (SST) (GRC45, GRD45, & GRS45) (Previous Construction)	1
*60	00-408196-000G2	Tank Assy. (5 Tube) (SST) (GRC65, GRD65, & GRS65) (Previous Construction)	1
61	00-416942-00G10	Tank Assy. (3 Tube) (SST) (GRD35, GRC35) (Current Construction)	1
62	00-418192-000G5	Tank Assy. (4 Tube) (SST) GRD45, GRC45) (Current Construction)	1
63	00-418196-000G5	Tank Assy. (5 Tube) (SST) (GRD65, GRC65) (Current Construction)	1

*For replacement tanks on fryers built before June 2002, the following parts must be ordered with the above listed appropriate tank:

00-427952-00001	Bracket – Mounting	1
SD-32-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT	1
00-426505-00012	Tube – Pilot	1
00-405569-00003	Fitting – Compression	1
FP-047-35	Fitting – Tube 1/4	1
FP-047-34	Fitting – Tube 1/4	1
Appropriate Pilot Assy.		

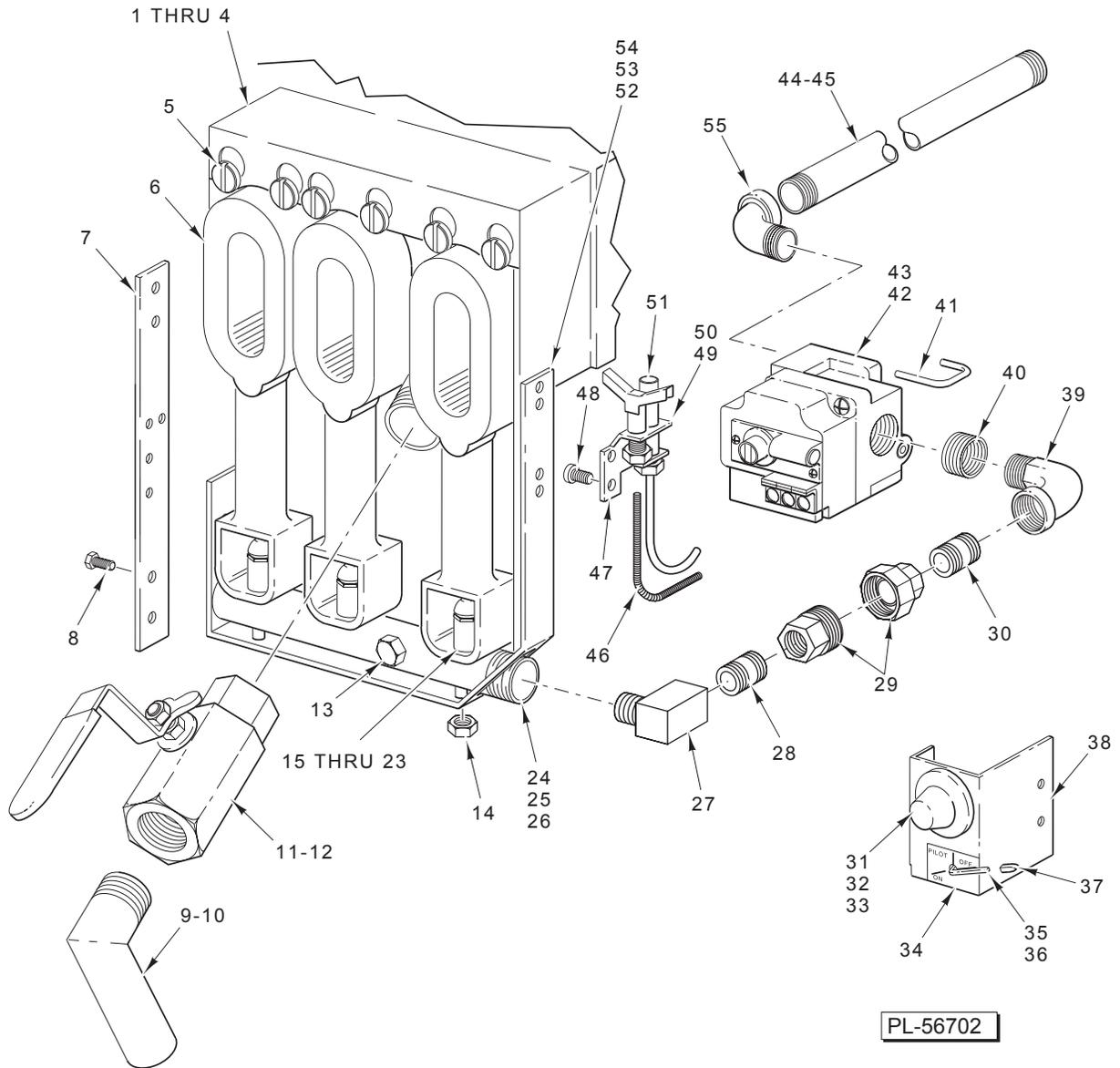


PL-56683

**BURNER COMPONENTS AND GAS MANIFOLD
(GR SERIES) (NON-FILTER-READY UNITS)**

BURNER COMPONENTS AND GAS MANIFOLD (GR SERIES) (NON-FILTER-READY UNITS)

ILLUS. PL-56683	PART NO.	NAME OF PART	AMT.
1	00-420621-000G3	Tank Assy. (GR25) (SST).....	1
2	00-416942-000G9	Tank Assy. (GR35) (SST).....	1
3	00-418192-000G6	Tank Assy. (GR45) (SST).....	1
4	00-418196-000G6	Tank Assy. (GR65) (SST).....	1
5	00-419620-000G4	Tank Assy. (GR85) (SST).....	1
6	00-428035-00001	Bolt – Shoulder	AR
7	00-410681-00001	Burner	AR
8	00-427903-00001	Valve – Ball 1 In. (GR25/35/45/65).....	1
9	00-414212-00006	Valve – Ball 1 1/4 In. (GR85)	1
10	00-419548	Bracket – Thermostat Control (GR25)	1
11	00-419670-00002	Thermostat – Hi-Limit (W/Stuff Box)	1
12	00-417714-00001	Hanger – Manifold Extension	1
13	SD-015-24	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT (GR25)	6
14	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT (GR35/45/65/85)	2
15	00-419613	Bracket – Control (GR35/45/65/85)	1
16	00-408659-00005	Knob – Thermostat	1
17	00-419999-00001	Thermostat (GR35/45/65/85)	1
18	00-408659-00007	Knob – Thermostat (Celsius)	1
19	00-420635-00001	Bracket – Support (GR25)	1
20	00-420561-00001	Bracket – Support (GR35/45)	1
21	00-420562-00001	Bracket – Support (GR65/85)	1
22	NS-047-72	Lock Nut 1/4-20 Hex	2
23	00-420634-00001	Hanger – Manifold (GR25)	1
24	00-418208-00001	Hanger – Manifold (GR35)	1
25	00-418211-00001	Hanger – Manifold (GR45)	1
26	00-418317-00001	Hanger – Manifold (GR65/85)	1
27	NS-046-52	Nut	6
28	00-420630-00001	Manifold (GR25)	1
29	00-416999-00001	Manifold (GR35)	1
30	00-418212-00001	Manifold (GR45)	1
31	00-418318-00001	Manifold (GR65/85)	1
32	FP-085-53	Pipe Plug 1/8 NPT	1
33	00-010901-00039	Orifice – Spud (Nat. Gas) (Sea Level – 2000 Ft.)	AR
34	00-010901-00041	Orifice – Spud (Nat. Gas) (2000 – 3000 Ft.)	AR
35	00-010901-00042	Orifice – Spud (Nat. Gas) (3000 – 5000 Ft.)	AR
36	00-010901-00043	Orifice – Spud (Nat. Gas) (5000 – 7000 Ft.)	AR
37	00-010901-00044	Orifice – Spud (Nat. Gas) (7000 – 8000 Ft.)	AR
38	00-010901-00052	Orifice – Spud (L.P. Gas) (Sea Level – 3000 Ft.)	AR
39	00-010901-00053	Orifice – Spud (L.P. Gas) (3000 – 5000 Ft.)	AR
40	00-010901-00054	Orifice – Spud (L.P. Gas) (5000 – 8000 Ft.)	AR
41	00-410695-00001	Extension – Orifice	AR
42	00-410839-00004	Thermopile	1
43	00-412212-00007	Pilot (Nat. Gas)	1
44	00-412212-00002	Pilot (L.P. Gas)	1
45	00-427952-00001	Bracket – Pilot Mounting	1
46	00-426505-00023	Tube – Pilot (23 In.)	1
47	FP-086-74	Elbow 90 Deg. (GR25/45/65/85)	1
48	FP-077-68	Elbow 1/2 x 1/2 x 90 Deg. (GR35)	1
49	FP-035-94	Pipe 1/2 x 1 1/2 TBE	1
50	FP-022-11	Union 1/2	1
51	FP-035-94	Pipe 1/2 x 1 1/2 TBE	1
52	FP-077-68	Elbow 1/2 x 1/2 x 90 Deg.	1
53	FP-035-95	Pipe 1/2 x 2 TBE	1
54	00-410841-00022	Valve – Combination (Nat. Gas)	1
55	00-410841-00023	Valve – Combination (L.P. Gas)	1
56	00-412593-00001	Tube – Vent	1
57	00-427882-000G1	Tube – Gas Inlet (GR25/35/45/65)	1
58	00-427882-000G2	Tube – Gas Inlet (GR85)	1
59	FP-013-17	Fitting – Elbow 90 Deg. (Street)	1

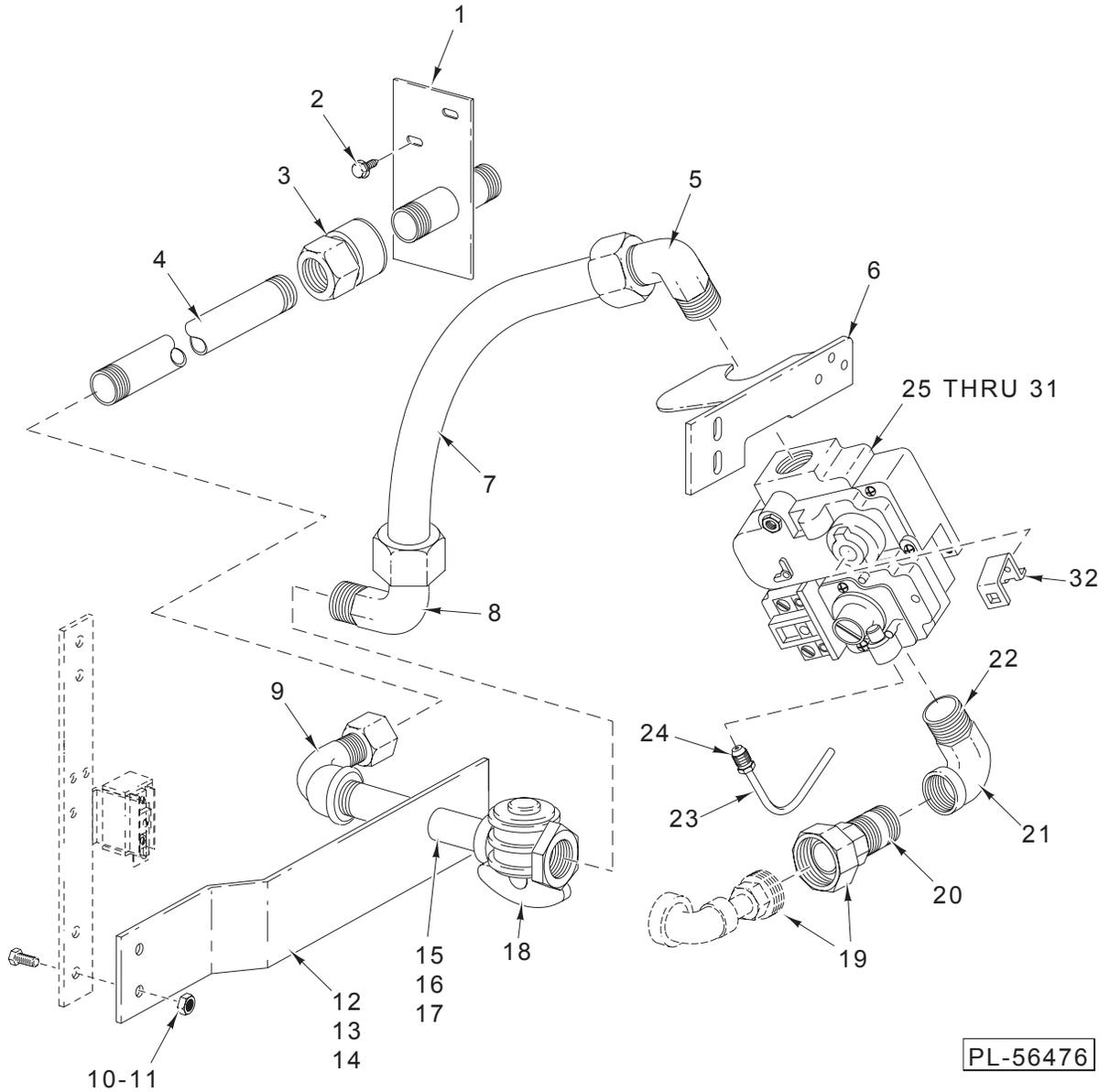


PL-56702

**BURNER COMPONENTS AND GAS MANIFOLD
(GR SERIES) (FILTER-READY UNITS)**

**BURNER COMPONENTS AND GAS MANIFOLD
(GR SERIES) (FILTER-READY UNITS)**

ILLUS. PL-56702	PART NO.	NAME OF PART	AMT.
1	00-416942-00G10	Tank Assy. (GR35)	1
2	00-418192-000G5	Tank Assy. (GR45)	1
3	00-418196-000G5	Tank Assy. (GR65)	1
4	00-419620-000G3	Tank Assy. (GR85)	1
5	00-428035	Bolt – Shoulder	AR
6	00-410681-00001	Burner	AR
7	00-417714-00001	Extension – Hanger	1
8	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT	AR
9	00-421860-000G1	Drain Extension (GR35/45/65)	1
10	00-421334-000G1	Drain Extension (GR85)	1
11	00-427903-00001	Valve – Ball 1 In. (GR35/45/65)	1
12	00-414212-00006	Valve – Ball 1 1/4 In.(GR35)	1
13	FP-085-53	Pipe – Plug 1/8	1
14	NS-047-72	Lock Nut 1/4-20	2
15	00-010901-00039	Orifice – Spud (Nat. Gas) (Sea Level – 2000 Ft.)	AR
16	00-010901-00041	Orifice – Spud (Nat. Gas) (2000 – 3000 Ft.)	AR
17	00-010901-00042	Orifice – Spud (Nat. Gas) (3000 – 5000 Ft.)	AR
18	00-010901-00043	Orifice – Spud (Nat. Gas) (5000 – 7000 Ft.)	AR
19	00-010901-00044	Orifice – Spud (Nat. Gas) (7000 – 8000 Ft.)	AR
20	00-010901-00052	Orifice – Spud (L.P. Gas) (Sea Level – 3000 Ft.)	AR
21	00-010901-00053	Orifice – Spud (L.P. Gas) (3000 – 5000 Ft.)	AR
22	00-010901-00054	Orifice – Spud (L.P. Gas) (5000 – 8000 Ft.)	AR
23	00-410695-00001	Extension – Orifice	AR
24	00-418209-00001	Manifold – Burner (GR35)	1
25	00-418212-00001	Manifold – Burner (GR45)	1
26	00-418318-00001	Manifold – Burner (GR65/85)	1
27	FP-086-74	Elbow – Pipe 1/2 x 90 Deg.	1
28	FP-035-94	Pipe 1/2 x 1 1/2 Lg. TBE	1
29	FP-022-11	Union – Pipe	1
30	FP-035-94	Pipe 1/2 x 1 1/2 Lg. TBE	1
31	00-408659-00005	Knob – Thermostat	AR
32	SC-109-10	Mach Screw 6-32 x 3/8 Pan Hd.	AR
33	00-419999-00001	Thermostat	AR
34	00-417896-00001	Plate – Control Valve	1
35	00-413433-00006	Handle – Combo Valve	1
36	PC-003-24	Cotter Pin 1/16	1
37	00-418452-00001	Cover – Combo Valve Handle (Red) (35/45/65)	1
38	00-418207-00001	Bracket – Control	1
39	FP-077-68	Elbow – Pipe 1/2 x 90 Deg.	1
40	FP-035-95	Pipe 1/2 x 2 Lg. TBE	1
41	00-412593-00001	Tube – Vent	1
42	00-410841-00022	Valve – Combination (Nat. Gas)	1
43	00-410841-00023	Valve – Combination (L.P. Gas)	1
44	FP-080-43	Pipe 1/2 x 15 Lg. TBE	1
45	FP-035-93	Pipe 1/2 x 19 1/2 Lg. TBE	1
46	00-426505-00012	Tube – Pilot (12 In.)	1
47	00-427952-00001	Bracket – Pilot Mounting	1
48	SC-018-32	Mach Screw 8-32 x 3/8 Pan Hd.	2
49	00-412212-00007	Pilot (Nat. Gas)	1
50	00-412212-00002	Pilot (L.P. Gas)	1
51	00-410839-00004	Thermopile	1
52	00-418208-00001	Hanger – Manifold (GR35)	1
53	00-418211-00001	Hanger – Manifold (GR45)	1
54	00-418317-00001	Hanger – Manifold (GR65/85)	1
55	FP-086-74	Elbow – Pipe 1/2 x 90 Deg.	1

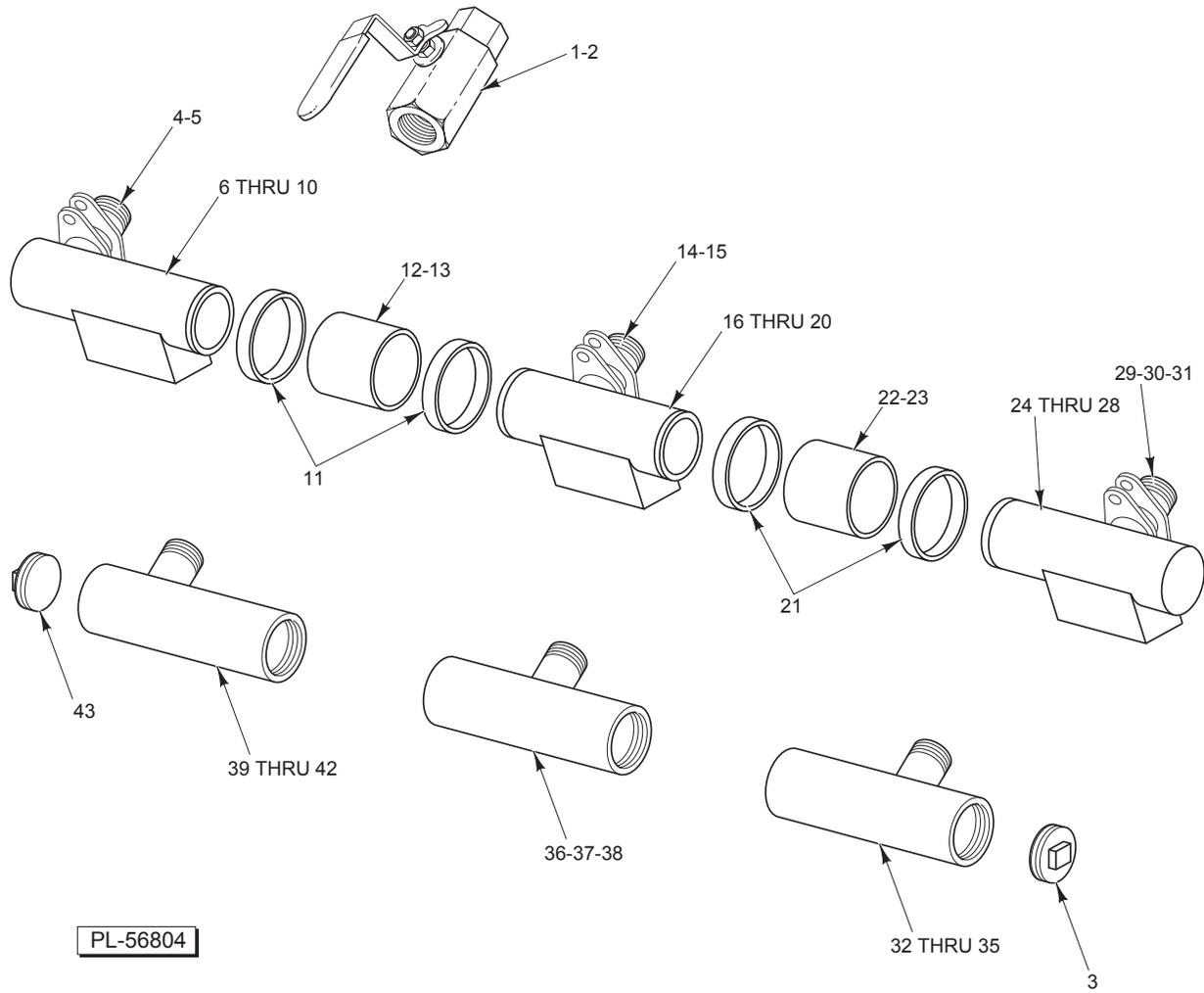


GAS INLET MANIFOLD

GAS INLET MANIFOLD

ILLUS. PL-56476	PART NO.	NAME OF PART	AMT.
1	00-418538-000G1	Bracket – Gas Inlet Mounting Assy.	1
2	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT	1
3	FP-012-39	Connector – Female 5/8 TBG x 1/2 FPT (Brass)	1
4	00-418561-00001	Tube – Gas	1
5	FP-012-07	Elbow – Male 5/8 TBG x 1/2 MPT (Brass)	2
6	00-418128	Bracket – Combo Valve	1
7	00-418559	Tube – Gas Combo/Solenoid Valve	1
8	FP-012-07	Elbow – Male 5/8 TBG x 1/2 MPT (Brass)	1
9	FP-086-20	Elbow – 90 Deg. Female 5/8 TBG x 1/2 FPT (Brass)	1
10	NS-044-14	Nut 1/4-20 Hex KEPS	2
11	WS-004-33	Washer	2
12	00-418129	Bracket – Solenoid Assy. (3 Tube)	1
13	00-418130	Bracket – Solenoid Assy. (4 Tube)	1
14	00-418129	Bracket – Solenoid Assy. (5 Tube)	1
15	FP-067-04	Nipple – Pipe 1/2 x 1.875 (Use With Item 12)	1
16	FP-079-25	Nipple – Pipe 1/2 x 3.250 (Use With Item 13)	1
17	FP-087-08	Nipple – Pipe 1/2 x 7.375 (Use With Item 14)	1
18	00-408604-00003	Valve – Gas Shutoff	1
19	FP-022-11	Union – Pipe 1/2	1
20	FP-035-91	Nipple – Pipe 1/2 x 1.125	1
21	FP-077-68	Elbow – 1/2 x 90 Deg.	1
22	FP-035-94	Nipple – Pipe 3/8 x 1.500	1
23	00-412593-00001	Tube – Vent	1
24	00-418059-00001	Sleeve 1/8 In. Hex Hd.	1
*25	00-412080-00001	Bracket – Adapter	1
26	00-410841-00022	Valve – Combination (Nat. Gas) (Use W/Manual Ignition) (GRS & GR Series)	1
27	00-410841-00023	Valve – Combination (L.P. Gas) (Use W/Manual Ignition) (GRS & GR Series)	1
28	00-410841-00028	Valve – Combination (Nat. Gas) (Use W/Electronic Ignition)	1
29	00-410841-00029	Valve – Combination (L.P. Gas) (Use W/Electronic Ignition)	1
30	00-410841-00030	Valve – Combination (Nat. Gas) (Use W/Manual Ignition & Fat Melt Cycle)	1
31	00-410841-00031	Valve – Combination (L.P. Gas) (Use W/Manual Ignition & Fat Melt Cycle)	1
32	00-412080-00001	Adapter – Knob (Use Existing Screw Provided With Knob)	1

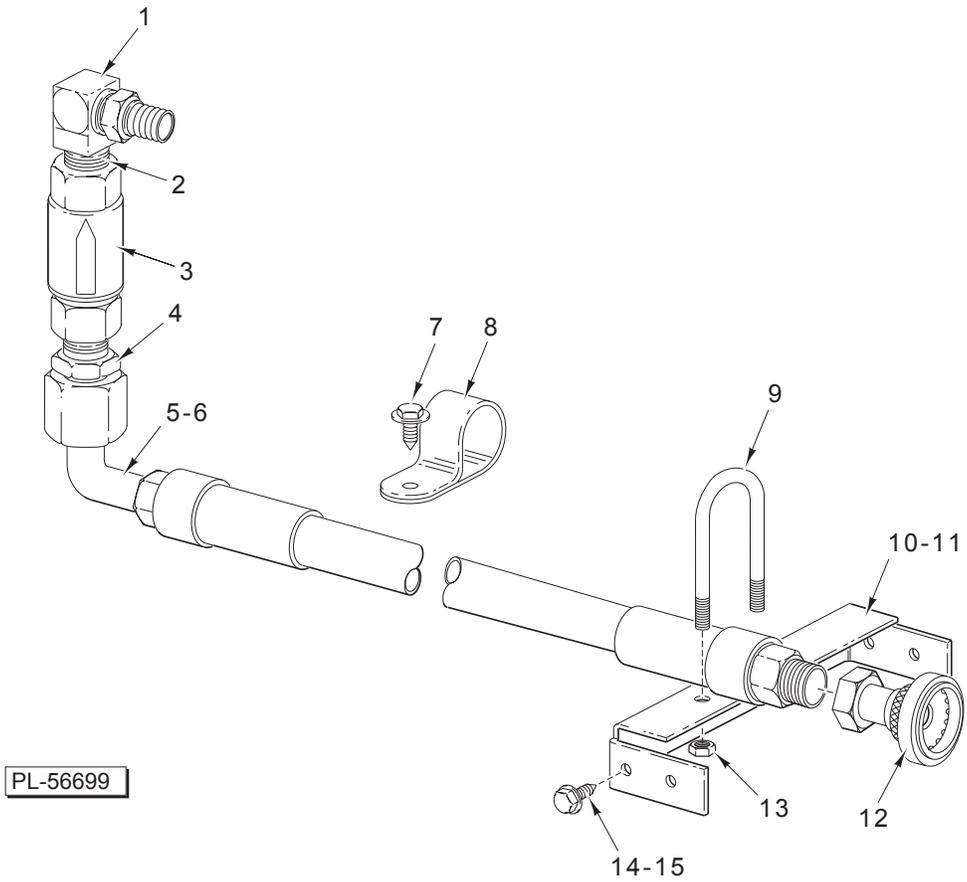
* See PIPS Service Obligation Report 10/20/00.



DRAIN COMPONENTS

DRAIN COMPONENTS

ILLUS. PL-56804	PART NO.	NAME OF PART	AMT.
1	00-414212-00008	Valve Assy. (GRS35/45/65, GRD35/45/65, & GRC35/45/65)	1
2	00-414212-00006	Valve Assy. (GR85)	1
3	FP-028-21	Plug – Pipe 1 Sq. Hd.	AR
4	00-420555-00001	Flange – Pipe	AR
5	00-420553-00002	Gasket – Silicone	AR
6	00-419886-000G1	Elbow – Filter Fill (LH) (3 Tube)	AR
7	00-419886-000G3	Elbow – Filter Fill (LH) (4 Tube)	AR
8	00-419886-000G7	Elbow – Filter Fill (LH) (3 & 4 Tube W/Dump)	AR
9	00-420729-000G1	Elbow – Filter Fill (LH) (5 Tube)	AR
10	00-420729-000G2	Elbow – Filter Fill (LH) (5 Tube W/Dump)	AR
11	00-416174-00002	Hose Clamp	AR
12	00-419351-00001	Hose – Connecting	AR
13	00-416266-00002	Shield – Sleeve	AR
14	00-420726-00001	Flange – Pipe	AR
15	00-420553-00002	Gasket – Silicone	AR
16	00-419890-000G1	Center Drain Assy. (3 Tube)	AR
17	00-419890-000G2	Center Drain Assy. (4 Tube)	AR
18	00-419890-000G4	Center Drain Assy. (3 & 4 Tube W/Dump)	AR
19	00-420728-000G1	Center Drain Assy. (5 Tube)	AR
20	00-420728-000G2	Center Drain Assy. (5 Tube W/Dump)	AR
21	00-416174-00002	Hose Clamp	AR
22	00-419351-00001	Hose – Connecting	AR
23	00-416266-00002	Shield – Sleeve	AR
24	00-419886-000G2	Elbow – Filter Fill (RH) (3 Tube)	AR
25	00-419886-000G4	Elbow – Filter Fill (RH) (4 Tube)	AR
26	00-419886-000G8	Elbow – Filter Fill (RH) (3 & 4 Tube W/Dump)	AR
27	00-420729-000G3	Elbow – Filter Fill (RH) (5 Tube)	AR
28	00-420729-000G4	Elbow – Filter Fill (RH) (5 Tube W/Dump)	AR
29	00-420726-00001	Flange – Pipe	AR
30	00-420553-00002	Gasket – Silicone	AR
31	FP-059-52	Pipe 1 ¹ / ₄ x 3.00	AR
32	00-420732-000G4	End Drain Assy. (3 Tube)	AR
33	00-420732-000G6	End Drain Assy. (3 Tube W/Dump)	AR
34	00-420732-000G5	End Drain Assy. (4 Tube)	AR
35	00-420732-000G1	End Drain Assy. (RH) (5 Tube)	AR
36	00-420730-000G3	Pipe – Center Drain (3 Tube)	AR
37	00-420730-000G2	Pipe – Center Drain (4 Tube)	AR
38	00-420730-000G1	Pipe – Center Drain (5 Tube)	AR
39	00-420732-000G4	End Drain Assy. (3 Tube)	AR
40	00-420732-000G6	End Drain Assy. (3 Tube W/Dump)	AR
41	00-420732-000G5	End Drain Assy. (4 Tube)	AR
42	00-420732-000G3	End Drain Assy. (LH) (5 Tube)	AR
43	FP-028-21	Plug – Pipe 1 Sq. Hd.	AR



OIL RETURN AND ACCESSORIES

OIL RETURN AND ACCESSORIES

ILLUS. PL-56699	PART NO.	NAME OF PART	AMT.
1	00-419251-00001	Elbow – 1/2 NPTF Male Swivel	1
2	FP-035-91	Pipe 1/2 x 1 1/8 TBE	1
3	00-418786-00001	Valve – Check (Ball Cone)	1
4	00-419211-00001	Adapter (Pipe to Flare)	1
5	00-418966-00001	Oil Return Line (GR35/45/65)	1
6	00-418966-00002	Oil Return Line (GR85)	1
7	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT	2
8	00-078752-00003	Clamp – Cable	2
9	00-521820	U-Bolt 1/4-20	1
10	00-417892-00001	Bracket – Oil Return (GR35/45)	1
11	00-418359-00001	Bracket – Oil Return (GR65/85)	1
12	00-418791-000G1	Quick Disconnect Assy.	1
13	NS-046-52	Nut 1/4-20 Hex KEPS	2
14	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT	4
15	NS-044-09	Nut Assy. 10-24 Hex KEPS	4
	00-410682-00004	Hose – Flex 3/4 x 4 Ft. (Gas) (Accessory)	1
	00-410682-00005	Hose – Flex 3/4 x 5 Ft. (Gas) (Accessory)	1
	00-410682-00006	Disconnect – Quick (3/4) (Gas) (Accessory)	1
	00-410682-00009	Disconnect – Quick (1 1/4) (Gas) (Accessory)	1
	00-410682-00008	Hose – Flex 1 1/4 x 5 Ft. (Gas) (Accessory)	1
	00-410682-00007	Hose – Flex 1 1/4 x 4 Ft. (Gas) (Accessory)	1
	00-414848-000G6	Vat Cover Assy. (GR25) (Accessory)	1
	00-414848-000G2	Vat Cover Assy. (GR35/45) (Accessory)	1
	00-418360-000G1	Vat Cover Assy. (GR65/85) (Accessory)	1
	00-418360-000G3	Vat Cover Assy. (GR85) (Accessory)	1
	00-416936-00002	Handle (Vat Cover Assy.) (Accessory)	1
	00-418346-00001	Cord – Electrical 120 V. (GR35/45/65) (Accessory)	1



CATALOG OF REPLACEMENT PARTS



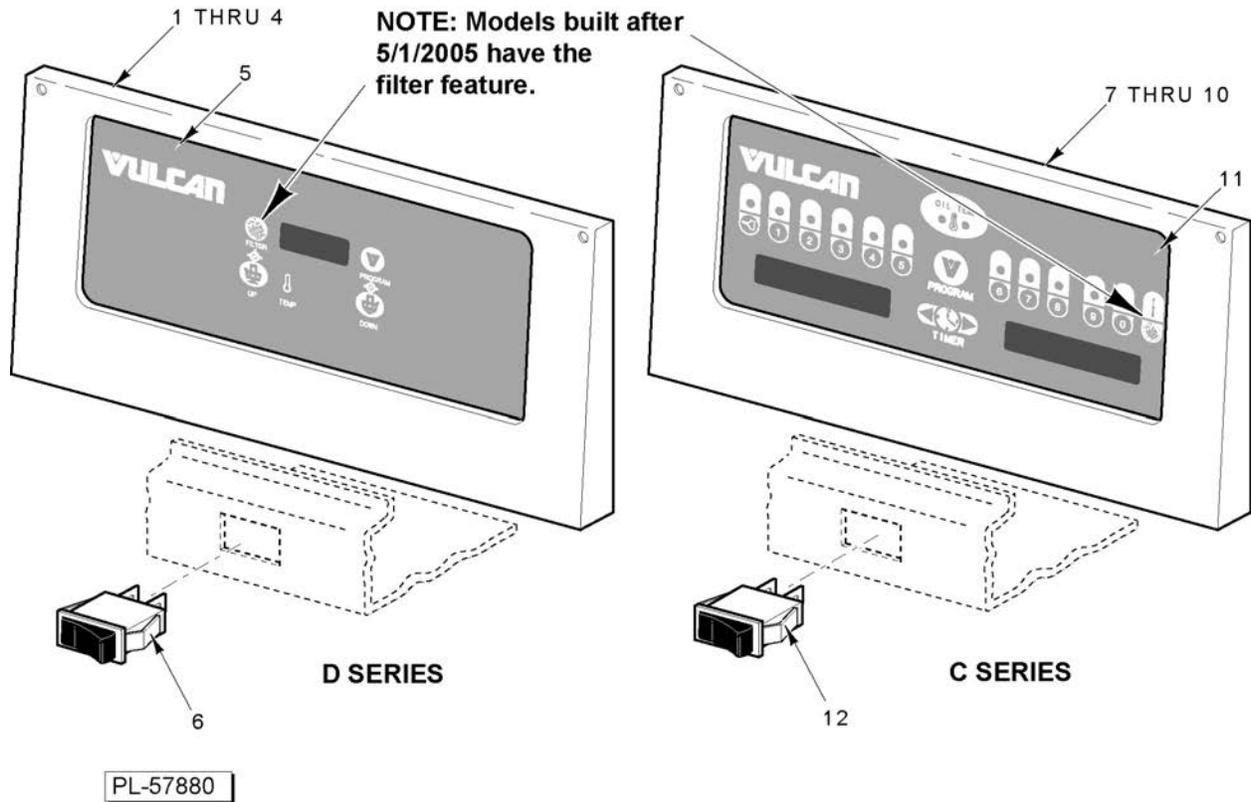
**GR SERIES GAS FRYER WITH
KLEEN SCREEN FILTER SYSTEM
GRD35F ML-126732, GRD45F
ML-126735, GRD65F ML-126738m
GRD85F ML-126741, GRC35F
ML-126733, GRC45F ML-126736,
GRC65F ML-126739, GRC85F
ML-126742, GR35F ML-126998,
GR45F ML-126999, GR65F
ML-135534, GR85F
ML-135535I, PRIOR MLS COVERED
IN THIS CATALOG, GRS35F M**

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS

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GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS

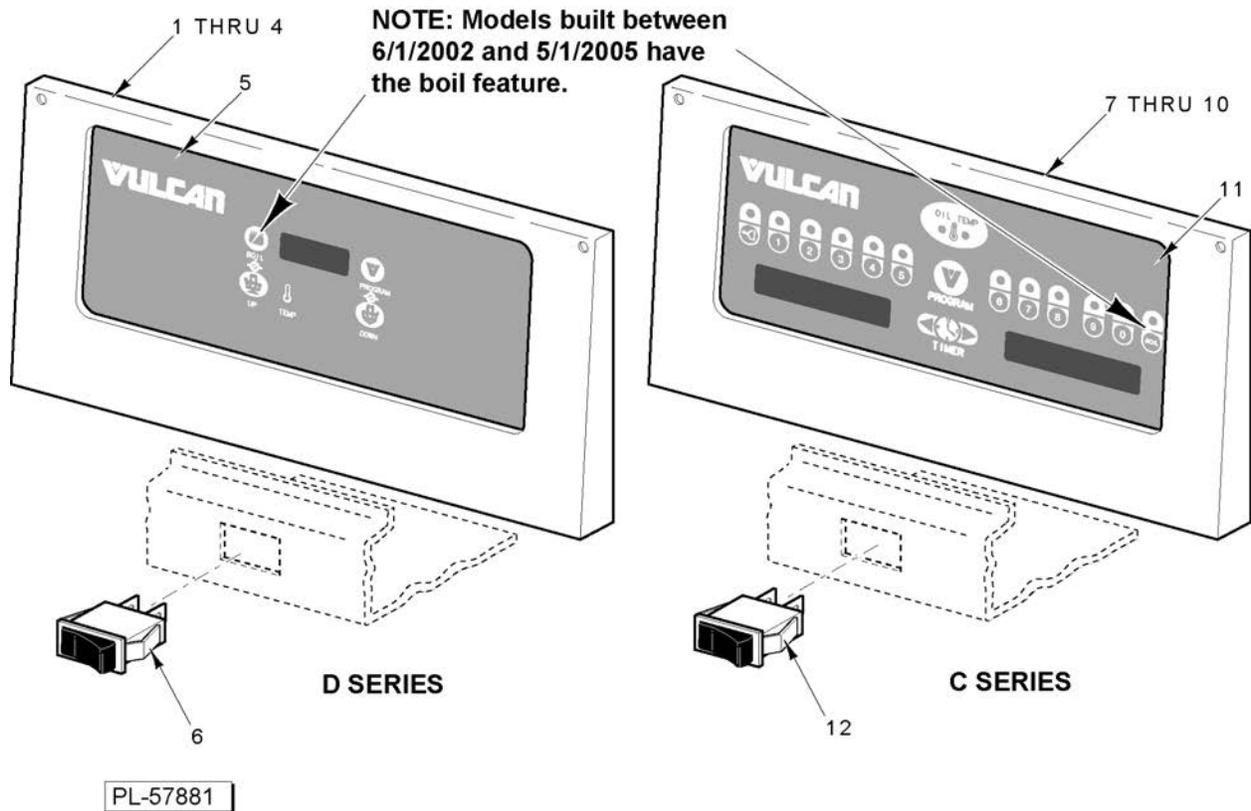


**CONTROL PANEL
(NCC)
(CURRENT CONSTRUCTION AFTER 5/1/05)**

**CONTROL PANEL
 (NCC)
 (CURRENT CONSTRUCTION AFTER 5/1/05)**

ILLUS. PL-57880	PART NO.	NAME OF PART	AMT.
1	00-497413-00001	Control Assy. - Solid State.....	1
2	00-426815-000G1	Plate Assy. - Mounting (GRD35/45F).....	1
3	00-426815-000G2	Plate Assy. - Mounting (GRD65/85F).....	1
4	NS-046-89	Nut Assy. 6-32 Hex.....	4
5	00-427820-00001	Overlay - Control Panel.....	AR
6	00-427755-000G1	Rocker Switch Assy.....	1
7	00-497414-00001	Computer Cooking Assy.....	1
8	00-426815-000G1	Plate Assy. - Mounting (GRC35/45F).....	1
9	00-426815-000G2	Plate Assy. - Mounting (GRD65/85F).....	1
10	NS-046-89	Nut Assy. 6-32 Hex.....	4
11	00-426732-00001	Overlay - Control Panel.....	1
12	00-427755-000G1	Rocker Switch Assy.....	1
	00-426251-00002	Plug.....	1

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS

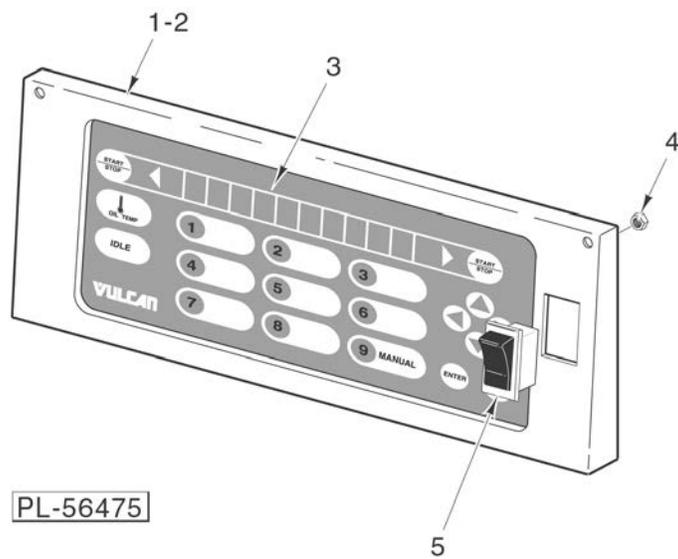


**CONTROL PANEL
(NCC)
(PREVIOUS CONSTRUCTION AFTER 6/1/02 AND BEFORE 5/1/05)**

**CONTROL PANEL
 (NCC)
 (PREVIOUS CONSTRUCTION AFTER 6/1/02 AND BEFORE 5/1/05)**

ILLUS. PL-57881	PART NO.	NAME OF PART	AMT.
1	00-427757-00001	Control Assy. - Solid State.....	1
2	00-426815-000G1	Plate Assy. - Mounting (GRD35/45F).....	1
3	00-426815-000G2	Plate Assy. - Mounting (GRD65/85F).....	1
4	NS-046-89	Nut Assy. 6-32 Hex.....	4
5	00-497421-00001	Overlay - Control Panel.....	1
6	00-427755-000G1	Rocker Switch Assy.....	1
7	00-427758-00001	Computer Cooking Assy.....	1
8	00-426815-000G1	Plate Assy. - Mounting (GRD35/45F).....	1
9	00-426815-000G2	Plate Assy. - Mounting (GRD65/85F).....	1
10	NS-046-89	Nut Assy. 6-32 Hex.....	4
11	00-497422-00001	Overlay - Control Panel.....	1
12	00-427755-000G1	Rocker Switch Assy.....	1
	00-426251-00002	Plug.....	1

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS



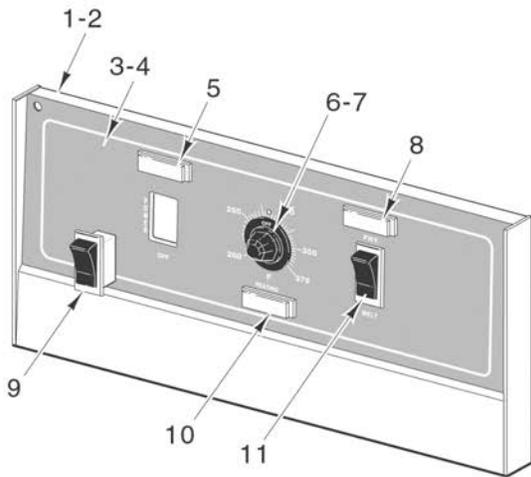
**CONTROL PANEL
(C SERIES)
(PREVIOUS CONSTRUCTION) USED ON FRYERS BUILT PRIOR TO JUNE 2**

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M
 REPLACEMENT PARTS

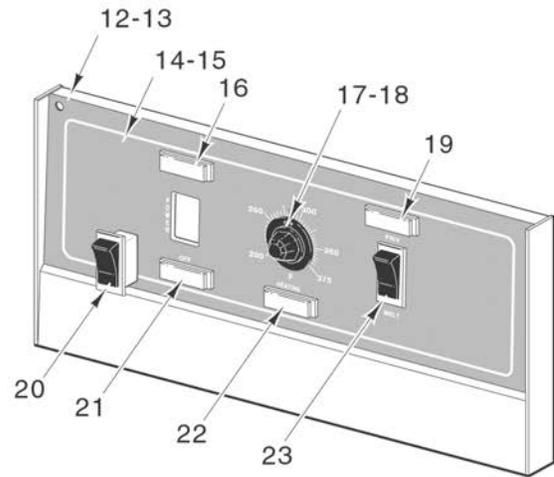
**CONTROL PANEL
 (C SERIES)
 (PREVIOUS CONSTRUCTION) USED ON FRYERS BUILT PRIOR TO JUNE 2**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56475			
1	00-419385-000G1	Control Panel (GRC35/45F).....	1
2	00-419386-000G1	Control Panel (GRC65/85F).....	1
3	00-419557-00007	Board & Panel Assy.....	1
4	NS-046-89	Nut Assy. 6-32 Hex KEPS.....	6
5	00-411496-000B8	Switch - Rocker.....	1

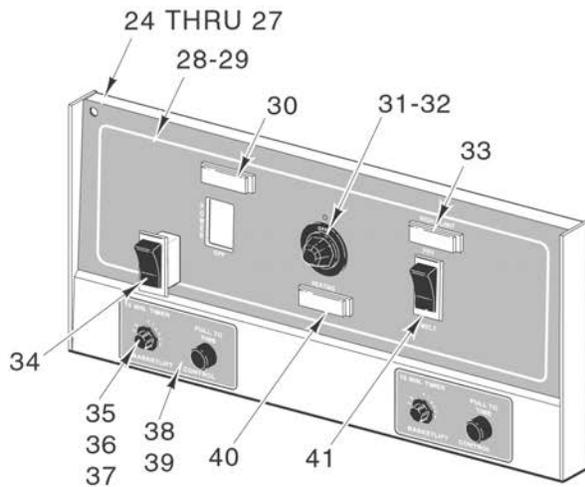
GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS



WITHOUT ELECTRONIC IGNITION

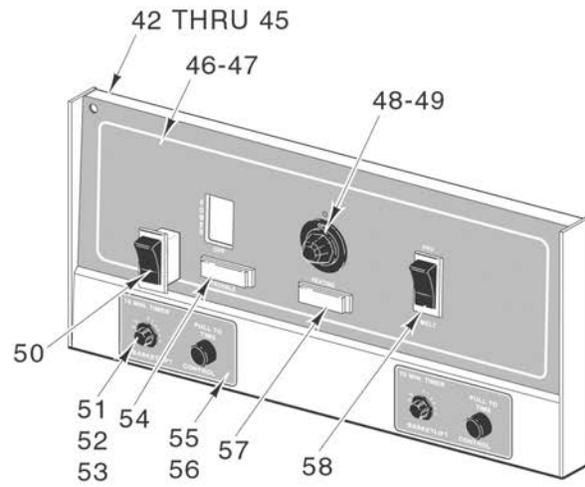


WITH ELECTRONIC IGNITION



**WITHOUT ELECTRONIC IGNITION,
WITH BASKETLIFT**

PL-56473



**WITH ELECTRONIC IGNITION,
WITH BASKETLIFT**

**CONTROL PANEL
(D SERIES)
(PREVIOUS CONSTRUCTION) USED ON FRYERS BUILT PRIOR TO JUNE 2002**

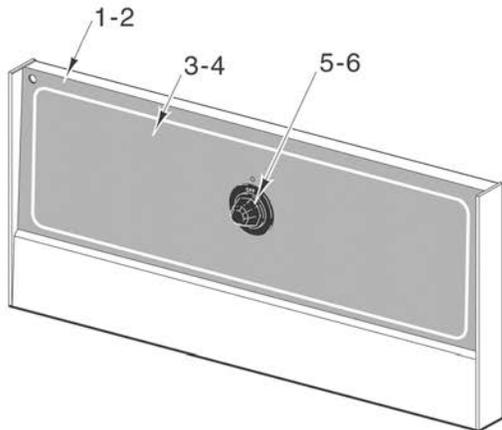
GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535 PRIOR MLS COVERED IN THIS CATALOG, GRS35F M

**CONTROL PANEL
(D SERIES)**

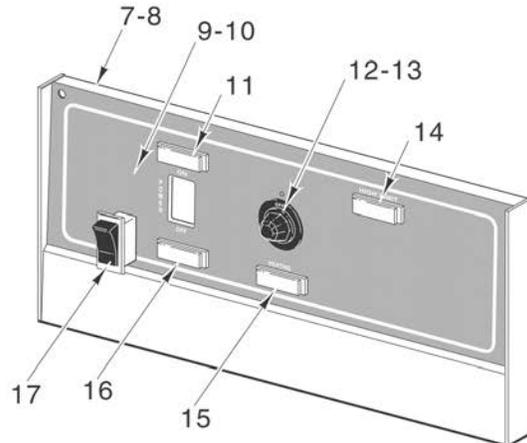
REPLACEMENT PARTS

(PREVIOUS CONSTRUCTION) USED ON FRYERS BUILT PRIOR TO JUNE 2002

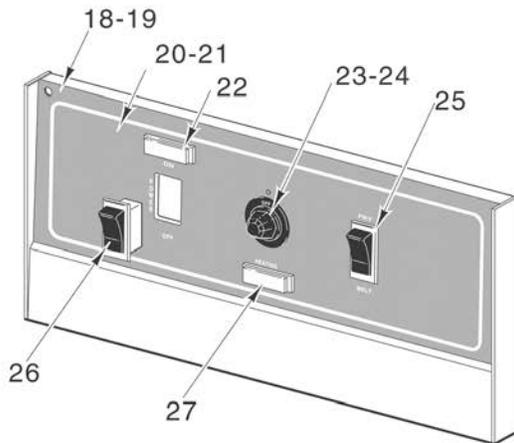
ILLUS. PL-56473	PART NO.	NAME OF PART	AMT.
1	00-418395-000G1	Display Panel Assy. (GRD35F & GRD45F) (Complete).....	1
2	00-418398-000G1	Display Panel Assy. (GRD65F) (Complete).....	1
3	00-418386-00001	Overlay - Control Panel (GRD35F & GRD45F).....	1
4	00-418389-00001	Overlay - Control Panel (GRD65F).....	1
5	00-411496-000E8	Light - Indicator (Red).....	1
6	00-414254-00001	Knob - Potentiometer.....	1
7	00-415638-000G1	Potentiometer.....	1
8	00-411496-000E8	Light - Indicator (Red).....	1
9	00-411496-000B1	Switch - Rocker.....	1
10	00-411496-000E9	Light - Indicator (Amber) (Heat).....	1
11	00-411496-000B7	Switch - Rocker.....	1
12	00-418396-000G1	Display Panel (GRD35F & GRD45F) (Complete).....	1
13	00-418397-000G1	Display Panel (GRD65F) (Complete).....	1
14	00-418387-00001	Overlay - Control Panel (GRD35F & GRD45F).....	1
15	00-418388-00001	Overlay - Control Panel (GRD65) Overlay - Control Panel (GRD65F).....	1
16	00-411496-000E8	Light - Indicator (Red).....	1
17	00-414254-00001	Knob - Potentiometer.....	1
18	00-415638-000G1	Potentiometer.....	1
19	00-411496-000E8	Light - Indicator (Red).....	1
20	00-411496-000B1	Switch - Rocker.....	1
21	00-411496-00E10	Light - Indicator (Trouble).....	1
22	00-411496-000E9	Light - Indicator (Amber) (Heat).....	1
23	00-411496-000B7	Switch - Rocker.....	1
24	00-418405-000G1	Display Panel Assy. (GRD35F & GRD45F) (1 Basketlift) (Complete).....	1
25	00-418405-000G2	Display Panel Assy. (GRD35F & GRD45F) (2 Basketlift) (Complete).....	1
26	00-418406-000G1	Display Panel (GRD65F) (1 Basketlift) (Complete).....	1
27	00-418406-000G2	Display Panel (GRD65F) (2 Basketlift) (Complete).....	1
28	00-418386-00001	Overlay - Control Panel (GRD35F & GRD45F).....	1
29	00-418389-00001	Overlay - Control Panel (GRD65F).....	1
30	00-411496-000E8	Light - Indicator (Red).....	1
31	00-414254-00001	Knob - Potentiometer.....	1
32	00-415638-000G1	Potentiometer.....	1
33	00-411496-000E8	Light - Indicator (Red).....	1
34	00-411496-000B1	Switch - Rocker.....	1
35	00-415254-00002	Timer - Basketlift (Solid State) (15 Min.).....	AR
36	00-415254-00003	Timer - Basketlift (7 Min.).....	1
37	00-415269-00001	Knob - Basketlift Timer.....	1
38	00-415255-00001	Overlay - Basketlift (15 Min.).....	AR
39	00-415255-00003	Overlay - Basketlift (7 Min.).....	1
40	00-411496-000E9	Light - Indicator (Amber) (Heat).....	1
41	00-411496-000B7	Switch - Rocker.....	1
42	00-418407-000G1	Display Panel Assy. (GRD35F & GRD45F) (1 Basketlift) (Complete).....	1
43	00-418407-000G2	Display Panel Assy. (GRD65F) (2 Basketlift) (Complete).....	1
44	00-418408-000G1	Display Panel (GRD65F) (1 Basketlift) (Complete).....	1
45	00-418408-00G10	Display Panel (2 Basketlift) (Complete) (GRD65F).....	1
46	00-418387-00001	Overlay - Control Panel (GRD35F & GRD45F).....	1
47	00-418388-00001	Overlay - Control Panel (GRD65F).....	1
48	00-414254-00001	Knob - Potentiometer.....	1
49	00-415638-000G1	Potentiometer.....	1
50	00-411496-000B1	Switch - Rocker.....	1
51	00-415254-00002	Timer - Basketlift (Solid State) (15 Min.).....	1
52	00-415254-00003	Timer (7 Min.) Basketlift.....	1
53	00-415269-00001	Knob - Basketlift Timer.....	1
54	00-411496-00E10	Light - Indicator (Trouble).....	1
55	00-415255-00001	Overlay - Basketlift (15 Min.).....	AR
56	00-415255-00003	Overlay - Control Panel (7 Min.).....	1
57	00-411496-000E8	Light - Indicator (Red).....	1
58	00-411496-000B7	Switch - Rocker.....	1



WITH KX THERMOSTAT

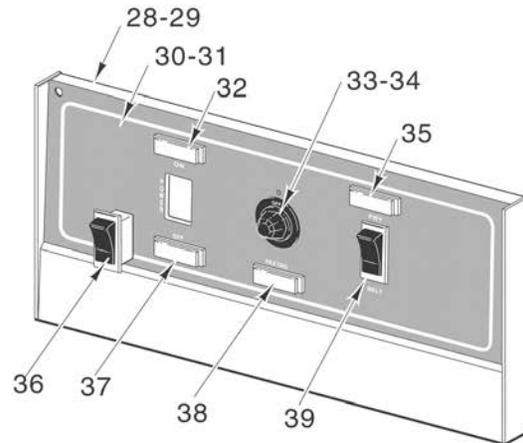


WITH ELECTRONIC IGNITION



WITH MELT CYCLE

PL-50655

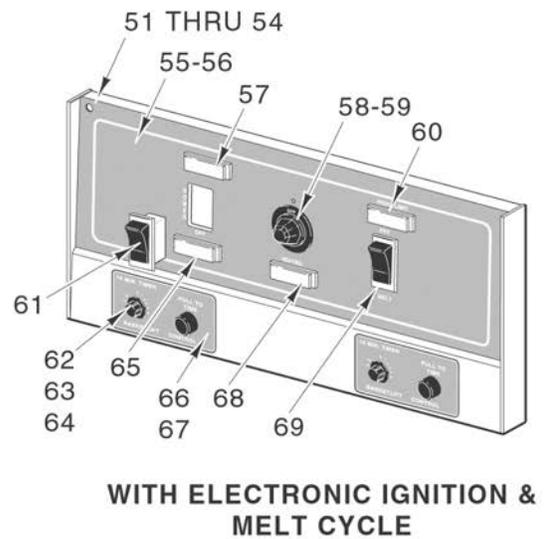
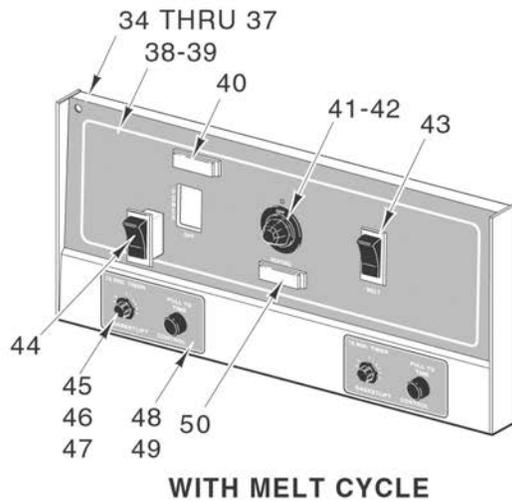
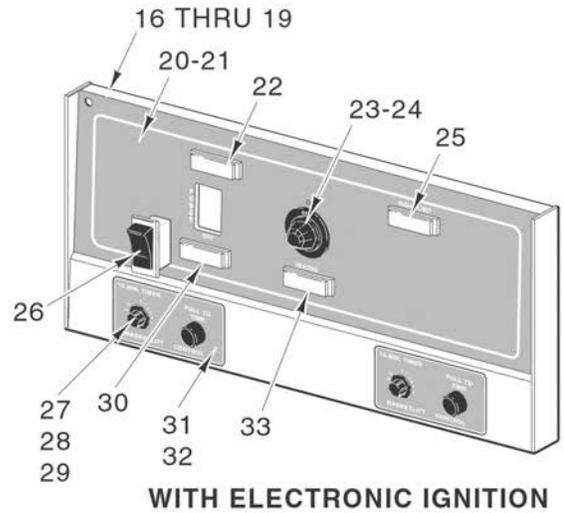
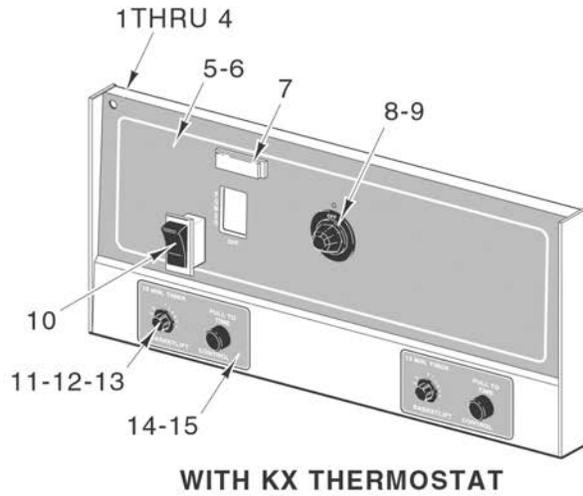


WITH ELECTRONIC IGNITION & MELT CYCLE

**CONTROL PANEL
(GRSF SERIES)**

CONTROL PANEL (GRSF SERIES)

ILLUS. PL-50655	PART NO.	NAME OF PART	AMT.
1	00-418526-000G1	Display Panel Assy. (GRS35F & GRS45F) (Complete).....	1
2	00-418527-000G1	Display Panel Assy. (GRS65F & GRS85F) (Complete).....	1
3	00-418456	Overlay - Control Panel (GRS35F & GRS45F).....	1
4	00-418461	Overlay - Control Panel (GRS65F & GRS85F).....	1
5	00-408659-00006	Knob - Thermostat.....	1
6	00-419999-00002	Thermostat - Millivolt.....	1
7	00-418530-000G1	Display Panel Assy. (GRS35F & GRS45F) (Complete).....	1
8	00-418531-000G1	Display Panel Assy. (GRS65F & GRS85F).....	1
9	00-418457	Overlay - Control Panel (GRS35F & GRS45F).....	1
10	00-418463	Overlay - Control Panel (GRS65F & GRS85F).....	1
11	00-411496-000E8	Light - Indicator (Red).....	1
12	00-408659-00006	Knob - Thermostat.....	1
13	00-419999-00002	Thermostat - Millivolt.....	1
14	00-411496-000E8	Light - Indicator (Red).....	1
15	00-411496-000E9	Light - Indicator (Amber) (Heat).....	1
16	00-411496-00E10	Light - Indicator (Trouble).....	1
17	00-411496-000B1	Switch - Rocker.....	1
18	00-418524-000G1	Display Panel Assy. (GRS35F & GRS45F) (Complete).....	1
19	00-418525-000G1	Display Panel Assy. (GRS65F & GRS85F) (Complete).....	1
20	00-418455	Overlay - Control Panel (GRS35F & GRS45F).....	1
21	00-418460	Overlay - Control Panel (GRS65F & GRS85F).....	1
22	00-411496-000E8	Light - Indicator (Red).....	1
23	00-408659-00006	Knob - Thermostat.....	1
24	00-419999-00002	Thermostat - Millivolt.....	1
25	00-411496-000B2	Switch - Rocker (DTDP).....	1
26	00-411496-000B1	Switch - Rocker.....	1
27	00-411496-000E9	Light - Indicator (Amber) (Heat).....	1
28	00-418258-000G1	Display Panel - (GRS35F & GRS45F) (Complete).....	1
29	00-418529-000G9	Display Panel - (GRS65F & GRS85F) (Complete).....	1
30	00-418454	Overlay - Control Panel (GRS35F & GRS45F).....	1
31	00-418462	Overlay - Control Panel (GRS65F & GRS85F).....	1
32	00-411496-000E8	Light - Indicator (Red).....	1
33	00-408659-00006	Knob - Thermostat.....	1
34	00-419999-00002	Thermostat - Millivolt.....	1
35	00-411496-000E8	Light - Indicator (Red).....	1
36	00-411496-000B1	Switch - Rocker.....	1
37	00-411496-00E10	Light - Indicator (Trouble).....	1
38	00-411496-000E9	Light - Indicator (Amber) (Heat).....	1
39	00-411496-000B2	Switch - Rocker (DTDP).....	1
	00-416535-00004	Switch - Relay S.P.D.T. 24 V. Coil (Electronic Ignition) (Located on Rear of Panel)	1
	NS-009-07	Mach. Nut 6-32 Hex (Use With Relay).....	2
	WL-003-09	Lockwasher #6 Helical (Use With Relay).....	2
	00-414247-00007	Timer - Melt Cycle (Solid State) (Located on Rear of Panel).....	1
	NS-046-52	Nut Assy. 1/4-20 KEPS (Use With Timer).....	AR



PL-56474

**CONTROL PANEL
(GRSF SERIES W/BASKETLIFT)**

**CONTROL PANEL
(GRSF SERIES W/BASKETLIFT)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56474			
1	00-418532-000G1	Display Panel Assy. (GRS35F & GRS45F) (1 Basketlift) (Complete).....	1
2	00-418532-000G2	Display Panel Assy. (GRS35F & GRS45F) (2 Basketlift) (Complete).....	1
3	00-418533-000G1	Display Panel (GRS65F) (1 Basketlift) (Complete).....	1
4	00-418533-000G2	Display Panel (GRS65F) (2 Basketlift) (Complete).....	1
5	00-418458	Overlay - Control Panel (GRS35F & GRS45F).....	1
6	00-418464	Overlay - Control Panel (GRS65F & GRS85F).....	1
7	00-411496-000E8	Light - Indicator (Red).....	1
8	00-408659-00006	Knob - Thermostat.....	1
9	00-419999-00002	Thermostat - Millivolt.....	1
10	00-411496-000B1	Switch - Rocker.....	1
11	00-415269-00001	Knob - Basketlift Timer.....	AR
12	00-415254-00002	Timer - Basketlift (Solid State).....	AR
13	00-415254-00003	Timer - Basketlift (7 Min.).....	1
14	00-415255-00001	Overlay - Basketlift (15 Min.).....	1
15	00-415255-00003	Overlay - Basketlift (7 Min.).....	1
16	00-419377-000G1	Display Panel Assy. (GRS35F & GRS45F) (1 Basketlift) (Complete).....	1
17	00-419377-000G2	Display Panel Assy. (GRS35F & GRS45F) (2 Basketlift) (Complete).....	1
18	00-419378-000G1	Display Panel Assy. (GRS65F & GRS85F) (1 Basketlift) (Complete).....	1
19	00-419378-000G2	Display Panel Assy. (GRS65F & GRS85F) (2 Basketlift) (Complete).....	1
20	00-418457	Overlay - Control Panel (GRS35F & GRS45F).....	1
21	00-418463	Overlay - Control Panel (GRS65F & GRS85F).....	1
22	00-411496-000E8	Light - Indicator (Red).....	1
23	00-408659-00006	Knob - Thermostat.....	1
24	00-419999-00002	Thermostat - Millivolt.....	1
25	00-411496-000E8	Light - Indicator (Red).....	1
26	00-411496-000B1	Switch - Rocker.....	1
27	00-415269-00001	Knob - Basketlift Timer.....	AR
28	00-415254-00002	Timer - Basketlift (Solid State) (15 Min.).....	AR
29	00-415254-00003	Timer - Basketlift (7 Min.).....	1
30	00-411496-00E10	Light - Indicator (Trouble).....	1
31	00-415255-00001	Overlay - Basketlift (15 Min.).....	1
32	00-415255-00003	Overlay - Basketlift (7 Min.).....	1
33	00-411496-000E9	Light - Indicator (Amber) (Heat).....	1
34	00-418550-000G1	Display Panel Assy. (GRS35F & GRS45F) (1 Basketlift) (Complete).....	1
35	00-418550-000G2	Display Panel Assy. (GRS35F & GRS45F) (2 Basketlift) (Complete).....	1
36	00-418560-000G1	Display Panel (GRS65F & GRS85F) (1 Basketlift) (Complete).....	1
37	00-418560-000G2	Display Panel (GRS65F & GRS85F) (2 Basketlift) (Complete).....	1
38	00-418455	Overlay - Control Panel (GRS35F & GRS45F).....	1
39	00-418460	Overlay - Control Panel (GRS65F & GRS85F).....	1
40	00-411496-000E8	Light - Indicator (Red).....	1
41	00-408659-00006	Knob - Thermostat.....	1
42	00-419999-00002	Thermostat - Millivolt.....	1
43	00-411496-000B2	Switch - Rocker (DTDP).....	1
44	00-411496-000B1	Switch - Rocker.....	1
45	00-415269-00001	Knob - Basketlift Timer.....	1
46	00-415254-00002	Timer - Basketlift (Solid State) (15 Min.).....	1
47	00-415254-00003	Timer - Basketlift (7 Min.).....	1
48	00-415255-00001	Overlay - Basketlift (15 Min.).....	1
49	00-415255-00003	Overlay - Basketlift (7 Min.).....	1
50	00-411496-000E9	Light - Indicator (Amber) (Heat).....	1
51	00-418545-000G1	Display Panel Assy. (GRS35F & GRS45F) (1 Basketlift) (Complete).....	1
52	00-418545-000G2	Display Panel Assy. (GRS35F & GRS45F) (2 Basketlift) (Complete).....	1
53	00-418546-000G1	Display Panel (GRS65F & GRS85F) (1 Basketlift) (Complete).....	1
54	00-418546-000G2	Display Panel (GRS65F & GRS85F) (2 Basketlift) (Complete).....	1
55	00-418454	Overlay - Control Panel (GRS35F & GRS45F).....	1

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS

CONTROL PANEL (GRSF SERIES W/BASKETLIFT)

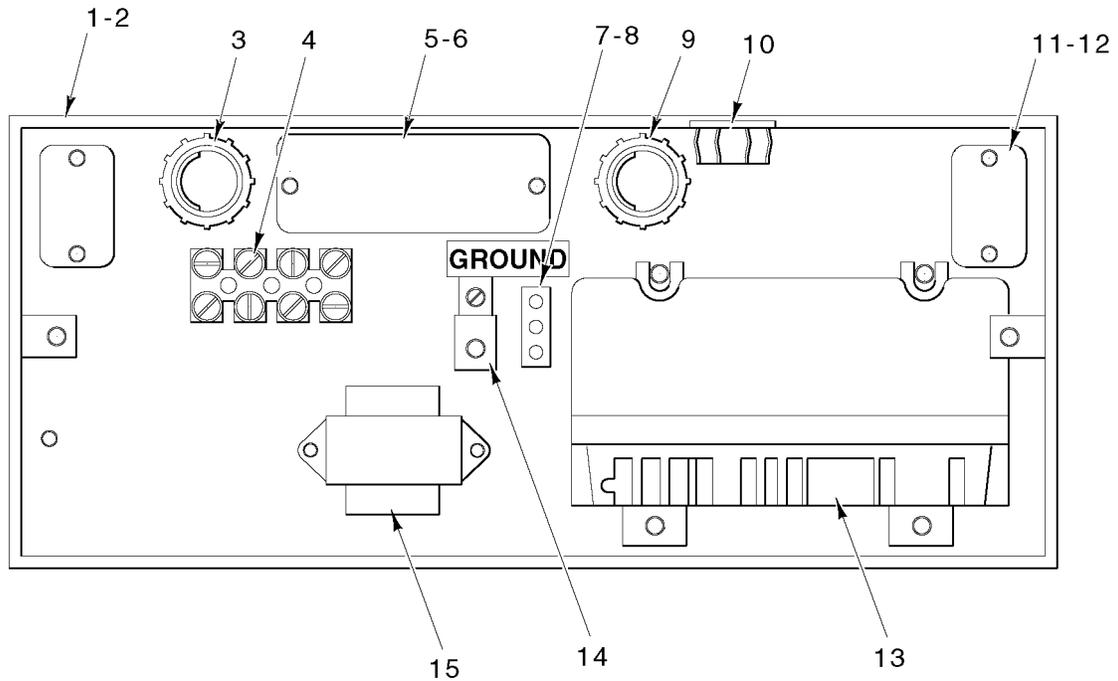
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56474			
56	00-418462	Overlay - Control Panel (GRS65F & GRS85F).....	1
57	00-411496-000E8	Light - Indicator (Red).....	1
58	00-408659-00006	Knob - Thermostat.....	1
59	00-419999-00002	Thermostat - Millivolt.....	1
60	00-411496-000E8	Light - Indicator (Red).....	1
61	00-411496-000B1	Switch - Rocker.....	1
62	00-415269-00001	Knob - Basketlift Timer.....	1
63	00-415254-00002	Timer - Basketlift (Solid State) (15 Min.).....	1
64	00-415254-00003	Timer - Basketlift (7 Min.).....	1
65	00-411496-00E10	Light - Indicator (Trouble).....	1
66	00-415255-00001	Overlay - Basketlift (15 Min.).....	1
67	00-415255-00003	Overlay - Basketlift (7 Min.).....	1
68	00-411496-000E9	Light - Indicator (Amber) (Heat).....	1
69	00-411496-000B2	Switch - Rocker (DTDP).....	1
	00-416535-00004	Switch - Relay S.P.D.T. 24 V. Coil (Electronic Ignition) (Located on Rear of Panel)	1
	NS-009-07	Mach. Nut 6-32 Hex (Use With Relay).....	2
	WL-003-09	Lockwasher #6 Helical (Use With Relay).....	2
	00-414247-00007	Timer - Melt Cycle (Solid State) (Located on Rear of Panel).....	1
	NS-046-52	Nut Assy. 1/4-20 KEPS (Use With Timer).....	1

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M

NOTES

REPLACEMENT PARTS

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS



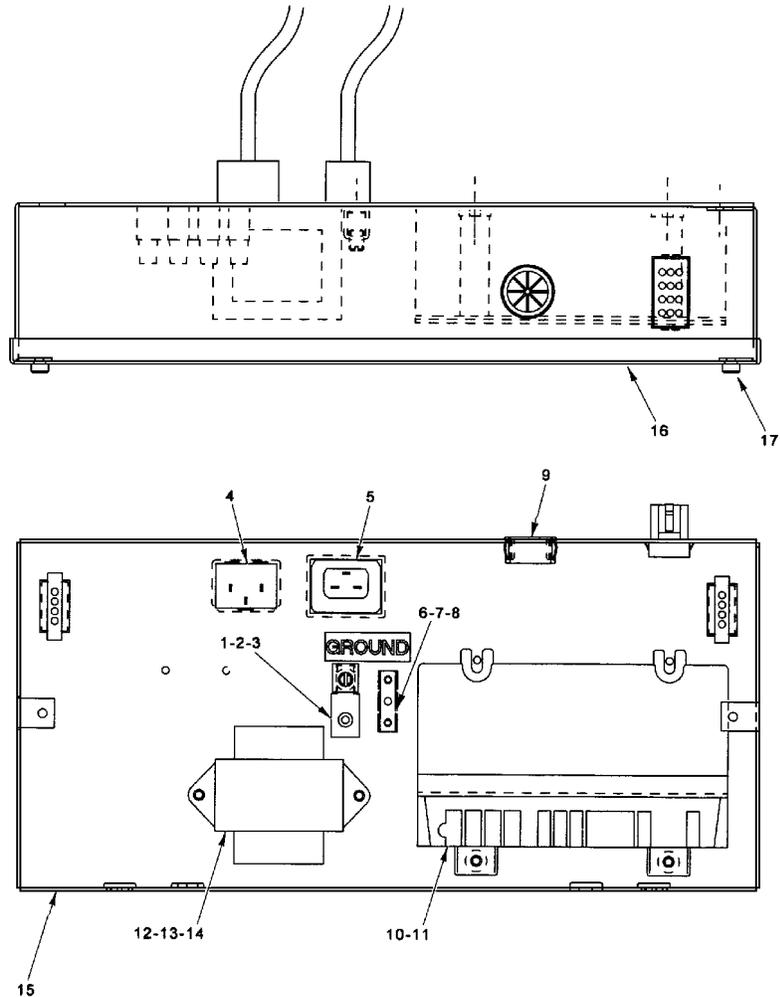
PL-55182

**POWER SUPPLY BOX
(PREVIOUS CONSTRUCTION) USED ON FRYERS BUILT PRIOR TO JUNE 2002.**

**POWER SUPPLY BOX
(PREVIOUS CONSTRUCTION) USED ON FRYERS BUILT PRIOR TO JUNE 2002.**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-55182			
1	00-419302-000G1	Box - Power Supply.....	1
2	00-419301-00002	Cover - Power Supply Box.....	1
3	FE-023-37	Connector - Conduit 1/2 TS.....	1
4	00-414208-00002	Barrier - Terminal.....	1
5	00-419375-00003	Cover - Plate.....	1
6	SC-060-23	Mach. Screw 4-40 x 1/4 Slotted Rd. Hd.....	2
7	00-419317	Terminal - Stationary.....	1
8	SC-060-23	Mach. Screw 4-40 x 1/4 Slotted Rd. Hd.....	2
9	FE-023-37	Connector - Conduit 1/2 TS.....	1
10	FE-024-28	Bushing - Electrical Snap.....	AR
11	00-419375-00001	Cover - Plate.....	2
12	SC-060-23	Mach. Screw 4-40 x 1/4 Slotted Rd. Hd.....	4
13	00-417980-00001	Ignitor - Module (Honeywell).....	1
14	00-417856-00001	Lug - Grounding (With Set Screw).....	1
15	00-411500-00012	Transformer (120 VAC, 24 V., 40 VA).....	1
	00-419315	Power Cord.....	1
	00-419359	Cable - Spark Ignitor.....	1
	00-419574-000G1	Power Supply Board Assy. (GRCF Only).....	1

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS



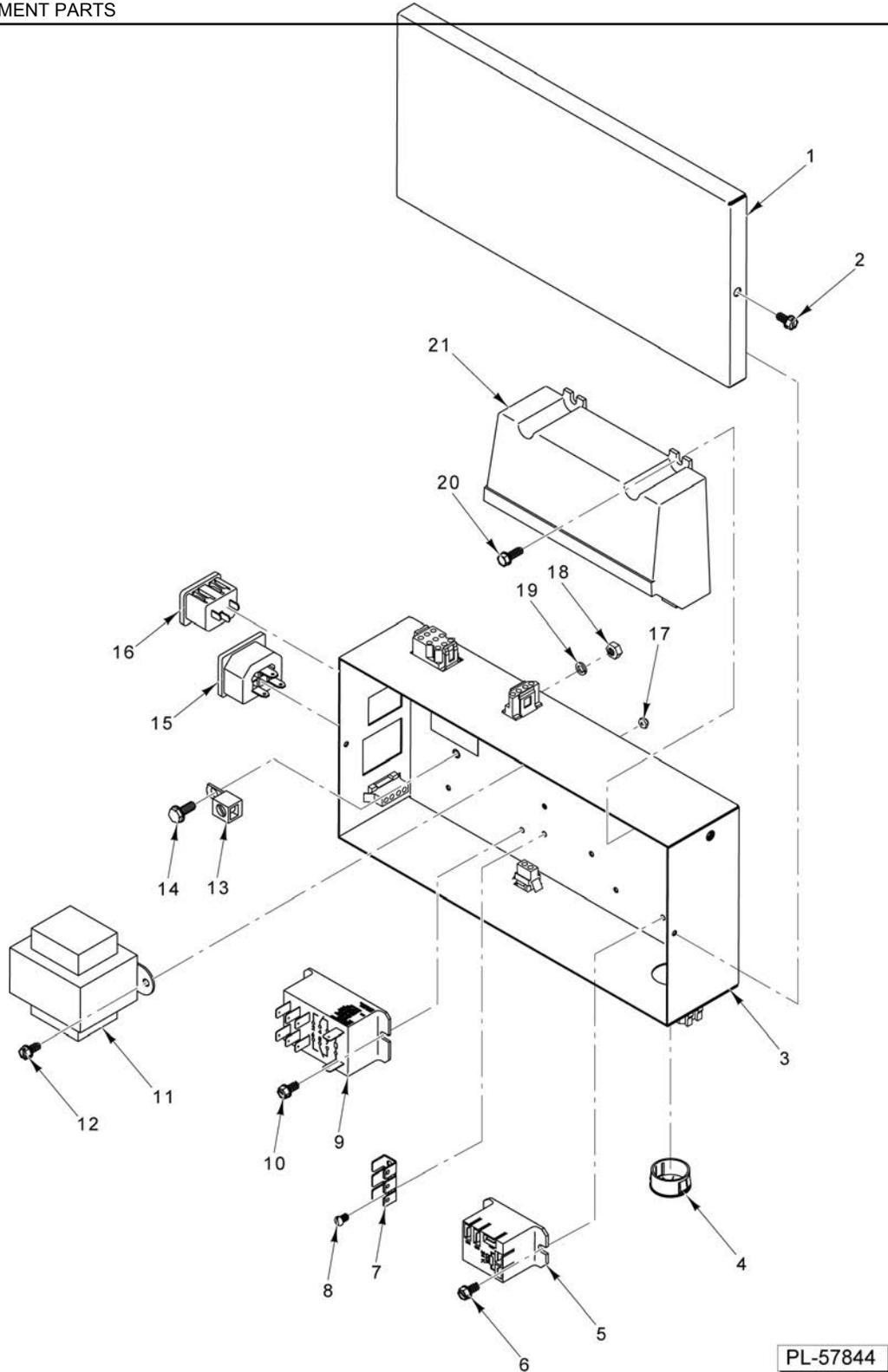
PL-56817

**POWER SUPPLY BOX
(PREVIOUS CONSTRUCTION AFTER 6/1/02 BEFORE 10/1/04)**

**POWER SUPPLY BOX
 (PREVIOUS CONSTRUCTION AFTER 6/1/02 BEFORE 10/1/04)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56817A			
1	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	1
2	WL-004-40	Lockwasher 10 Helical.....	1
3	00-417856-00001	Lug - Grounding (With Set Screw).....	1
4	00-419973-000G1	Receptacle - Male Power.....	1
5	00-419973-000G2	Receptacle - Female Power.....	1
6	SC-060-23	Mach. Screw 4-40 x 1/4 Slotted Rd. Hd.....	1
7	NS-047-32	Lock Nut 4-40.....	1
8	00-419317	Terminal - Stationary.....	1
9	FE-024-28	Bushing - Electrical Snap.....	1
10	00-417980-00001	Module - Ignition (E. I. Only).....	1
11	SD-037-49	Self-Tapping Screw 8-18 x 1/2 Hex Washer Hd., Type AB.....	4
12	00-411500-00013	Transformer (200-240 VAC, 28 V., 20 VA).....	1
13	00-411500-00012	Transformer (120 VAC, 24 V., 40 VA).....	1
14	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	2
15	00-427814-000G1	Box - Power Supply.....	1
16	00-427815-00001	Lid.....	1
17	SD-037-07	Self-Tapping Screw 10-16 x 2 Hex Washer Hd., Type AB.....	2

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS

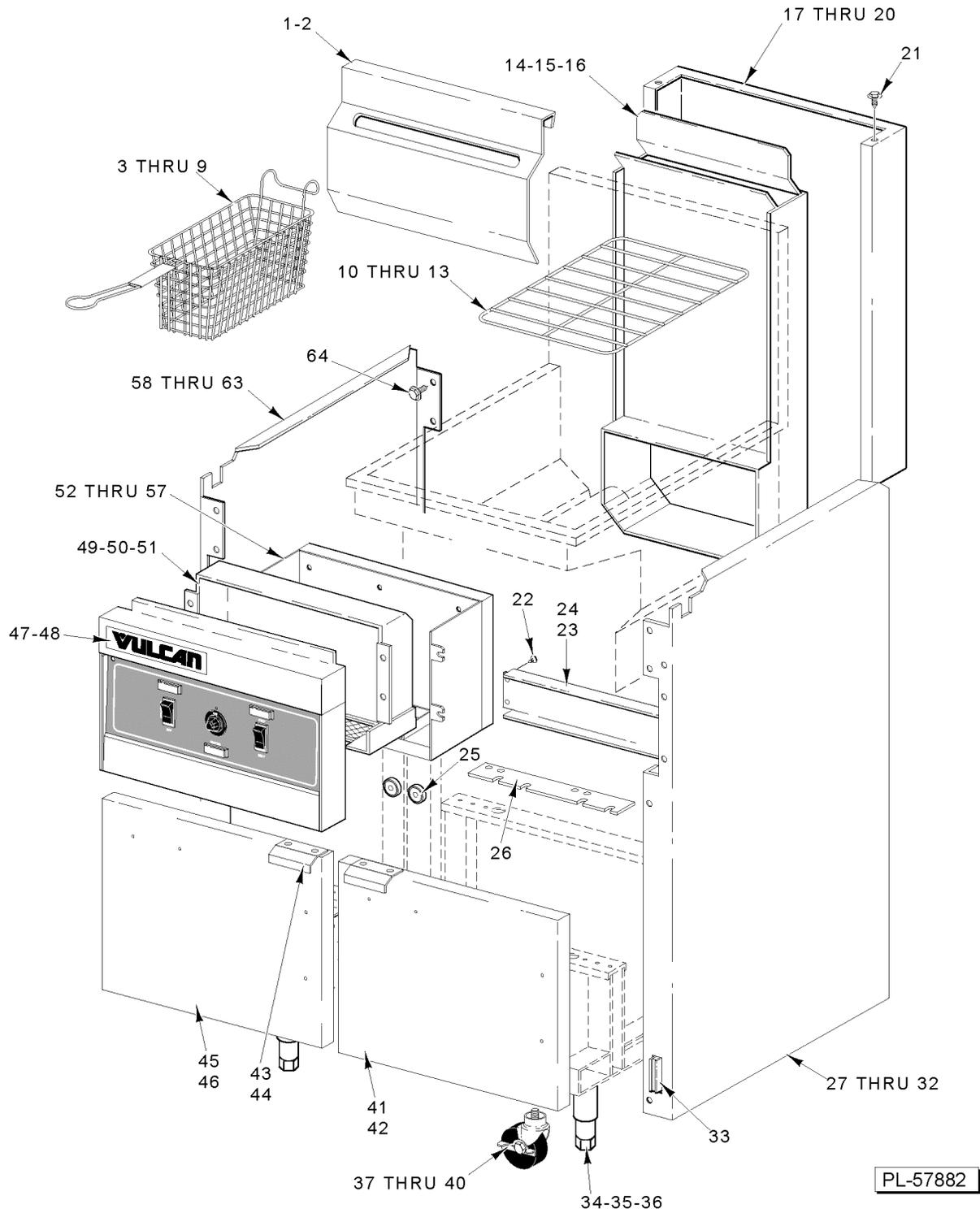


PL-57844

**POWER SUPPLY BOX
(CURRENT CONSTRUCTION AFTER 10/1/04)**

**POWER SUPPLY BOX
(CURRENT CONSTRUCTION AFTER 10/1/04)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57844A			
1	00-428684-00001	Lid - Power Supply Box.....	1
2	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	2
3	00-428716-000G1	Box - Power Supply.....	1
4	FE-024-28	Bushing - Electrical Snap.....	1
5	00-497125-00001	Relay (S.P.D.T., 24 VAC).....	1
6	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	2
7	00-419317	Terminal - Stationary Lug.....	1
8	SC-060-23	Mach. Screw 4-40 x 1/4 Slotted Rd. Hd.....	2
9	00-428864-00001	Relay.....	1
10	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	2
11	00-411500-00012	Transformer (120 VAC, 24 V., 40 VA).....	1
12	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	2
13	00-417856-00001	Lug - Grounding (With Set Screw).....	1
14	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	1
15	00-419973-000G2	Receptacle - Female Power.....	1
16	00-419973-000G1	Receptacle - Male Power.....	1
17	NS-047-32	Lock Nut 4-40 Hex.....	2
18	NS-044-09	Nut Assy. 10-24 Hex KEPS.....	1
19	WL-004-40	Lockwasher 10 Helical.....	1
20	SD-037-49	Self-Tapping Screw 8-18 x 1/2 Hex Washer Hd., Type AB.....	4
21	00-417980-00001	Module - Ignition (Machines With Electronic Ignition).....	1



BODY UNIT

BODY UNIT

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57882			
1	00-417056-00002	Hanger - Basket (GRS35/45F, GRD35/45F, & GRC35/45F).....	2
2	00-418321-00002	Hanger - Basket (GRS65/85F, GRD65/85F, & GRC65/85F).....	2
3	00-410737-00007	Basket - Twin (Red Handle) (GRS35/45F, GRD35/45F, & GRC35/45F).....	AR
4	00-411378-00002	Basket - Large Single (GRS35/45F, GRD35/45F, & GRC35/45F).....	AR
5	00-418380-00001	Basket - Single (GRS65F, GRD65F, & GRC65F).....	AR
6	00-499223-00002	Basket - Twin (GRS65F, GRD65F, & GRC65F).....	AR
7	00-420581-00001	Basket - Single (GRS85F, GRD85F, & GRC85F).....	AR
8	00-420580-00001	Basket - Twin (Red Handle) (GRS85F, GRD85F, & GRC85F).....	AR
9	00-410737-00006	Basket - Triple (Red Handle).....	AR
10	00-427883-00001	Screen - Crumb (GRS35F, GRD35F, & GRC35F).....	2
11	00-427883-00002	Screen - Crumb (GRS45F, GRD45F, & GRC45F).....	2
12	00-427883-00003	Screen - Crumb (GRS65F, GRD65F, & GRC65F).....	2
13	00-427883-00004	Screen - Crumb (GRS85F, GRD85F, & GRC85F).....	2
14	00-416994-000G1	Flue Box Assy. (3 Tube) (GRS35F, GRD35F, & GRC35F).....	2
15	00-418201-000G1	Flue Box Assy. (4 Tube) (GRS45F, GRD45F, & GRC45F).....	2
16	00-418205-000G1	Flue Box Assy. (5 Tube) (GRS65/85F, GRD65/85F, & GRC65/85F).....	2
17	00-418125-000G2	Flue - Wrap (W/Basketlift) (GRS35/45F, GRD35/45F, & GRC35/45F).....	2
18	00-416959-00002	Flue - Wrap (SST) (GRS35/45F, GRD35/45F, & GRC35/45F).....	2
19	00-418126-000G2	Flue - Wrap (W/Basketlift) (GRS65/85F, GRD65/85F, & GRC65/85F).....	2
20	00-418336-00002	Flue - Wrap (SST) (GRS65/85F, GRD65/85F, & GRC65/85F).....	2
21	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	4
22	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	10
23	00-417014-00001	Bracket - Rear Support (15.5 In.).....	2
24	00-418320-00001	Bracket - Rear Support (21 In.).....	2
25	00-497296-000G1	Magnet Assy.....	2
26	00-419580	Bracket - Power Supply Mounting.....	1
27	00-426765-00003	Body - LH Side (Alum.) (GRS35/45F, GRD35/45F, & GRC35/45F).....	1
28	00-426764-00003	Body - LH Side (SST) (GRS35/45F, GRD35/45F, & GRC35/45F).....	1
29	00-419777-00003	Body - LH Side (SST) (GRS85F, GRD85F, & GRC85F).....	1
30	00-417711-00001	Body - LH Side (SST) (GRS35/45/65F, GRD35/45/65F, & GRC35/45/65F).....	1
31	00-419648-00001	Body - LH Side (SST) (GRD35/45/65F & GRC35/45/65F).....	1
32	00-420596-00003	Body - Side (SST) (LH) (NFR) (GRD85F & GRC85F).....	1
33	00-426573-00002	Catch - Magnetic.....	2
34	00-413112-00007	Leg (6-1/4 In.) (SST).....	4
35	00-413112-00009	Leg (6 In.) (SST).....	4
36	00-413112-00010	Base Plate - Leg (Use with Item 35).....	4
37	00-418907-00001	Caster - Swivel Assy. (Adjustable).....	2
38	00-418907-00003	Caster.....	2
39	00-421893-00001	Mount Plate - Caster (4 In.) (After 4/17/95).....	2
40	00-421893-00002	Caster 4 In. (No Brake) (After 4/17/95).....	2
41	00-426582-000G2	Door Assy. (RH) (GRS35/45F, GRD35/45F, & GRC35/45F).....	1
42	00-426582-000G6	Door Assy. (RH) (GRS65/85F, GRD65/85F, & GRC65/85F).....	1
43	00-419653	Handle.....	2
44	RS-033-09	Rivet - Pop (0.187).....	4
45	00-426582-000G1	Door Assy. (LH) (GRS35/45F, GRD35/45F, & GRC35/45F).....	1
46	00-426582-000G5	Door Assy. (LH) (GRS65/85F, GRD65/85F, & GRC65/85F).....	1
47	NS-047-79	Pal Nut 3/16.....	2
48	00-417700-00002	Nameplate (6 In.).....	1
*50	00-419379-00001	Probe - Thermistor (GRCF) (Previous Construction) (GRF Series - Current Construction).....	2
*49	00-415144-00011	Board - Temperature (GRDF Series) (Previous Construction).....	2
*51	00-419379-00002	Probe - Thermistor (GRDF Series) (Previous Construction).....	2
52	00-427018-000G1	Heat Shield (GRC35/45F & GRD35/45F) (Previous Construction).....	1
53	00-427018-000G2	Heat Shield (GRS35F & GRS45F).....	1
54	00-427044-000G1	Heat Shield (GRC65/85F & GRD65/85F) (Previous Construction).....	1
55	00-427044-000G2	Heat Shield (GRS65F & GRS85F).....	1

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS

BODY UNIT

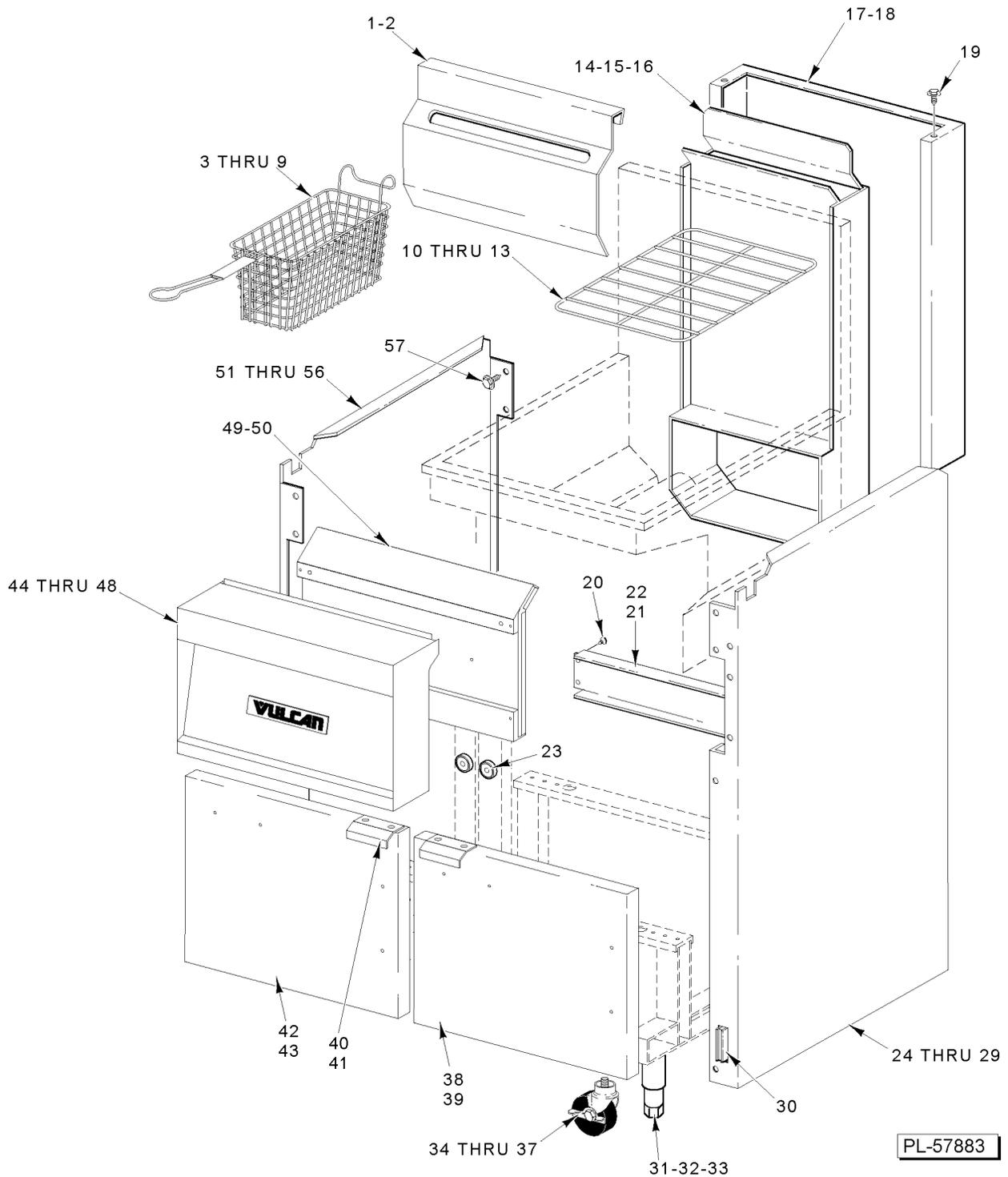
ILLUS.	PART NO.	NAME OF PART	AMT.
56	00-428542-00001	Heat Shield (GRC35/45F & GRD35/45F) (Current Construction).....	1
57	00-428689-00001	Heat Shield (GRC65/85F & GRD65/85F) (Current Construction).....	1
58	00-419777-00004	Body - RH Side (SST) (GRS85F, GRD85F, & GRC85F).....	1
59	00-417711-00002	Body - RH Side (SST) (GRS35/45/65F, GRD35/45/65F, & GRC35/45/65F).....	1
60	00-426764-00004	Body - RH Side (SST) (GRS85F, GRD85F, & GRC85F).....	1
61	00-426765-00004	Body - RH Side (Alum.) (GRS35/45/65F, GRD35/45/65F, & GRC35/45/65F).....	1
62	00-419648-00001	Body - RH Side (SST) (GRD35/45/65F & GRC35/45/65F).....	1
63	00-420596-00003	Body - Side (SST) (LH) (NFR) (GRD85F & GRC85F).....	1
64	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	1

* Used on fryers built prior to June 2002. Thermistor Probe currently used on GRF Series.

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M

NOTES

REPLACEMENT PARTS

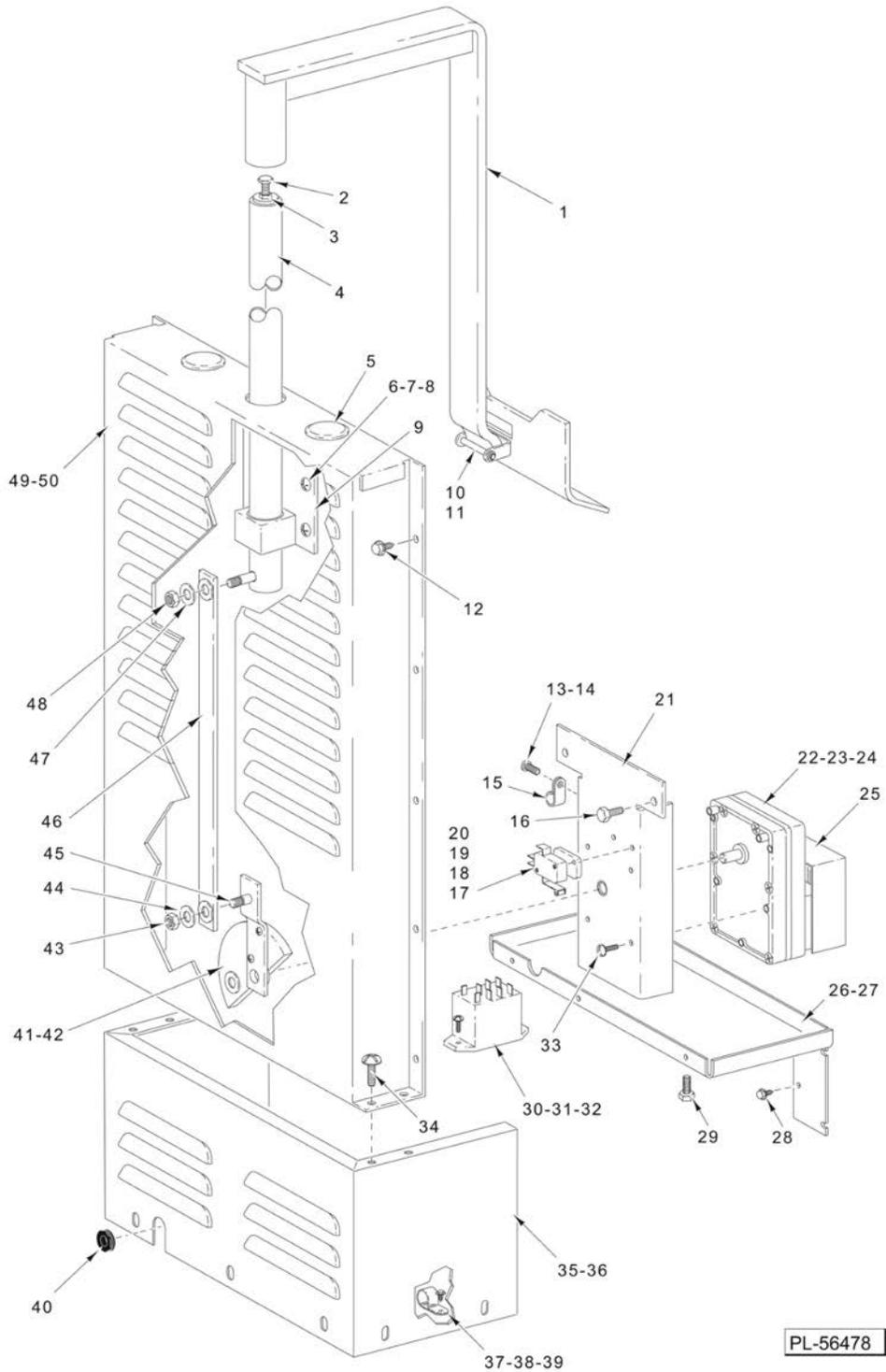


**BODY UNIT
(GRF SERIES)**

**BODY UNIT
(GRF SERIES)**

REPLACEMENT PARTS

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57883			
1	00-417056-00002	Hanger - Basket (GR35/45F).....	2
2	00-418321-00002	Hanger - Basket (GR65/85F).....	2
3	00-410737-00007	Basket - Twin (Red Handle) (GR35/45F).....	AR
4	00-411378-00002	Basket - Large Single (GR35/45F).....	AR
5	00-418380-00001	Basket - Single (GR65F).....	AR
6	00-499223-00002	Basket - Twin (GR65F).....	AR
7	00-420581-00001	Basket - Single (GR85F).....	AR
8	00-420580-00001	Basket - Twin (Red Handle) (GR85F).....	AR
9	00-410737-00006	Basket - Triple (Red Handle) (GR65F).....	AR
10	00-427883-00001	Rack - Crumb (GR35F).....	2
11	00-427883-00002	Rack - Crumb (GR45F).....	2
12	00-427883-00003	Rack - Crumb (GR65F).....	2
13	00-427883-00004	Rack - Crumb (GR85F).....	2
14	00-416994-000G1	Flue Box Assy. (GR35F).....	2
15	00-418201-000G1	Flue Box Assy. (GR45F).....	2
16	00-418205-000G1	Flue Box Assy. (GR65/85F).....	2
17	00-416959-00002	Flue - Wrap (SST) (GR35/45F).....	2
18	00-418336-00002	Flue - Wrap (SST) (GR65/85F).....	2
19	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	4
20	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	10
21	00-417014-00001	Bracket - Rear Support (15.5 In.) (GR35/45F).....	2
22	00-418320-00001	Bracket - Rear Support (21 In.) (GR65/85F).....	2
23	00-497296-000G1	Magnet Assy.....	2
24	00-426765-00003	Body - LH Side (Alum.) (GR35/45/65F).....	1
25	00-426764-00003	Body - LH Side (SST) (GR85F).....	1
26	00-419777-00003	Body - LH Side (SST) (GR85F).....	1
27	00-417711-00001	Body - LH Side (SST) (GR35/45/65F).....	1
28	00-420596-00003	Body - Side (SST) (LH) (NFR) (GR85F).....	1
29	00-419648-00001	Body - LH Side (SST) (GR35/45/65F).....	1
30	00-426573-00002	Catch - Magnetic.....	2
31	00-413112-00007	Leg (6-1/4 In.) (SST).....	4
32	00-413112-00009	Leg (6 In.) (SST).....	4
33	00-413112-00010	Base Plate - Leg (Use with Item 32).....	4
34	00-418907-00001	Caster - Swivel Assy. (Adjustable).....	2
35	00-418907-00003	Caster.....	2
36	00-421893-00001	Mount Plate - Caster (4 In.) (After 4/17/95).....	2
37	00-421893-00002	Caster 4 In. (No Brake) (After 4/17/95).....	2
38	00-426582-000G6	Door Assy. (SS) (RH) (21 In.) (GR65/85F).....	1
39	00-426582-000G2	Door Assy. (RH) (GR35/45F).....	1
40	00-419653	Handle.....	2
41	RS-033-09	Rivet - Pop (0.187).....	4
42	00-426582-000G5	Door Assy. (LH) (GR65/85F).....	1
43	00-426582-000G1	Door Assy. (LH) (GR35/45F).....	1
44	00-428116-000G3	Frame - Front Assy. (GR35/45F).....	1
45	00-428116-000G4	Frame - Front Assy. (GR65/85F).....	1
46	00-428116-000G5	Frame - Front Assy. (GR35/45F) (3 Unit).....	1
47	00-428116-000G6	Frame - Front Assy. (GR65/85F) (3 Unit).....	1
48	00-428116-000G7	Frame - Front Assy. (GR35/45F) (4 Unit).....	1
49	00-418379-000G1	Heat Shield (GR35/45F).....	1
50	00-418324-000G1	Heat Shield (GR65/85F).....	1
51	00-419777-00004	Body - RH Side (SST) (GR85F).....	1
52	00-417711-00002	Body - RH Side (SST) (GR35/45/65F).....	1
53	00-426764-00004	Body - RH Side (SST) (GR85F).....	1
54	00-426765-00004	Body - RH Side (SST) (HG35/45/65F) Body - RH Side (SST) (GR35/45/65F).....	1
55	00-420596-00004	Body - Side (SST) (RH) (NFR) (GR85F).....	1
56	00-419648-00002	Body - RH Side (SST) (GR35/45/65F).....	1
57	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	1

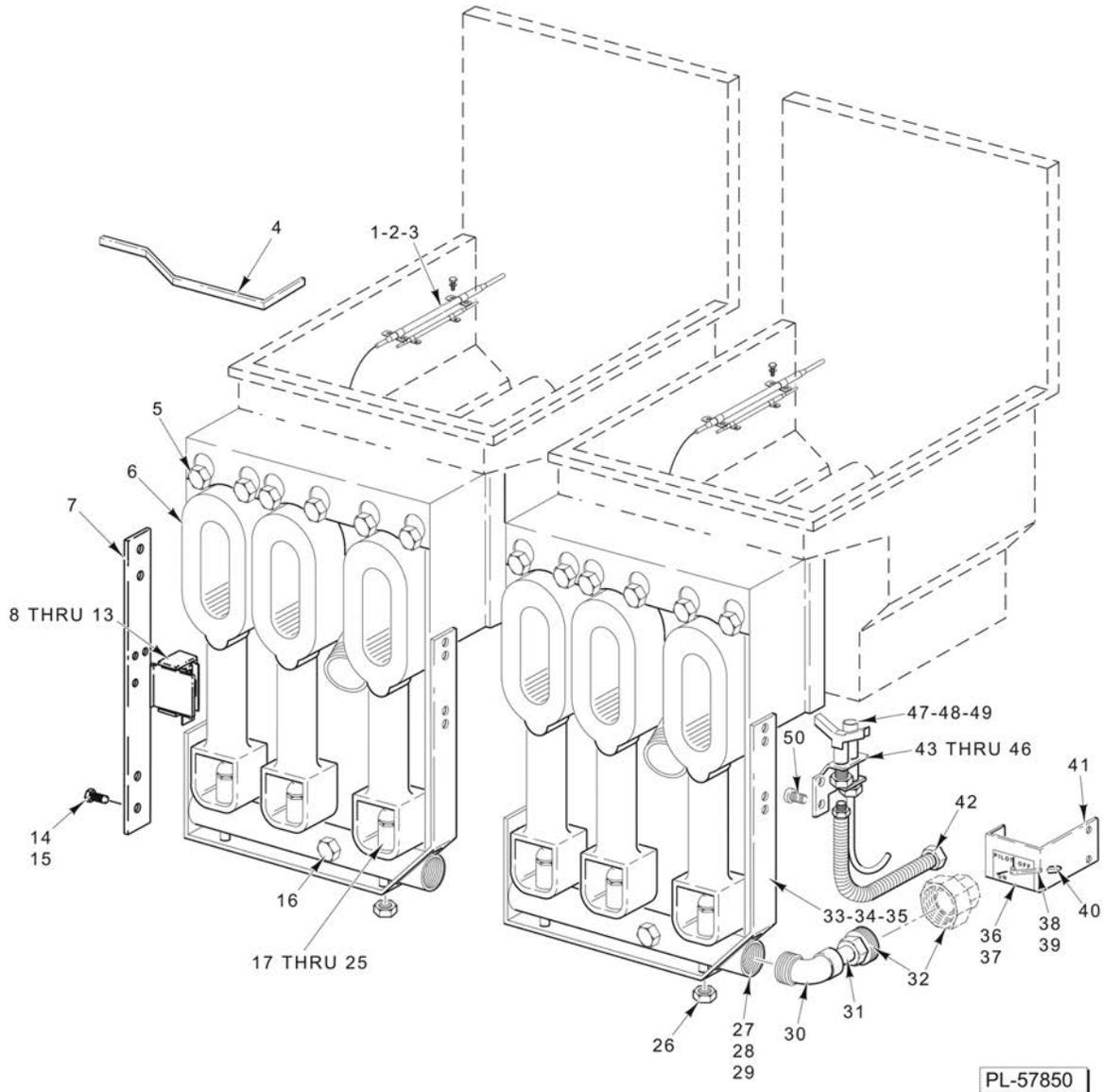


PL-56478

BASKETLIFT COMPONENTS

BASKETLIFT COMPONENTS

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-56478A			
1	00-418474-000G1	Arm - Basket Assy. (Incls. Items 10 & 11).....	1
2	00-418118-00001	Bolt - Adjusting.....	1
3	NS-018-01	Jam Nut 1/4-20 Hex (SST).....	1
4	00-418479-000G1	Tube - Basketlift.....	1
5	PB-004-04	Plug Button (1-1/4) (Single Unit).....	2
6	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	2
7	WS-004-33	Washer.....	6
8	NS-047-73	Lock Nut 5/16-18 Hex (SST).....	6
9	00-418478-000G1	Bearing Support Assy.....	1
10	00-418487-00001	Roller.....	1
11	00-418488-00001	Pin - Roller.....	1
12	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	10
13	SC-109-10	Mach. Screw 6-32 x 3/8 Slotted Pan Hd. (SST).....	1
14	NS-009-07	Nut 6-32 Hex.....	1
15	00-078752-00012	Clamp - Cable 3/8.....	1
16	SC-037-80	Mach. Screw 10-24 x 1/2 Hex Hd.....	8
17	00-418159-00001	Block - Cam Switch.....	1
18	00-411496-000F3	Microswitch.....	1
19	SC-112-90	Mach. Screw 4-40 x 1 Slotted Pan Hd.....	2
20	NS-009-02	Nut 4-40 Hex.....	2
21	00-418123-000G1	Plate - Motor.....	1
22	00-418156-00001	Gear - Motor (115 V., 60 Hz.).....	1
23	00-418156-00002	Gear - Motor (230 V., 50/60 Hz.).....	1
24	00-418156-00003	Gear - Motor (208 V., 50/60 Hz.).....	1
25	00-418517-00001	Shroud - Motor.....	1
26	00-418484-00001	Base - Motor Mounting (GR35 & GR45 Series).....	1
27	00-418513-00001	Base - Motor Mounting (GR65 & GR85 Series).....	1
28	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	2
29	SC-037-80	Mach. Screw 10-24 x 1/2 Hex Hd.....	2
30	00-416535-00004	Switch - Relay S.P.D.T. 24 V. Coil (Electronic Ignition).....	1
31	SC-109-10	Mach. Screw 6-32 x 3/8 Slotted Pan Hd. (SST).....	3
32	NS-009-07	Nut 6-32 Hex.....	3
33	SC-018-47	Mach. Screw 10-32 x 3/4 Slotted Pan Hd.....	4
34	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	4
35	00-418480-00001	Wrap - Bottom (GR35 & GR45 Series).....	1
36	00-418510-00001	Wrap - Bottom (GR65 & GR85 Series).....	1
37	00-078752-00012	Clamp - Cable (3/8 P).....	1
38	SC-109-10	Mach. Screw 6-32 x 3/8 Slotted Pan Hd. (SST).....	1
39	NS-009-07	Nut 6-32 Hex.....	1
40	00-418482-00001	Grommet.....	1
41	00-418475-000G1	Crank - Arm Assy. (Incls. Items 42 & 43).....	1
42	SC-055-02	Set Screw 1/4-20 x 1/4 Hdls., Cup Pt. (SST).....	2
43	NS-047-73	Lock Nut 5/16-18 Hex.....	1
44	WS-004-33	Washer.....	1
45	SD-015-41	Self-Tapping Screw 8-32 x 1/2 Phil. Pan Hd., Type TT.....	2
46	00-418477-000G1	Coupler Assy.....	1
47	WS-004-33	Washer.....	1
48	NS-047-73	Lock Nut 5/16-18 Hex.....	1
49	00-418481-00001	Wrap - Top (GR35 & GR45 Series).....	1
50	00-418511-00001	Wrap - Top (GR65 & GR85 Series).....	1

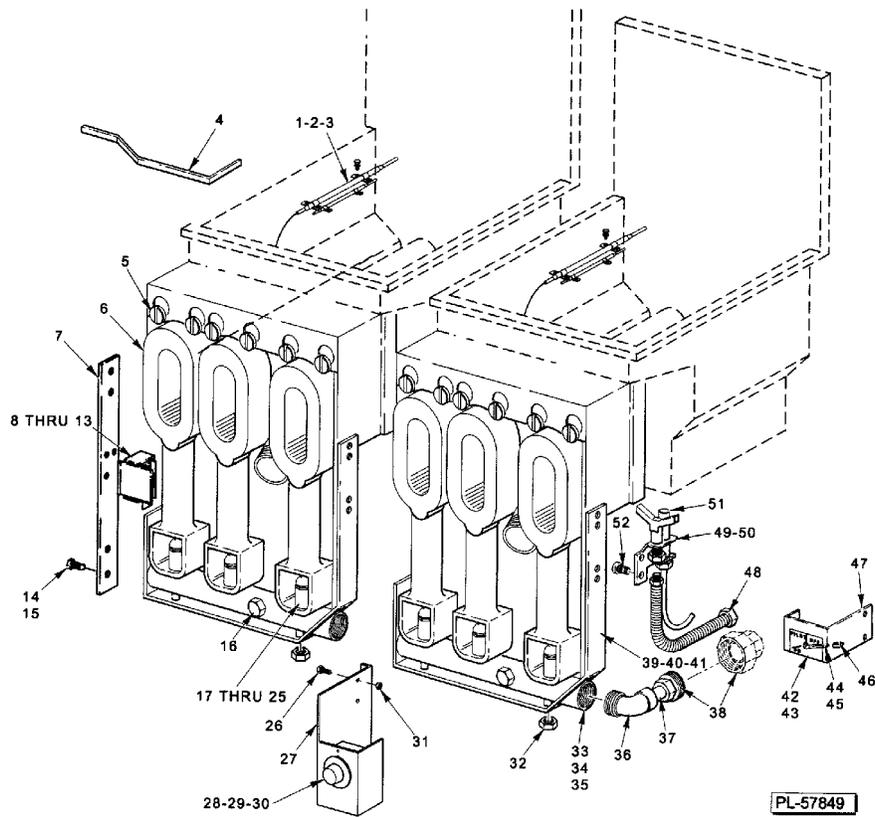


BURNER COMPONENTS

BURNER COMPONENTS

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57850			
1	00-402558-00005	Clamp (HGSF Only).....	2
2	00-417522-00001	Clip - Capillary.....	2
3	SD-035-02	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	4
4	00-409300-00005	Rod - Clean-Out.....	1
5	00-428035-00001	Bolt - Shoulder.....	AR
6	00-410681-00001	Burner.....	AR
7	00-417714-00001	Extension - Hanger.....	1
8	00-419548	Bracket - Hi-Limit.....	1
9	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT.....	4
10	NS-046-52	Nut Assy. 1/4-20 Hex KEPS.....	4
11	SD-036-80	Self-Tapping Screw 8-32 x 3/8 Hex Washer Hd., Type TT.....	2
12	00-419670-00002	Thermostat - Hi-Limit (W/Stuff Box).....	1
13	00-419587	Bracket - Pull Rod (Previous Construction).....	1
14	SD-015-24	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT.....	AR
15	NS-044-14	Nut 1/4-20 Hex KEPS.....	AR
16	FP-085-53	Pipe Plug 1/8.....	1
17	00-010901-00039	Orifice - Spud (39 Drill).....	AR
18	00-010901-00041	Orifice - Spud (Nat. Gas) (2001 - 3499 Ft.).....	AR
19	00-010901-00042	Orifice - Spud (Nat. Gas) (3500 - 5499 Ft.).....	AR
20	00-010901-00043	Orifice - Spud (Nat. Gas) (5500 - 7499 Ft.).....	AR
21	00-010901-00044	Orifice - Spud (Nat. Gas) (7500 - 9499 Ft.).....	AR
22	00-010901-00052	Orifice - Spud (LP Gas) (Sea Level - 3499 Ft.).....	AR
23	00-010901-00053	Orifice - Spud (L.P. Gas) (3500 - 6499 Ft.).....	AR
24	00-010901-00054	Orifice - Spud (L.P. Gas) (6500 - 8499 Ft.).....	AR
25	00-410695-00001	Extension - Orifice.....	AR
26	NS-047-72	Lock Nut 1/4-20.....	2
27	00-418209-00001	Manifold - Burner (3 Tube).....	1
28	00-418212-00001	Manifold - Burner (4 Tube).....	1
29	00-418318-00001	Manifold - Burner (5 Tube).....	1
30	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
31	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
32	FP-022-11	Union - Pipe.....	AR
33	00-418208-00001	Hanger - Manifold (3 Tube).....	1
34	00-418211-00001	Hanger - Manifold (4 Tube).....	1
35	00-418317-00001	Hanger - Manifold (5 Tube).....	1
36	00-417896-00001	Plate - Control Valve (W/Pilot P).....	1
37	00-417896-00002	Plate - Control Valve (W/O Pilot P).....	1
38	00-413433-00003	Handle - Combo Valve.....	1
39	PC-003-24	Cotter Pin 1/16 x 1 1/2.....	1
40	00-418452-00001	Cover - Combo Valve Handle (Red).....	1
41	00-418553	Bracket - Control.....	1
42	00-426505-00012	Tubing - Pilot Flex 1/4 O.D. x 12 In.....	1
43	00-412212-00007	Pilot (Nat. Gas).....	1
44	00-412212-00002	Pilot (L.P. Gas).....	1
45	00-419316-00001	Pilot (Nat. Gas) (W/Electronic Ignition).....	1
46	00-419316-00002	Pilot (L.P. Gas) (W/Electronic Ignition).....	1
47	00-410839-00004	Thermopile (GRSF - No Other Options).....	1
48	00-497301-00001	Thermopile (750 MV) (GR - Millivolt Control).....	1
49	00-497302-00001	Thermocouple (For Manual Ignition GRC/GRD).....	2
50	SC-018-32	Mach. Screw 8-32 x 3/8 Pan Hd.....	2

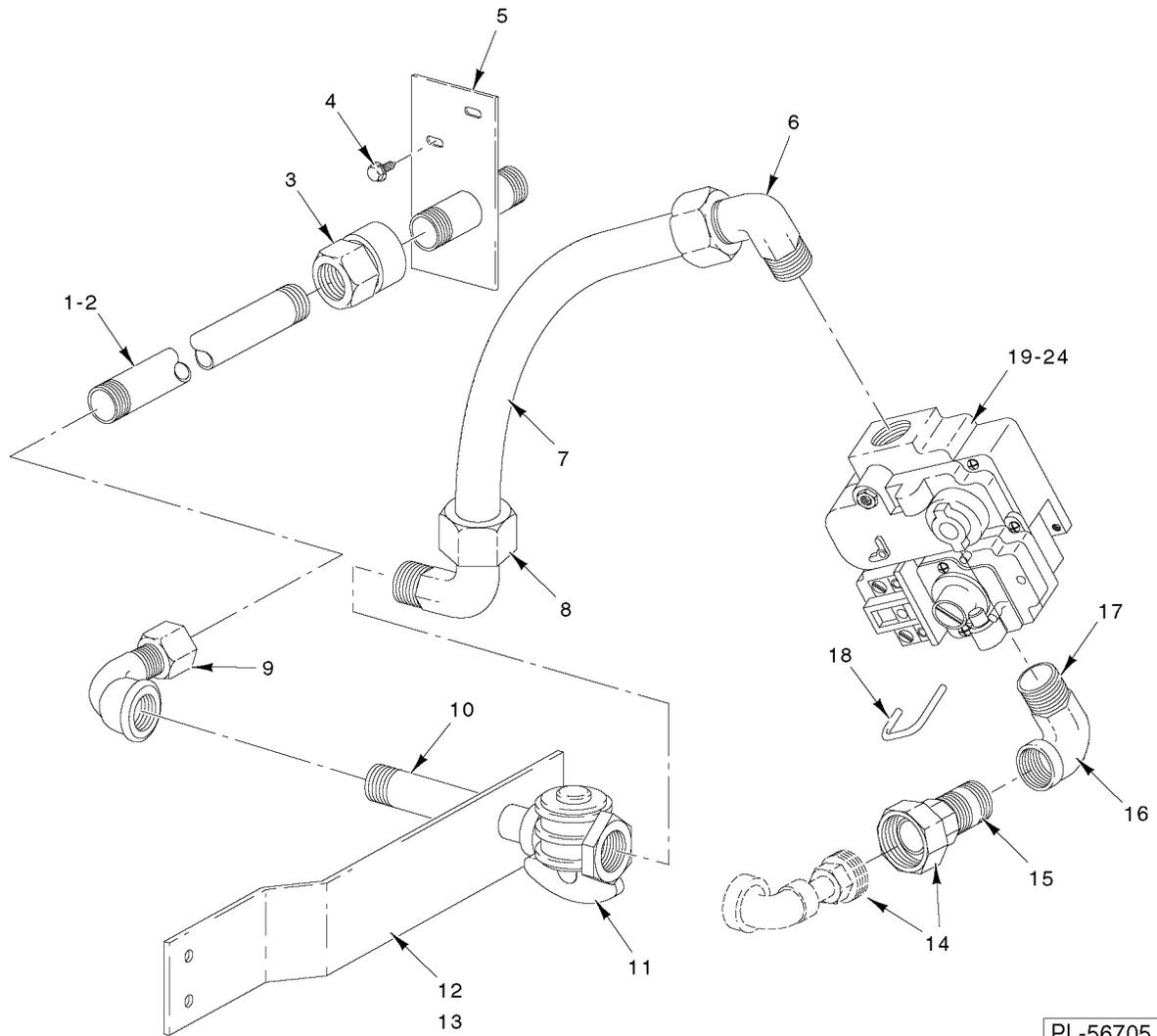
GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS



BURNER COMPONENTS (GRF SERIES)

BURNER COMPONENTS (GRF SERIES)

ILLUS. PL-57849	PART NO.	NAME OF PART	AMT.
1	00-402558-00005	Clamp.....	2
2	00-417522-00001	Clip - Capillary.....	2
3	SD-035-02	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	4
4	00-409300-00005	Rod - Clean-Out.....	1
5	00-428035-00001	Bolt - Shoulder.....	AR
6	00-410681-00001	Burner.....	AR
7	00-417714-00001	Extension - Hanger.....	1
8	00-419548	Bracket - Hi-Limit.....	1
9	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT.....	4
10	NS-046-52	Nut Assy. 1/4-20 Hex KEPS.....	4
11	SD-036-80	Self-Tapping Screw 8-32 x 3/8 Hex Washer Hd., Type TT.....	2
12	00-419670-00002	Thermostat - Hi-Limit (W/Stuff Box).....	1
13	00-419587	Bracket - Pull Rod (Previous Construction).....	1
14	SD-015-24	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT.....	AR
15	NS-044-14	Nut 1/4-20 Hex KEPS.....	AR
16	FP-085-53	Pipe Plug 1/8.....	1
17	00-010901-00039	Orifice - Spud (39 Drill).....	AR
18	00-010901-00041	Orifice - Spud (Nat. Gas) (2001 - 3499 Ft.).....	AR
19	00-010901-00042	Orifice - Spud (Nat. Gas) (3500 - 5499 Ft.).....	AR
20	00-010901-00043	Orifice - Spud (Nat. Gas) (5500 - 7499 Ft.).....	AR
21	00-010901-00044	Orifice - Spud (Nat. Gas) (7500 - 9499 Ft.).....	AR
22	00-010901-00052	Orifice - Spud (LP Gas) (Sea Level - 3499 Ft.).....	AR
23	00-010901-00053	Orifice - Spud (LP Gas) (3500 - 6499 Ft.).....	AR
24	00-010901-00054	Orifice - Spud (LP Gas) (6500 - 8499 Ft.).....	AR
25	00-410695-00001	Extension - Orifice.....	AR
26	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT.....	2
27	00-497089-00001	Bracket - Control.....	1
28	00-408659-00005	Knob - Thermostat.....	1
29	00-419999-00001	Thermostat.....	1
30	00-408659-00007	Knob - Thermostat (Celsius).....	1
31	NS-046-52	Nut Assy. 1/4-20 Hex.....	6
32	NS-047-72	Lock Nut 1/4-20.....	2
33	00-418209-00001	Manifold - Burner (3 Tube) (GR35F).....	1
34	00-418212-00001	Manifold - Burner (4 Tube) (GR45F).....	1
35	00-418318-00001	Manifold - Burner (5 Tube) (GR65/85F).....	1
36	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
37	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
38	FP-022-11	Union - Pipe.....	AR
39	00-418208-00001	Hanger - Manifold (3 Tube) (GR35F).....	1
40	00-418211-00001	Hanger - Manifold (4 Tube) (GR45F).....	1
41	00-418317-00001	Hanger - Manifold (5 Tube) (GR65/85F).....	1
42	00-417896-00001	Plate - Control Valve.....	1
43	00-417896-00002	Plate - Control Valve (W/O Pilot P).....	1
44	00-413433-00003	Handle - Combo Valve.....	1
45	PC-003-24	Cotter Pin 1/16 x 1 1/2.....	1
46	00-418452-00001	Cover - Combo Valve Handle (Red).....	1
47	00-418553	Bracket - Control.....	1
48	00-426505-00012	Tubing - Pilot Flex 1/4 O.D. x 12 In.....	1
49	00-412212-00007	Pilot (Nat. Gas).....	1
50	00-412212-00002	Pilot (L.P. Gas).....	1
51	00-497302-00001	Thermocouple.....	2
52	SC-018-32	Mach. Screw 8-32 x 3/8 Pan Hd.....	2



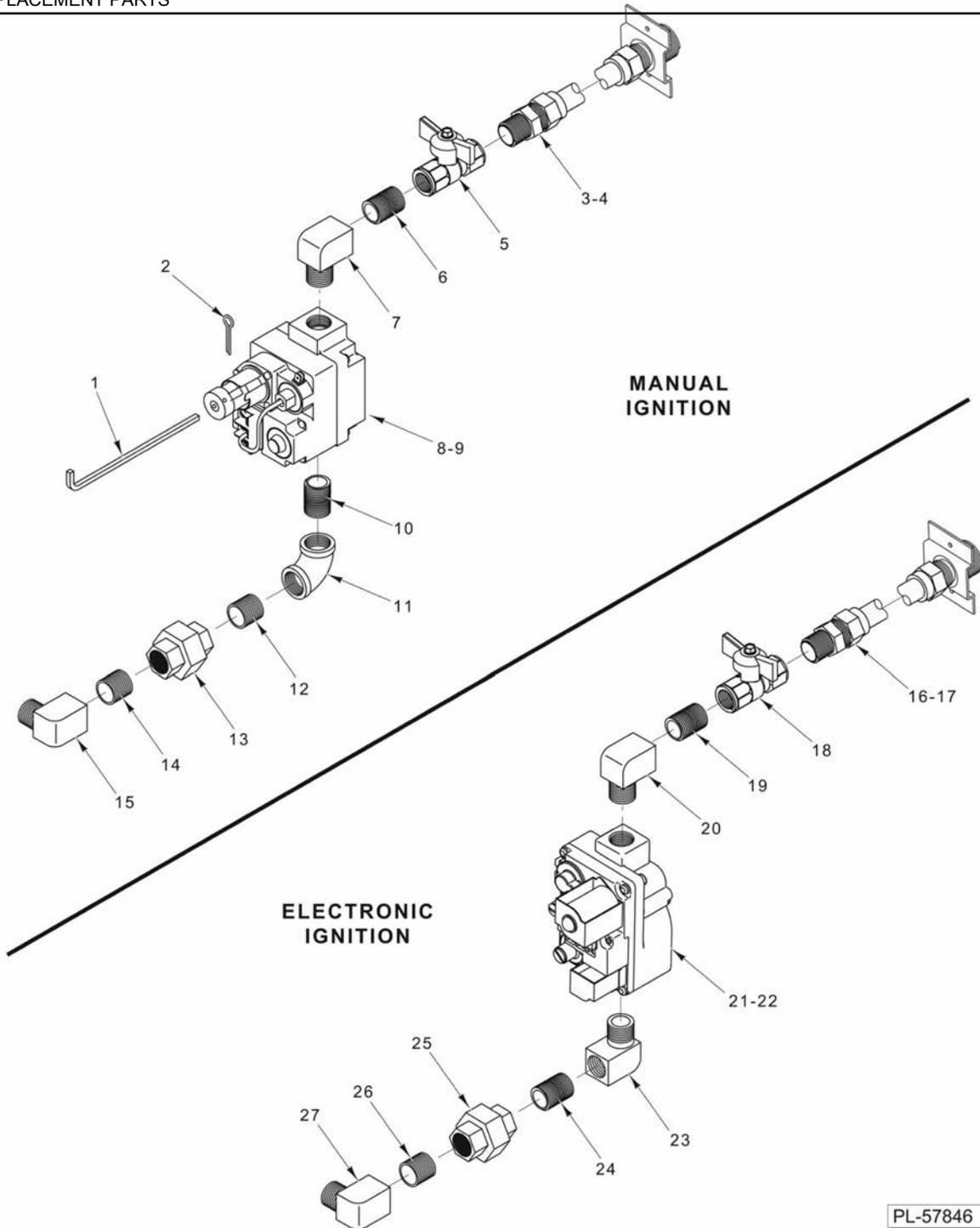
PL-56705

**GAS INLET MANIFOLD
(PREVIOUS CONSTRUCTION)**

**GAS INLET MANIFOLD
(PREVIOUS CONSTRUCTION)**

ILLUS. PL-56705	PART NO.	NAME OF PART	AMT.
1	00-418561-00001	Tube - Gas (GR35, GR45, & GR65 Series).....	1
2	00-418561-00003	Tube - Gas (GR85 Series).....	1
3	FP-012-39	Fitting - Tube 5/8 TBG x 1/2 FPT (Brass).....	1
4	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	1
5	00-418538-000G1	Bracket - Gas Inlet Mounting Assy.....	1
6	FP-012-07	Elbow - Male (1/2 Pipe x 5/8 Tube).....	2
7	00-418559	Tube - Gas Combo/Solenoid Valve.....	1
8	FP-012-07	Elbow - Male (1/2 Pipe x 5/8 Tube).....	1
9	FP-086-20	Elbow - 90 Deg. Female 5/8 x 1/2 FPT.....	1
10	FP-087-08	Pipe 1/2 x 73/8 Lg. TBE.....	1
11	00-428472-00001	Valve - Ball Gas Shutoff.....	1
12	00-418129	Bracket - Solenoid Assy. (3 Tube) & (5 Tube).....	1
13	00-418130	Bracket - Solenoid Assy. (4 Tube).....	1
14	FP-022-11	Union - Pipe.....	1
15	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
16	FP-077-68	Elbow 1/2 x 90 Deg.....	1
17	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
18	00-412593-00001	Tube - Vent.....	1
19	00-410841-00022	Valve - Combination W/Millivolt Control (NAT).....	1
20	00-410841-00023	Valve - Combination W/Millivolt Control (LP).....	1
21	00-410841-00028	Valve - Combination (NAT) (Electronic Ignition).....	1
22	00-410841-00029	Valve - Combination (LP) (Electronic Ignition).....	1
23	00-410841-00030	Valve - Combination W/Manual Control/Fat Melt Cycle (NAT).....	1
24	00-410841-00031	Valve - Combination W/Manual Control/Fat Melt Cycle (LP).....	1

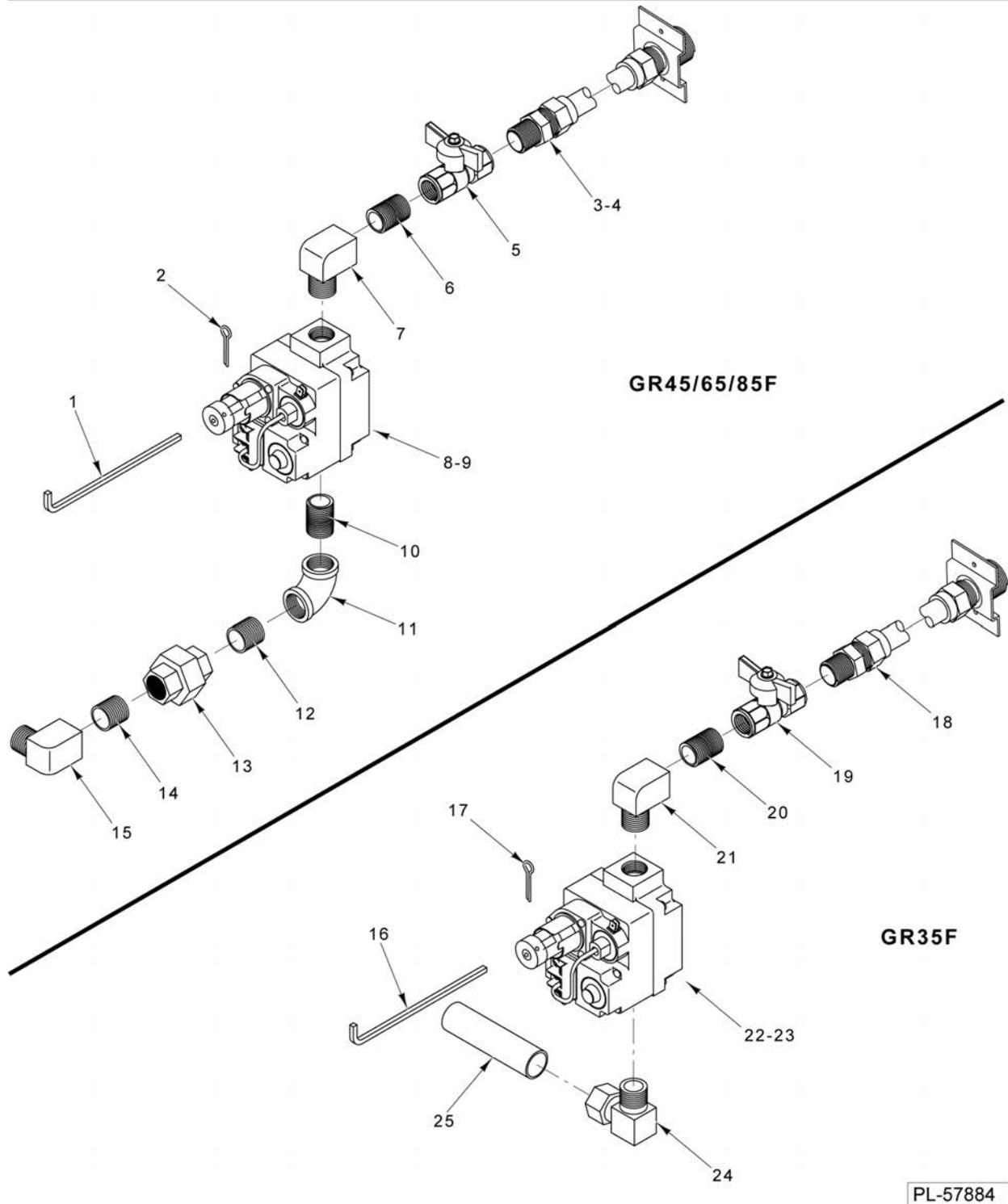
GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS



**GAS INLET MANIFOLD
(GRCF & GRDF SERIES)
(CURRENT CONSTRUCTION)**

**GAS INLET MANIFOLD
(GRCF & GRDF SERIES)
(CURRENT CONSTRUCTION)**

ILLUS. PL-57846	PART NO.	NAME OF PART	AMT.
1	00-413433-00003	Lever - Pilot Actuating.....	1
2	00-497305-00001	Pin - Cotter.....	1
3	00-427882-000G2	Gas Inlet (GRC35/45F & GRD35/45F).....	1
4	00-427882-000G3	Gas Inlet (GRC65/85F & GRD65/85F).....	1
5	00-428472-00001	Valve - Ball.....	1
6	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
7	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
8	00-497386-000G4	Valve - Combination (LP) (Manual Ignition).....	1
9	00-497386-000G3	Valve - Combination (NAT) (Manual Ignition).....	1
10	FP-035-95	Pipe 1/2 x 2 TBE.....	1
11	FP-077-68	Elbow 1/2 x 90 Deg.....	1
12	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
13	FP-022-11	Union - Pipe.....	1
14	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
15	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
16	00-427822-000G2	Gas Inlet (GRC35/45F & GRD35/45F).....	1
17	00-427882-000G3	Gas Inlet (GRC65/85F & GRD65/85F).....	1
18	00-428472-00001	Valve - Ball.....	1
19	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
20	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
21	00-497271-00003	Valve - Combination (NAT) (Electronic Ignition).....	1
22	00-497271-00004	Valve - Combination (LP) (Electrical Ignition).....	1
23	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
24	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
25	FP-022-11	Union - Pipe.....	1
26	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
27	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1

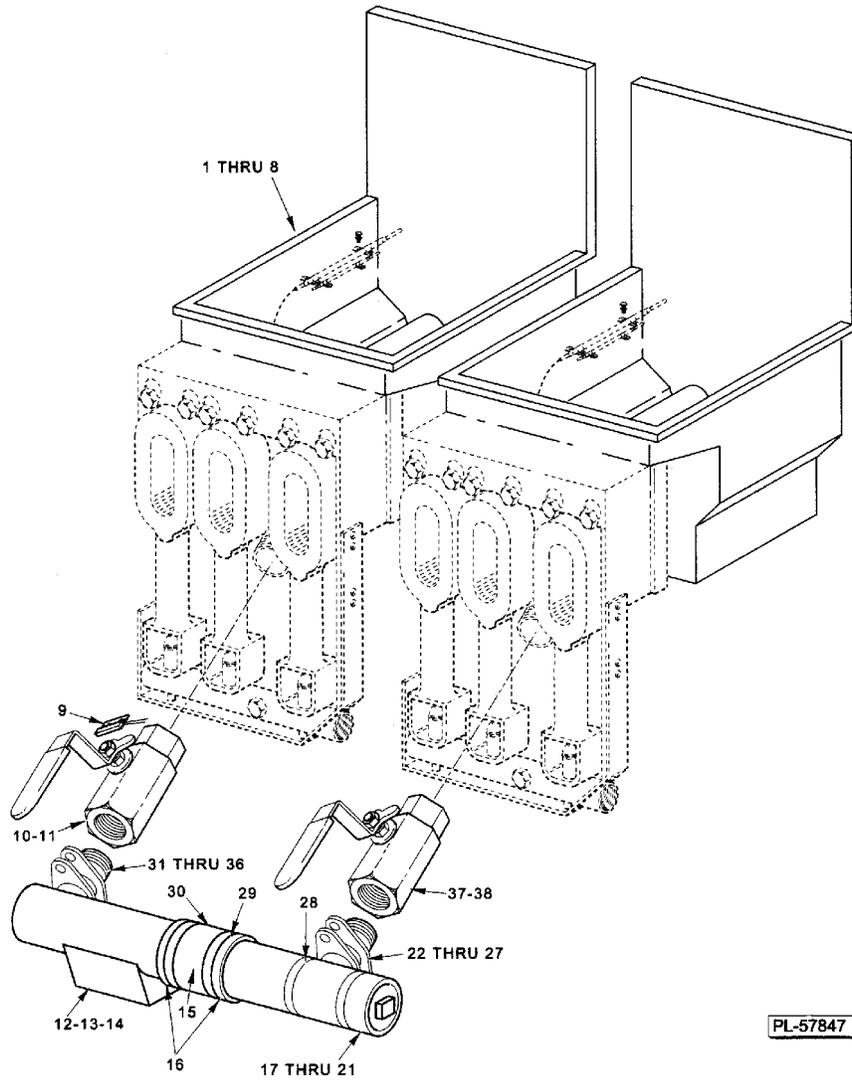


**GAS INLET MANIFOLD
(GRF SERIES)
(CURRENT CONSTRUCTION)**

**GAS INLET MANIFOLD
 (GRF SERIES)
 (CURRENT CONSTRUCTION)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57884			
1	00-413433-00007	Lever - Pilot Actuating.....	1
2	00-497305-00001	Pin - Cotter.....	1
3	00-427822-000G2	Gas Inlet (GR45F).....	1
4	00-427882-000G3	Gas Inlet (GR65/85F).....	1
5	00-428472-00001	Valve - Ball.....	1
6	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
7	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
8	00-497386-000G1	Valve - Combination (NAT) (GR45/65/85F) (Manual Ignition).....	1
9	00-497386-000G2	Valve - Combination (LP) (GR45/65/85F) (Manual Ignition).....	1
10	FP-036-94	Pipe 1/2 x 2 1/2 TBE.....	1
11	FP-077-68	Elbow 1/2 x 90 Deg.....	1
12	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
13	FP-022-11	Union - Pipe.....	1
14	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
15	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
16	00-413433-00007	Lever - Pilot Actuating.....	1
17	00-497305-00001	Pin - Cotter.....	1
18	00-427882-000G2	Gas Inlet (GR35F).....	1
19	00-428472-00001	Valve - Ball.....	1
20	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
21	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
22	00-497386-000G1	Valve - Combination (NAT) (GR35F) (Manual Ignition).....	1
23	00-497386-000G2	Valve - Combination (LP) (GR35F) (Manual Ignition).....	1
24	FP-012-07	Elbow - Swivel 5/8 Tube Fitting.....	1
25	00-418561-00005	Tube - Gas.....	1

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS



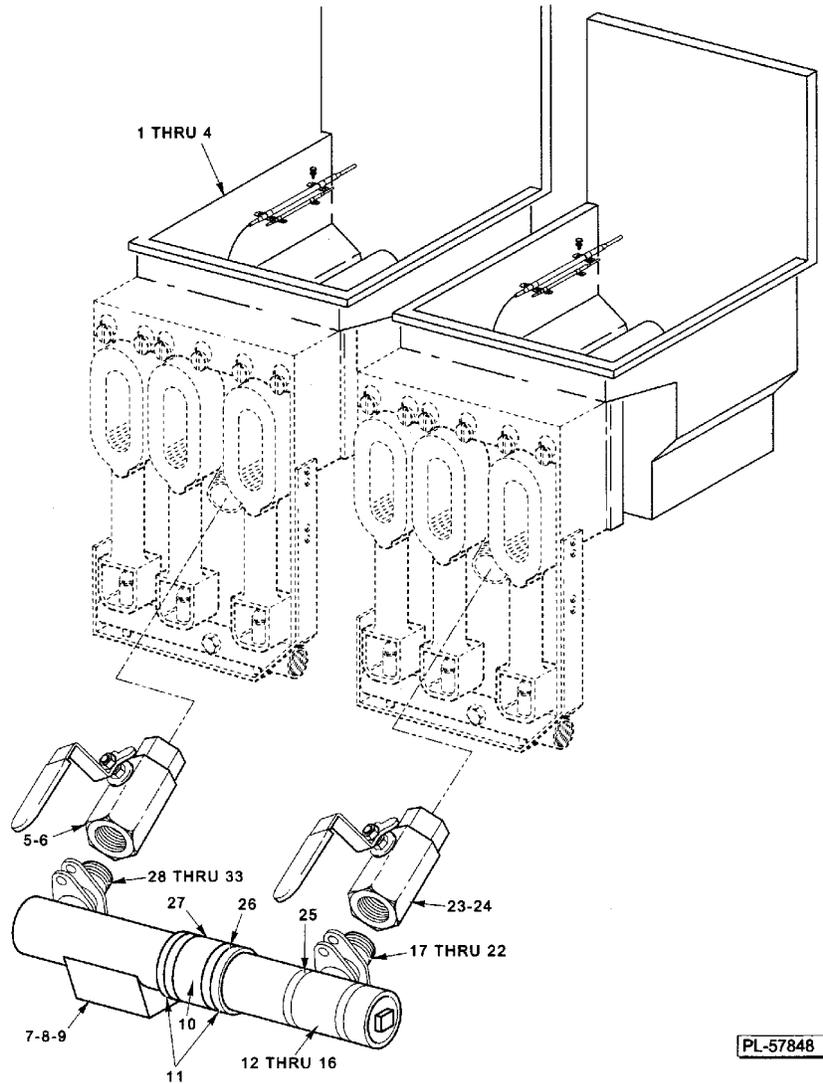
TANK AND DRAIN

TANK AND DRAIN

ILLUS. PL-57847	PART NO.	NAME OF PART	AMT.
*1	00-416942-000G5	Tank - Assy. Weldment (3 tube) (GRS35F, GRD35F, & GRC35F) (Previous Construction).....	1
*2	00-418192-000G2	NLA - Obsolete--Tank Assy. (4 Tube) (SST) (HGFS/HGFD/HGFC45) (Previous Construction).....	1
*3	00-418196-000G2	Tank - Stainless Steel (GRS65F, GRD65F, & GRC65F) (Previous Construction).....	1
*4	00-419620-000G2	Tank - Stainless Steel (GRS85F, GRD85F, & GRC85F) (Previous Construction).....	1
5	00-416942-000G10	Tank Assy. (3 Tube) (SST) (D/C35) (Current Construction).....	1
6	00-418192-000G6	Tank Assy. (4 Tube) (SST) (D/C45) (Current Construction).....	1
7	00-418196-000G6	Tank Assy. (5 Tube) (SST) (D/C65) (Current Construction).....	1
8	00-419620-000G4	Tank Assy. (5 Tube) (SST) (D/C85) (Current Construction).....	1
9	00-426805-000G1	Switch Assy. (Drain Valve Interlock) (Current Construction).....	1
10	00-426803-000G1	Valve - Ball (1 In.) (GR35/45/65 Series).....	1
11	00-426803-000G2	Valve - Ball (1 1/4 In.) (GR85 Series).....	1
12	00-426612-000G1	Elbow - Filter Fill (LH) (4 Tube).....	1
13	00-426612-000G2	Elbow - Filter Fill (LH) (5 Tube).....	1
14	00-426612-000G3	Elbow - Filter Fill (LH) (3 Tube).....	1
15	00-416266-00002	Shield - Sleeve (Previous Construction).....	2
16	00-416174-00002	Clamp - Hose (Previous Construction).....	2
17	00-420732-000G1	Pipe - End Section (RH) (5 Tube).....	1
18	00-420732-000G3	Pipe - End Section (LH) (5 Tube).....	1
19	00-420732-000G4	Pipe - End Section (RH) (3 Tube).....	1
20	00-420732-000G5	NLA - Obsolete--Pipe - End Section (RH) (4 Tube).....	1
21	00-420732-000G6	End Drain Assy. (3 Tube W/Dump) Pipe - End Section (RH) (3 Tube) (With Dump).....	1
22	00-420555-00001	Flange - Pipe (1 In.).....	1
23	00-420726-00001	Flange - Pipe (1 1/4 In.).....	1
24	00-420553-00002	Gasket - Silicone.....	1
25	FP-085-96	Pipe 1 x 1 TBE.....	1
26	FP-087-96	Pipe 1 1/4 x 1 3/8 TBE.....	1
27	SC-036-13	Cap Screw 1/4-20 x 3/4 Hex Hd.....	2
28	00-416174-00002	Clamp - Hose.....	AR
29	00-497409-00001	Clamp - Drain Tube (Current Construction).....	2
30	00-419351-00001	Hose - Connect.....	AR
31	00-420553-00002	Gasket - Silicone.....	1
32	00-420555-00001	Flange - Pipe (1 In.).....	1
33	00-420726-00001	Flange - Pipe (1 1/4 In.).....	1
34	FP-085-96	Pipe 1 x 1 TBE.....	1
35	FP-087-96	Pipe 1 1/4 x 1 3/8 TBE.....	1
36	SC-036-13	Cap Screw 1/4-20 x 3/4 Hex Hd.....	2
37	00-426803-000G1	Valve - Ball (1 In.) (GR35/45/65 Series).....	1
38	00-426803-000G2	Valve - Ball (1 1/4 In.) (GR85 Series).....	1
**	00-427952-00001	Bracket - Pilot Mounting.....	1
**	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	1
**	00-426505-00012	Tubing - Pilot Flex 1/4 O.D. x 12 In.....	1
**	00-405569-00003	Fitting - Compression.....	1
**	FP-047-35	Fitting - Tube 1/4.....	1
**	FP-047-34	Fitting - Tube 1/4.....	1
**	FP-059-52	Pipe 1 1/4 x 3 TBE.....	1
**		Appropriate Pilot Assy.....	AR

* For replacement tanks on fryers built before June 2002, the following parts listed below must be ordered as well as the appropriate tank.

** Must be ordered with items 1, 2, 3 & 4 for fryers built before June 2002



TANK AND DRAIN (GRF SERIES)

TANK AND DRAIN (GRF SERIES)

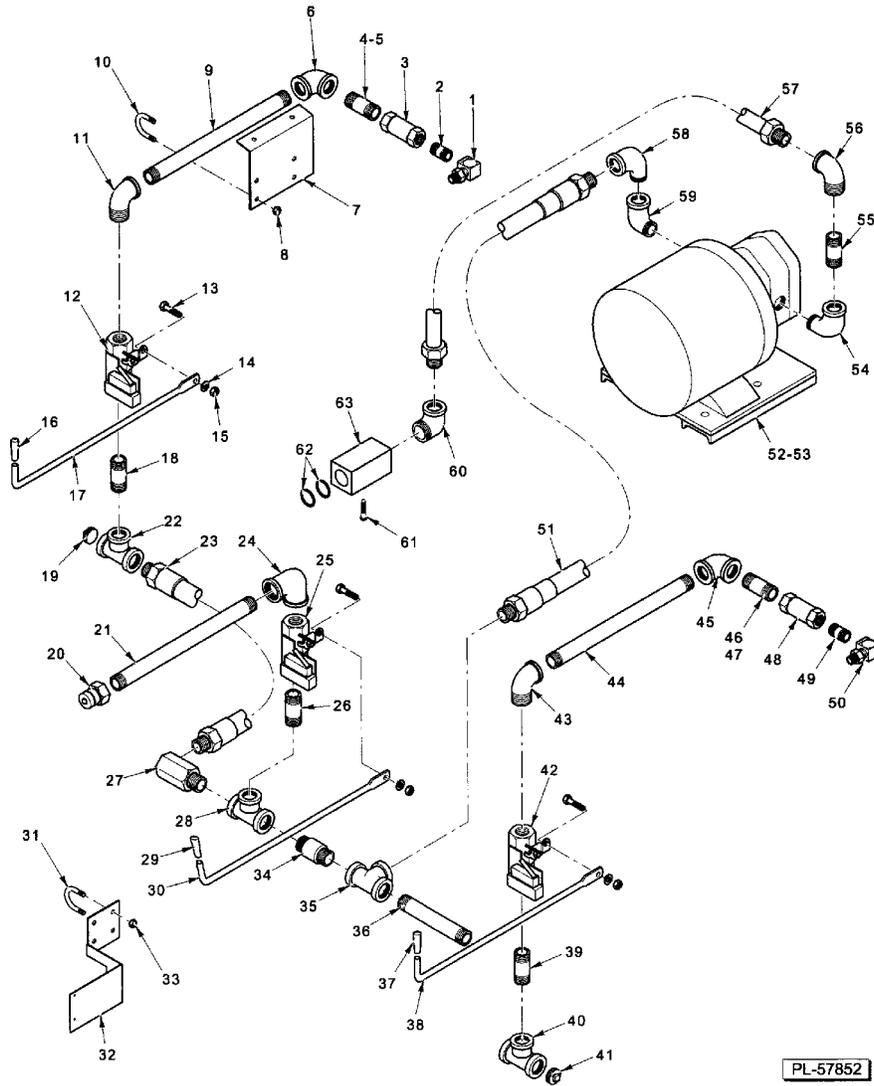
ILLUS. PL-57848	PART NO.	NAME OF PART	AMT.
1	00-416942-00G10	Tank Assy. (SST) (GR35F).....	1
2	00-418192-000G6	Tank Assy. (SST) (GR45F).....	1
3	00-418196-000G6	Tank Assy. (SST) (GR65F).....	1
4	00-419620-000G4	Tank Assy. (SST) (GR85F).....	1
5	00-427903-00001	Valve - Ball (1 In.) (GR35/45/65F).....	1
6	00-414212-00006	Valve - Ball (1 1/4 In.) (GR85F).....	1
7	00-426612-000G1	Elbow - Filter Fill (LH) (4 Tube).....	1
8	00-426612-000G2	Elbow - Filter Fill (LH) (5 Tube).....	1
9	00-426612-000G3	Elbow - Filter Fill (LH) (3 Tube).....	1
10	00-416266-00002	Shield - Sleeve.....	2
11	00-416174-00002	Clamp - Hose.....	2
12	00-420732-000G1	Pipe - End Section (RH) (5 Tube).....	1
13	00-420732-000G3	Pipe - End Section (LH) (5 Tube).....	1
14	00-420732-000G4	Pipe - End Section (RH) (3 Tube).....	1
15	00-420732-000G5	NLA - Obsolete--Pipe - End Section (RH) (4 Tube).....	1
16	00-420732-000G6	Pipe - End Section (RH) (3 Tube) (With Dump).....	1
17	00-420555-00001	Flange - Pipe (1 In.).....	1
18	00-420726-00001	Flange - Pipe (1 1/4 In.).....	1
19	00-420553-00002	Gasket - Silicone.....	1
20	FP-085-96	Pipe 1 x 1 TBE.....	1
21	FP-087-96	Pipe 1 1/4 x 1 3/8 TBE.....	1
22	SC-036-13	Cap Screw 1/4-20 x 3/4 Hex Hd.....	2
23	00-427903-00001	Valve - Ball (1 In.) (GR35/45/65F).....	1
24	00-414212-00006	Valve - Ball (1 1/4 In.) (GR85F).....	1
25	00-416174-00002	Clamp - Hose.....	AR
26	00-497409-00001	Clamp - Drain Tube.....	2
27	00-419351-00001	Hose - Connect.....	AR
28	00-420553-00002	Gasket - Silicone.....	1
29	00-420555-00001	Flange - Pipe (1 In.).....	1
30	00-420726-00001	Flange - Pipe (1 1/4 In.).....	1
31	FP-085-96	Pipe 1 x 1 TBE.....	1
32	FP-087-96	Pipe 1 1/4 x 1 3/8 TBE.....	1
33	SC-036-13	Cap Screw 1/4-20 x 3/4 Hex Hd.....	2

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, ~~ON RETURN~~ PRIOR MLS COVERED IN THIS CATALOG, GRS35F M

**(GRCF AND GRDF SERIES)
(CURRENT CONSTRUCTION)**

REPLACEMENT PARTS

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57843			
1	00-418781-00001	Quick Disconnect.....	1
2	FP-080-44	Pipe 1/2 x 12 TBE (GRC35/45/65F & GRD35/45/65F).....	1
3	FP-080-92	Pipe 1/2 x 16 TBE (GRC85F & GRD85F).....	1
4	NS-046-52	Nut Assy. 1/4-20 Hex KEPS.....	1
5	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
6	WS-005-06	Washer.....	3
7	SC-113-34	Shoulder Screw 1/4-20 x 1/2 Hex Soc. Hd.....	1
8	FP-028-14	Pipe - Plug 1/2 Sq. Hd.....	1
9	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
10	FP-035-95	Pipe 1/2 x 2 TBE.....	1
11	FP-059-85	Pipe 1/2 x 43/4 TBE (GRC35/65/85F & GRD35/65/85F).....	1
12	00-419251-00001	Fitting - 90 Deg. Swivel NPTF.....	1
13	FP-035-95	Pipe 1/2 x 2 TBE.....	1
14	00-418786-00001	Valve - Check.....	1
15	FP-035-95	Pipe 1/2 x 2 TBE.....	1
16	FP-077-68	Elbow 1/2 x 90 Deg.....	1
17	FP-035-95	Pipe 1/2 x 2 TBE.....	1
18	00-428691-00001	Valve - Solenoid.....	1
19	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
20	00-419251-00001	Fitting - 90 Deg. Swivel NPTF.....	1
21	FP-035-95	Pipe 1/2 x 2 TBE.....	1
22	00-418786-00001	Valve - Check.....	1
23	FP-035-95	Pipe 1/2 x 2 TBE.....	1
24	FP-077-68	Elbow 1/2 x 90 Deg.....	1
25	FP-035-95	Pipe 1/2 x 2 TBE.....	1
26	00-428691-00001	Valve - Solenoid.....	1
27	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
28	FP-028-14	Pipe - Plug 1/2 Sq. Hd.....	1
29	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
30	00-426602-00002	Tube - Flex (29 In.).....	1
31	FP-077-68	Elbow 1/2 x 90 Deg.....	1
32	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
33	FP-077-68	Elbow 1/2 x 90 Deg.....	1
34	00-417792-00001	Pump Motor Assy. (120 V., 60 Hz.).....	1
35	00-417792-00003	Pump Motor Assy. (208 V., 50/60 Hz.).....	1
36	00-417792-00004	Pump Motor Assy. (230 V., 50/60 Hz.).....	1
37	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
38	SC-114-01	Mach. Screw 10-32 x 3/8 Hex Washer Hd.....	1
39	00-426567-00002	O-Ring (Viton).....	2
40	00-426567-00001	Receptacle - Oil Suction.....	1
41	00-426602-00003	Tube - Flex (8 In.).....	1
42	00-426602-00004	Tube - Flex (19 In.).....	1
43	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
44	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
45	00-426602-00004	Tube - Flex (19 In.).....	1
46	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
47	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
48	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
49	FP-035-95	Pipe 1/2 x 2 TBE.....	1
50	FP-077-68	Elbow 1/2 x 90 Deg.....	1
51	FP-035-95	Pipe 1/2 x 2 TBE.....	1
52	FP-058-49	Pipe 1/2 x 31/2 TBE.....	1
53	00-428694-000G1	Valve Assy.....	1
54	00-426801-00002	Magnet - Switch Element Head.....	1
55	00-426805-000G2	Switch - Magnetic (Wired).....	1
56	00-428693-00001	Rod - Pull (GRC45/65F & GRD45/65F).....	1
57	00-418583	NLA - Obsolete--Rod - Pull (HGC35F & HGD35F).....	1
58	00-428693-00002	Rod - Pull (GRC85F & GRD85F).....	1
59	00-416435-00002	Grip (Yellow).....	1



**OIL RETURN
(PREVIOUS CONSTRUCTION)**

**OIL RETURN
(PREVIOUS CONSTRUCTION)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57852			
1	00-419251-00001	Fitting - 90 Deg. Swivel.....	1
2	FP-086-28	Pipe 1/2 x 7/8 TBE.....	1
3	00-418786-00001	Valve - Check.....	1
4	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
5	FP-035-96	Pipe 1/2 x 2-1/2 TBE.....	1
6	FP-077-68	Elbow 1/2 x 90 Deg.....	1
7	00-421868-00001	Bracket - Oil Return.....	1
8	NS-046-52	Nut Assy. 1/4-20 Hex.....	4
9	00-426636-00001	Pipe 1/2 x 11 1/2.....	1
10	00-521820	U-Bolt.....	2
11	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
12	00-419291-000G1	Valve Assy.....	1
13	SC-113-34	Shoulder Screw 1/4-20 x 1/2 Hex Soc. Hd.....	3
14	WS-005-06	Washer.....	9
15	NS-046-52	Nut Assy. 1/4-20 Hex.....	3
16	00-416435-00001	Grip (Red).....	1
17	00-418583-00003	Rod - Refill.....	1
18	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
19	FP-028-14	Pipe - Plug 1/2 Sq. Hd.....	1
20	00-418781-00001	Quick Disconnect.....	1
21	FP-083-37	NLA - Obsolete--Pipe 1/2 x 9.....	1
22	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
23	00-418783-00009	Hose.....	1
24	FP-077-68	Elbow 1/2 x 90 Deg.....	1
25	00-419291-000G1	Valve Assy.....	1
26	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
27	00-418968-00001	Fitting - 90 Deg. Swivel.....	1
28	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
29	00-416435-00002	Grip (Yellow).....	1
30	00-418583-00004	Rod - Discard.....	1
31	00-521820	U-Bolt.....	2
32	00-427435-00001	Bracket - Pull Rod.....	1
33	NS-046-52	Nut Assy. 1/4-20 Hex.....	4
34	FP-035-95	Pipe 1/2 x 2 TBE.....	1
35	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
36	FP-035-95	Pipe 1/2 x 2 TBE.....	1
37	00-416435-00001	Grip (Red).....	1
38	00-418583-00003	Rod - Refill.....	1
39	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
40	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
41	FP-028-14	Pipe - Plug 1/2 Sq. Hd.....	1
42	00-419291-000G1	Valve Assy.....	1
43	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
44	00-426636-00001	Pipe 1/2 x 11 1/2.....	1
45	FP-077-68	Elbow 1/2 x 90 Deg.....	1
46	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
47	FP-035-96	Pipe 1/2 x 2-1/2 TBE.....	1
48	00-418786-00001	Valve - Check.....	1
49	FP-086-28	Pipe 1/2 x 7/8 TBE.....	1
50	00-419251-00001	Fitting - 90 Deg. Swivel.....	1
51	00-418783-00005	Hose.....	1
52	00-417792-00001	Pump Motor Assy. (120 V., 60 Hz.).....	1
53	00-417792-00004	Pump Motor Assy. (230 V., 50/60 Hz.).....	1
54	FP-077-68	Elbow 1/2 x 90 Deg.....	1
55	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS

OIL RETURN (PREVIOUS CONSTRUCTION)

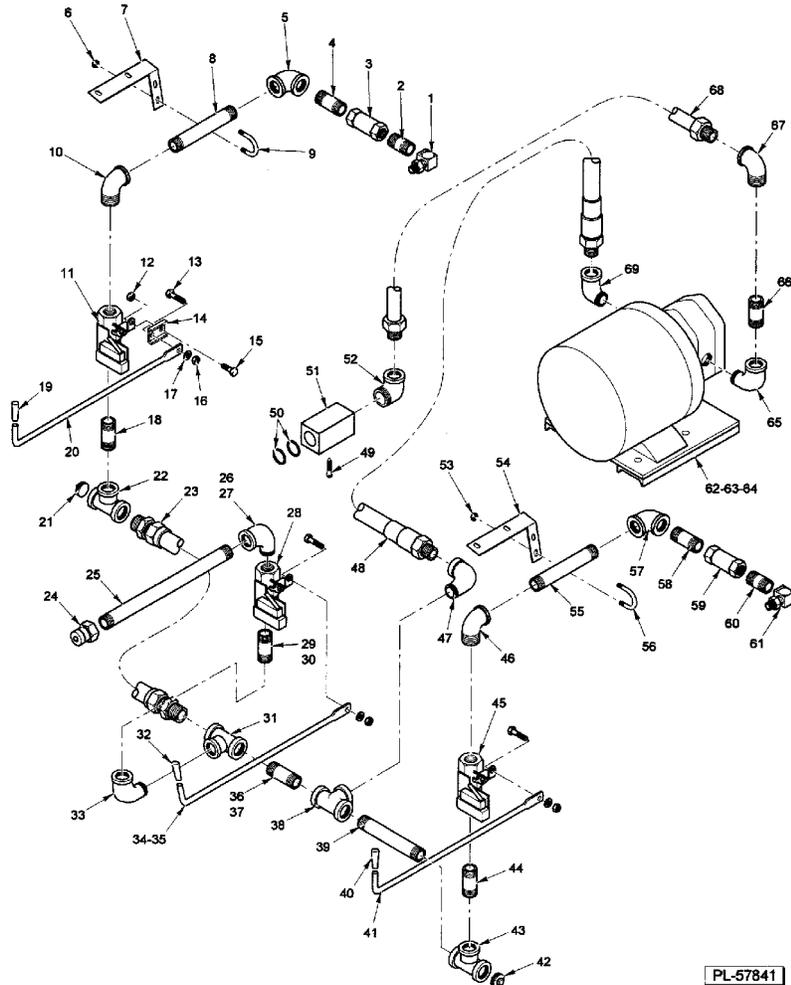
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57852			
56	FP-077-68	Elbow 1/2 x 90 Deg.....	1
57	00-426602-00002	Tube - Flex (29 In.).....	1
58	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
59	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
60	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
61	SC-114-01	Mach. Screw 10-32 x 3/8 Hex Washer Hd.....	1
62	00-426567-00002	O-Ring (Viton).....	1
63	00-426567-00001	Receptacle - Oil Suction.....	1
	00-411496-000F7	Micro Switch (Included With Items 12, 25, & 42).....	AR

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M

NOTES

REPLACEMENT PARTS

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS



**OIL RETURN
(GR35F AND GR45F)
(CURRENT CONSTRUCTION)**

**OIL RETURN
(GR35F AND GR45F)
(CURRENT CONSTRUCTION)**

ILLUS. PL-57841	PART NO.	NAME OF PART	AMT.
1	00-419251-00001	Fitting - 90 Deg. Swivel.....	1
2	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
3	00-418786-00001	Valve - Check.....	1
4	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
5	FP-077-68	Elbow 1/2 x 90 Deg.....	1
6	NS-046-52	Nut Assy. 1/4-20 Hex.....	2
7	00-428955-00001	Bracket - Oil Return.....	1
8	FP-058-49	Pipe 1/2 x 3/2 TBE.....	1
9	00-521820	U-Bolt.....	1
10	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
11	00-419291-000G1	Valve Assy.....	1
12	NS-044-14	Nut 1/4-20 Hex KEPS.....	1
13	SC-113-34	Shoulder Screw 1/4-20 x 1/2 Hex Soc. Hd.....	3
14	00-428956-00001	Extension - Pull Rod.....	1
15	SC-110-12	Cap Screw 1/4-20 x 5/8 Hex Hd.....	1
16	NS-044-14	Nut 1/4-20 Hex KEPS.....	3
17	WS-005-06	Washer.....	9
18	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
19	00-416435-00001	Grip (Red).....	1
20	00-428693-00003	Rod - Refill.....	1
21	FP-028-14	Pipe - Plug 1/2 Sq. Hd.....	1
22	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
23	00-426602-00003	Tube - Flex (8 In.).....	1
24	00-418781-00001	Quick Disconnect.....	1
25	FP-080-43	Pipe 1/2 x 15.....	1
26	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
27	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
28	00-419291-000G1	Valve Assy.....	1
29	FP-035-96	Pipe 1/2 x 2-1/2 TBE.....	1
30	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
31	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
32	00-416435-00002	Grip (Yellow).....	1
33	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
34	00-428693-00002	Rod - Discard.....	1
35	00-428693-00001	Rod - Discard.....	1
36	FP-035-95	Pipe 1/2 x 2 TBE.....	1
37	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
38	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
39	FP-035-95	Pipe 1/2 x 2 TBE.....	1
40	00-416435-00001	Grip (Red).....	1
41	00-428693-00003	Rod - Refill.....	1
42	FP-028-14	Pipe - Plug 1/2 Sq. Hd.....	1
43	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
44	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
45	00-419291-000G1	Valve Assy.....	1
46	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
47	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
48	00-426602-00003	Tube - Flex (8 In.).....	1
49	SC-114-01	Mach. Screw 10-32 x 3/8 Hex Washer Hd.....	1
50	00-426567-00002	O-Ring (Viton).....	2
51	00-426567-00001	Receptacle - Oil Suction.....	1
52	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
53	NS-046-52	Nut Assy. 1/4-20 Hex.....	2
54	00-428955-00001	Bracket - Oil Return.....	1
55	FP-058-49	Pipe 1/2 x 3/2.....	1

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS

**OIL RETURN
(GR35F AND GR45F)
(CURRENT CONSTRUCTION)**

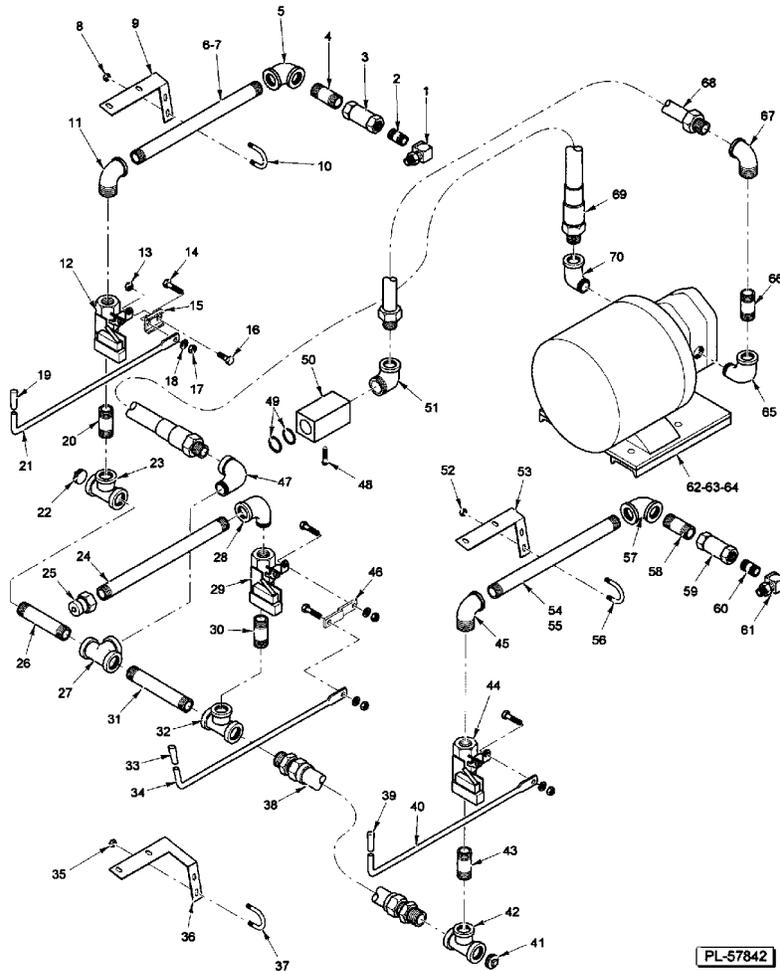
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57841			
56	00-521820	U-Bolt.....	1
57	FP-077-68	Elbow 1/2 x 90 Deg.....	1
58	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
59	00-418786-00001	Valve - Check.....	1
60	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
61	00-419251-00001	Fitting - 90 Deg. Swivel.....	1
62	00-417792-00001	Pump Motor Assy. (120 V., 60 Hz.).....	1
63	00-417792-00003	Pump Motor Assy. (208 V., 50/60 Hz.).....	1
64	00-417792-00004	Pump Motor Assy. (230 V., 50/60 Hz.).....	1
65	FP-077-68	Elbow 1/2 x 90 Deg.....	1
66	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
67	FP-077-68	Elbow 1/2 x 90 Deg.....	1
68	00-426602-00002	Tube - Flex (29 In.).....	1
69	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
	00-411496-000F7	Micro Switch (Included With Items 11, 28, & 45).....	AR

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M

NOTES

REPLACEMENT PARTS

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS



**OIL RETURN
(GR65F AND GR85F)
(CURRENT CONSTRUCTION)**

**OIL RETURN
(GR65F AND GR85F)
(CURRENT CONSTRUCTION)**

ILLUS. PL-57842	PART NO.	NAME OF PART	AMT.
1	00-419251-00001	Fitting - 90 Deg. Swivel.....	1
2	FP-086-28	Pipe 1/2 x 7/8 TBE.....	1
3	00-418786-00001	Valve - Check.....	1
4	FP-086-29	Pipe 1/2 x 4 1/2 TBE.....	1
5	FP-077-68	Elbow 1/2 x 90 Deg.....	1
6	FP-059-86	Pipe 1/2 x 75/8 TBE.....	1
7	FP-058-49	Pipe 1/2 x 31/2 TBE.....	1
8	NS-046-52	Nut Assy. 1/4-20 Hex.....	2
9	00-428955-00001	Bracket - Oil Return.....	1
10	00-521820	U-Bolt.....	1
11	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
12	00-419291-000G1	Valve Assy.....	1
13	NS-044-14	Nut 1/4-20 Hex KEPS.....	1
14	SC-113-34	Shoulder Screw 1/4-20 x 1/2 Hex Soc. Hd.....	4
15	00-428956-00001	Extension - Pull Rod.....	1
16	SC-110-12	Cap Screw 1/4-20 x 5/8 Hex Hd.....	1
17	NS-044-14	Nut 1/4-20 Hex KEPS.....	4
18	WS-005-06	Washer.....	12
19	00-416435-00001	Grip (Red).....	1
20	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
21	00-428693-00003	Rod - Refill.....	1
22	FP-028-14	Pipe - Plug 1/2 Sq. Hd.....	1
23	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
24	FP-080-92	Pipe 1/2 x 16.....	1
25	00-418781-00001	Quick Disconnect.....	1
26	FP-086-29	Pipe 1/2 x 4 1/2 TBE.....	1
27	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
28	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
29	00-419291-000G1	Valve Assy.....	1
30	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
31	FP-058-51	Pipe 1/2 x 5 TBE.....	1
32	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
33	00-416435-00002	Grip (Yellow).....	1
34	00-428693-00003	Rod - Pull.....	1
35	NS-046-52	Nut Assy. 1/4-20 Hex.....	2
36	00-497087-00001	Bracket - Quick Disconnect.....	1
37	00-521820	U-Bolt.....	1
38	00-426602-00003	Tube - Flex (8 In.).....	1
39	00-416435-00001	Grip (Red).....	1
40	00-428693-00003	Rod - Pull.....	1
41	FP-028-14	Pipe - Plug 1/2 Sq. Hd.....	1
42	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
43	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
44	00-419291-000G1	Valve Assy.....	1
45	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
46	00-426682-00001	Extension - Pull Rod.....	1
47	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
48	SC-114-01	Mach. Screw 10-32 x 3/8 Hex Washer Hd.....	1
49	00-426567-00002	O-Ring (Viton).....	2
50	00-426567-00001	Receptacle - Oil Suction.....	1
51	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
52	NS-046-52	Nut Assy. 1/4-20 Hex.....	2
53	00-428955-00001	Bracket - Oil Return.....	1
54	FP-059-86	Pipe 1/2 x 75/8 TBE.....	1
55	FP-058-49	Pipe 1/2 x 31/2 TBE.....	1

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS

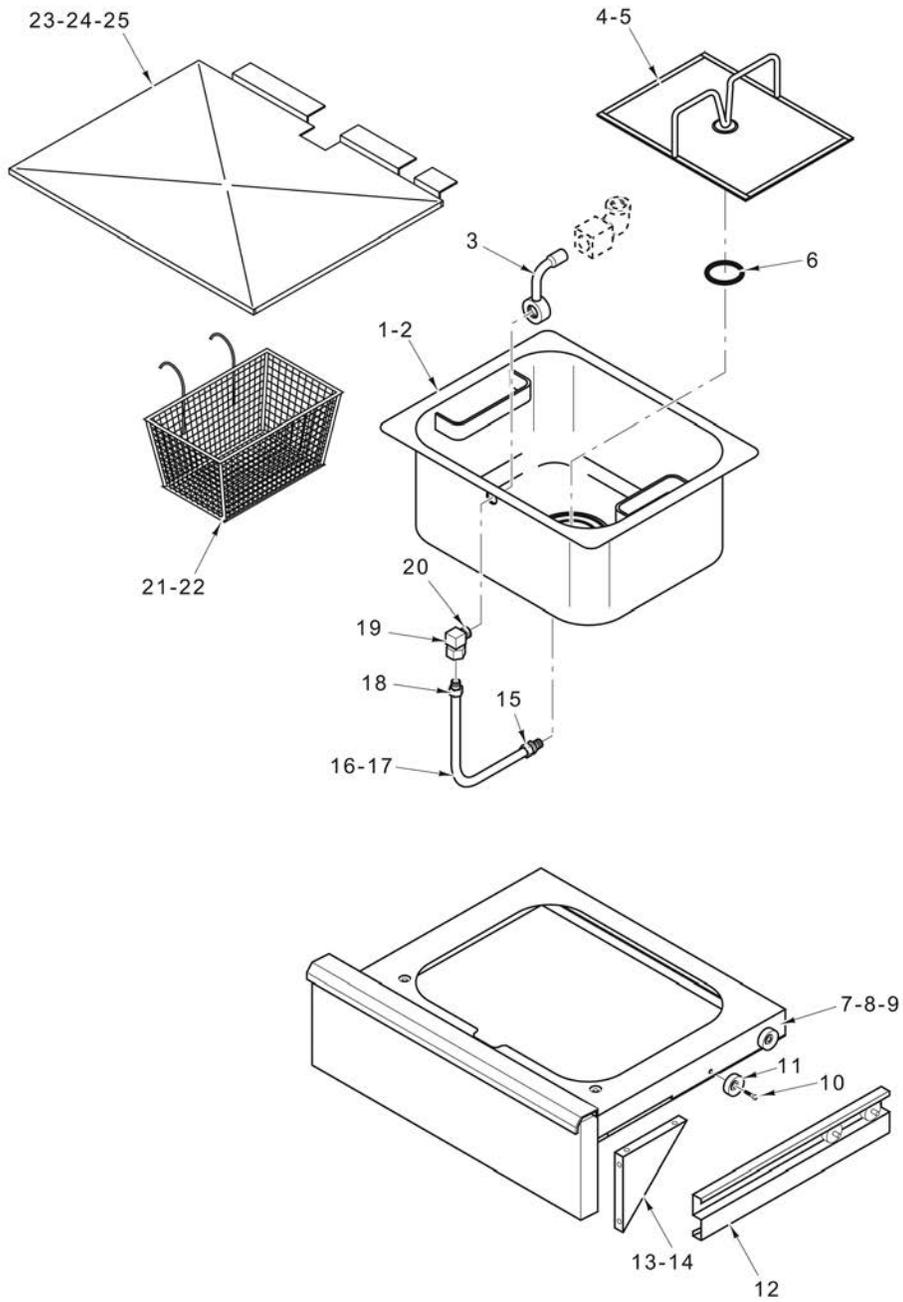
**OIL RETURN
(GR65F AND GR85F)
(CURRENT CONSTRUCTION)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57842			
56	00-521820	U-Bolt.....	1
57	FP-077-68	Elbow 1/2 x 90 Deg.....	1
58	FP-086-29	Pipe 1/2 x 4 1/2 TBE.....	1
59	00-418786-00001	Valve - Check.....	1
60	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
61	00-419251-00001	Fitting - 90 Deg. Swivel.....	1
62	00-417792-00001	Pump Motor Assy. (120 V., 60 Hz.).....	1
63	00-417792-00003	Pump Motor Assy. (208 V., 50/60 Hz.).....	1
64	00-417792-00004	Pump Motor Assy. (230 V., 50/60 Hz.).....	1
65	FP-077-68	Elbow 1/2 x 90 Deg.....	1
66	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
67	FP-077-68	Elbow 1/2 x 90 Deg.....	1
68	00-426602-00002	Tube - Flex (29 In.).....	1
69	00-426602-00003	Tube - Flex (8 In.).....	1
70	FP-083-73	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
	00-411496-000F7	Micro Switch (Included W/Items 12, 29, & 44).....	1

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M

NOTES

REPLACEMENT PARTS



PL-57840

FILTER ASSEMBLY

FILTER ASSEMBLY

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57840			
1	00-426570-000G1	Vessel Assy. (GR35/45/65 Series).....	1
2	00-428581-000G1	Vessel Assy. (GR85 Series).....	1
3	00-427672-000G1	Pipe - Oil Return Assy.....	1
4	00-426711-000G1	Element - Filter Assy. (GR35/45/65 Series).....	1
5	00-426711-000G2	Element - Filter Assy. (GR85 Series).....	1
6	00-426630-00002	Seal - O-Ring.....	1
7	00-428180-000G1	Drawer Assy. (GR35/45 Series) (Incls. Items 10 thru 14).....	1
8	00-428180-000G2	Drawer Assy. (GR65 Series) (Incls. Items 10 thru 14).....	1
9	00-428580-000G1	Drawer Assy. (GR85 Series) (Incls. Items 10 thru 14).....	1
10		Screw - Flat Head 1/4-20 x 1.0 Lg.....	2
11	00-426600-00002	Bearing - Roller.....	2
12	00-426600-000G1	Roller Guide Assy.....	1
13	00-426595-00001	Gussett - Drawer Door.....	1
14	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	AR
15	00-426601-00002	Fitting 3/8 Compression.....	1
16	00-426566-00001	Tube - Oil Return (GR35/45/65 Series).....	1
17	00-426566-00003	Tube - Oil Return (GR85 Series).....	1
18	00-426601-00001	Fitting 3/8 Compression.....	1
19	00-426568-00001	Elbow 3/8 NPT.....	1
20	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
21	00-426606-00001	Basket - Scrap (GR35/45/65 Series).....	1
22	00-426606-00002	Basket - Scrap (GR85 Series).....	1
23	00-428677-00001	Splash Guard (GR35/45 Series).....	1
24	00-428678-00001	Splash Guard (GR65 Series).....	1
25	00-428911-00001	Splash Guard (GR85 Series).....	1

GR SERIES GAS FRYER WITH KLEEN SCREEN FILTER SYSTEM GRD35F ML-126732, GRD45F ML-126735, GRD65F ML-126738m GRD85F ML-126741, GRC35F ML-126733, GRC45F ML-126736, GRC65F ML-126739, GRC85F ML-126742, GR35F ML-126998, GR45F ML-126999, GR65F ML-135534, GR85F ML-135535, PRIOR MLS COVERED IN THIS CATALOG, GRS35F M REPLACEMENT PARTS

VULCAN

CATALOG OF REPLACEMENT PARTS

1GR SERIES FRYER STAND ALONE

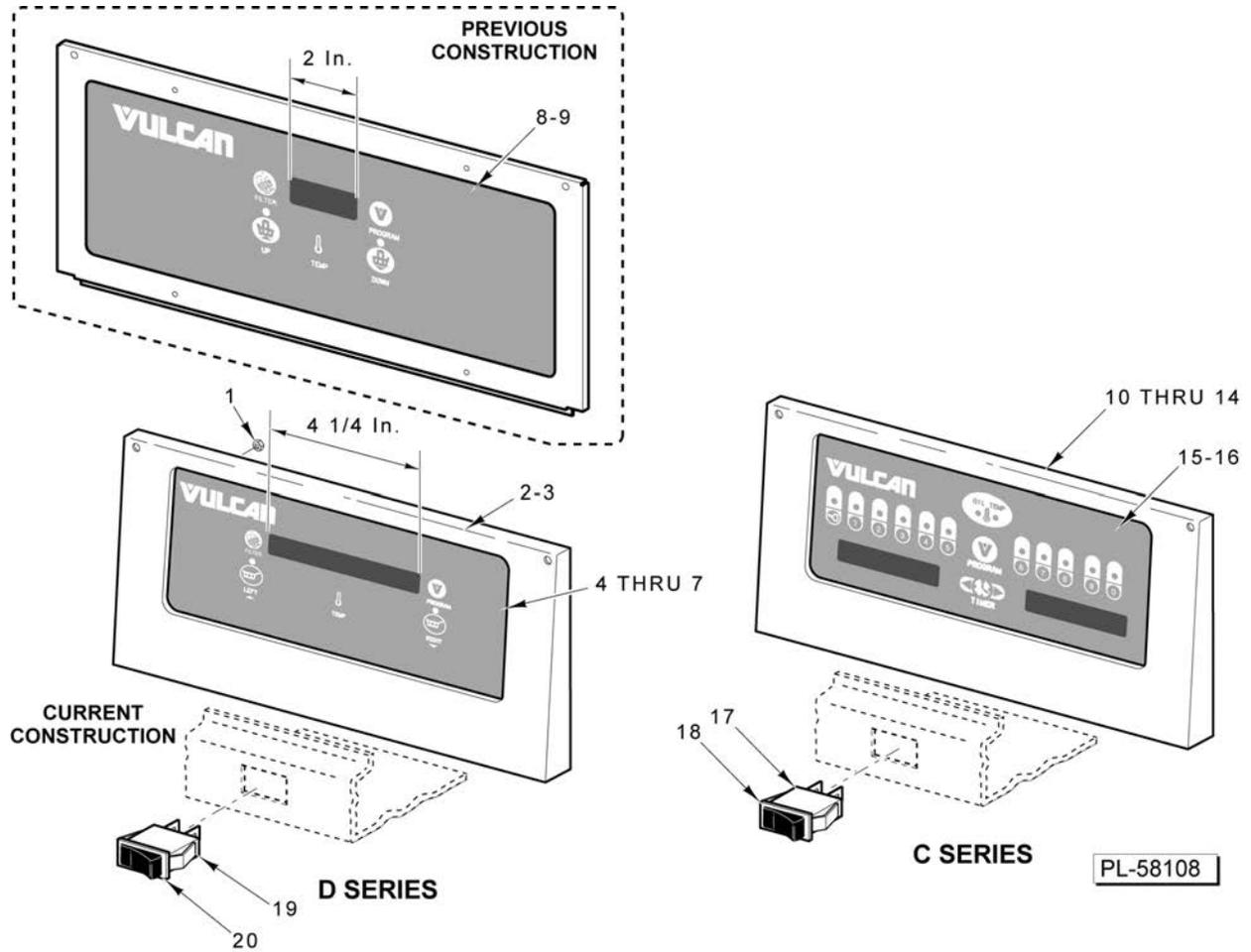
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1GR45M	ML-136408
1GR65M	ML-136409
1GR85M	ML-136410
1GR45D	ML-136411
1GR65D	ML-136412
1GR85D	ML-136413
1GR45C	ML-136414
1GR65C	ML-136415
1GR85C	ML-136416
1GR45DF	ML-136788
1GR85DF	ML-136790
1GR45CF	ML-136791
1GR85CF	ML-136793



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

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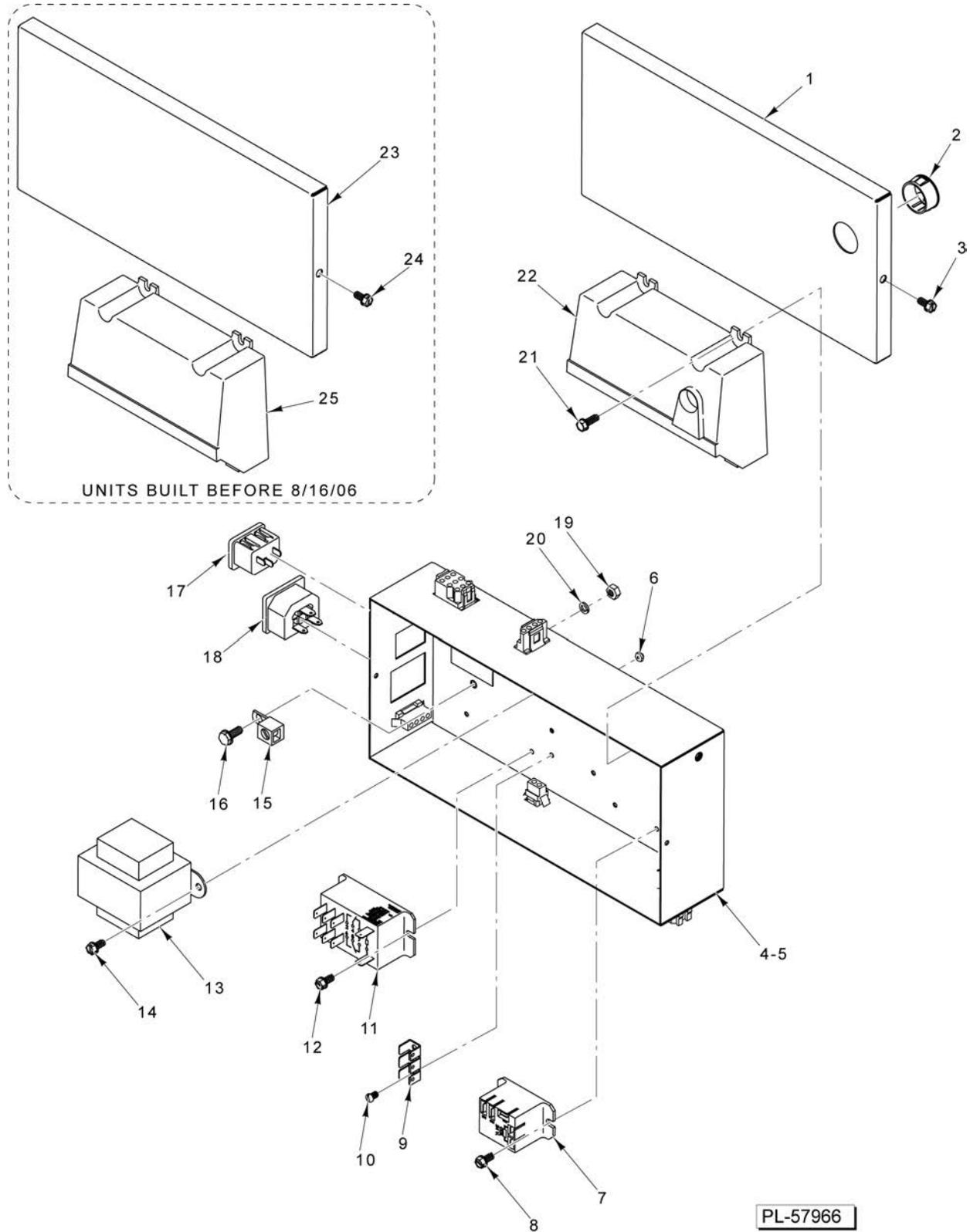
5	CONTROL PANEL (NCC)
7	POWER SUPPLY BOX
9	BODY UNIT (1GRC & 1GRD SERIES)
11	BODY UNIT (1GRM)
13	BODY UNIT (FRYERS WITH FILTER)
15	BURNER COMPONENTS (1GRC & 1GRD SERIES)
17	BURNER COMPONENTS (1GRM SERIES)
19	GAS VALVE (1GRC & 1GRD SERIES) (PREVIOUS CONSTRUCTION)
21	GAS VALVE (1GRC & 1GRD SERIES) (CURRENT CONSTRUCTION)
23	GAS VALVE (1GRM SERIES) (PREVIOUS CONSTRUCTION)
25	GAS VALVE (1GRM SERIES) (CURRENT CONSTRUCTION)
27	TANK AND DRAIN ASSEMBLY
29	OIL RETURN (1GR45CF/DF & 1GR85CF/DF)
31	FILTER ASSEMBLY
33	BASKETLIFT COMPONENTS (OPTIONAL)



CONTROL PANEL (NCC)

CONTROL PANEL (NCC)

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-58108			
1	NS-046-89	Nut Assy. 6-32 Hex.....	4
2	00-426815-000G1	Plate Assy. - Mounting (1GR45C, 1GR45D, & 1GR45CF).....	1
3	00-426815-000G2	Plate Assy. - Mounting (1GR65/85C, 1GR65/85D, & 1GR85CF/DF).....	1
4	00-497745-00001	Overlay - Vulcan (Filter).....	1
5	00-497745-00003	Overlay - Vulcan (Boil).....	1
6	00-913086-00004	Control Assy. - Solid State (Filter Button) (Incls. Item 4).....	1
7	00-913086-00003	Control Assy. - Solid State (Boil Button) (Incls. Item 5).....	1
8	00-497421-00001	Overlay - Control Panel (Boil Button).....	1
9	00-427820-00001	Overlay - Control Panel (Filter Button).....	1
10	00-913086-00002	Computer Cooking Assy. (Filter Button) (Incls. Item 15).....	1
11	00-913086-00001	Computer Cooking Assy. (Boil Button) (Incls. Item 16).....	1
12	00-426815-000G1	Plate Assy. - Mounting (1GR45C, 1GR45D, & 1GR45CF).....	1
13	00-426815-000G2	Plate Assy. - Mounting (1GR65/85C, 1GR65/85D, & 1GR85CF/DF).....	1
14	NS-046-89	Nut Assy. 6-32 Hex.....	4
15	00-426732-00001	Overlay - Control Panel (Filter Button).....	1
16	00-497422-00001	Overlay - Control Panel (Boil Button).....	1
17	00-427755-000G1	Rocker Switch Assy. - Power.....	1
18	00-428906-00001	Overlay - Power.....	1
19	00-427755-000G1	Rocker Switch Assy. - Power.....	1
20	00-428906-00001	Overlay - Power.....	1

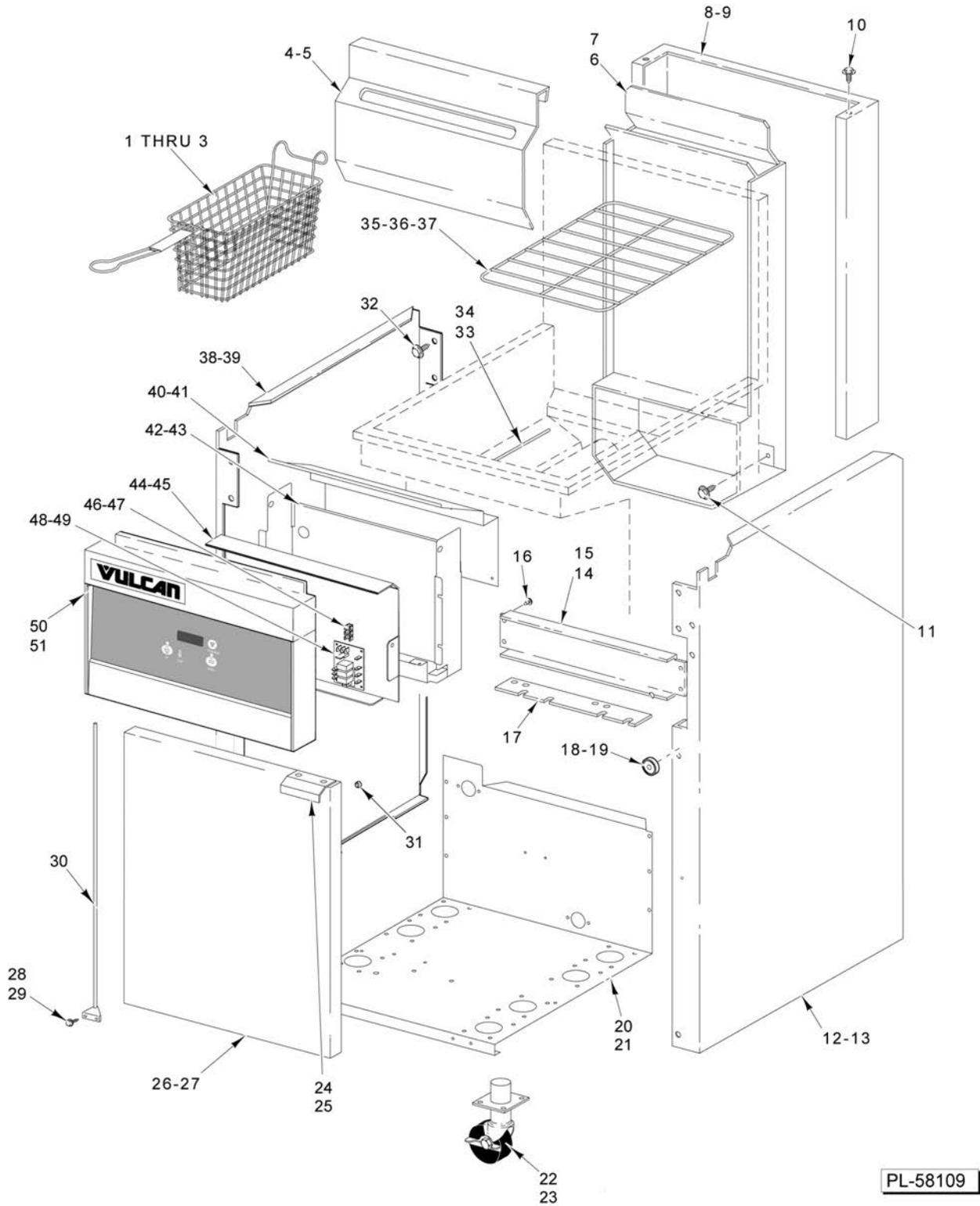


POWER SUPPLY BOX

POWER SUPPLY BOX

ILLUS.	PART NO.	NAME OF PART	AMT.
	PL-57966A		
1	00-428684-00002	Lid - Power Supply (Machines Built After 8/16/06).....	1
2	FE-024-24	Bushing - Electrical Snap.....	1
3	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	2
4	00-428716-000G1	Box - Power Supply (Filter).....	1
5	00-428716-000G2	Box - Power Supply (Non-Filter).....	1
6	NS-047-32	Lock Nut 4-40.....	2
7	00-497125-00001	Relay (S.P.D.T., 24 VAC).....	1
8	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	2
9	00-419317	Terminal - Stationary - Lug.....	1
10	SC-060-23	Mach. Screw 4-40 x 1/4 Slotted Rd. Hd.....	2
11	00-428864-00001	Relay.....	1
12	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	2
13	00-411500-00012	Transformer (120 VAC, 24 V., 40 VA).....	1
14	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	2
15	00-417856-00001	Lug - Grounding (With Set Screw).....	1
16	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	1
17	00-419973-000G1	Receptacle - Male Power.....	1
18	00-419973-000G2	Receptacle - Female Power.....	1
19	NS-044-09	Nut Assy. 10-24 Hex KEPS.....	1
20	WL-004-40	Lockwasher 10 Helical.....	1
21	SD-037-49	Self-Tapping Screw 8-18 x 1/2 Hex Washer Hd., Type AB.....	4
22	00-857207-00001	Module - Ignition (Machines Built After 8/16/06).....	1
23	00-428684-00001	Lid - Power Supply Box (Machines Built On Or Before 8/16/06).....	1
24	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	2
*25		Module - Ignition (Machines With Electronic Ignition) (Machines Built On Or Before 8/16/06).....	1
	00-428685-000G2	Box - Power Supply (120 V.) (With Filtration) (Incls. Items 1 thru 4 & 6 thru 24).....	1
	00-428685-000G5	Box - Power Supply (Without Filtration) (Incls. Items 1, 2, 3, 5, 6, 8, 9, 10, 12 thru 17, & 19 thru 24).....	1

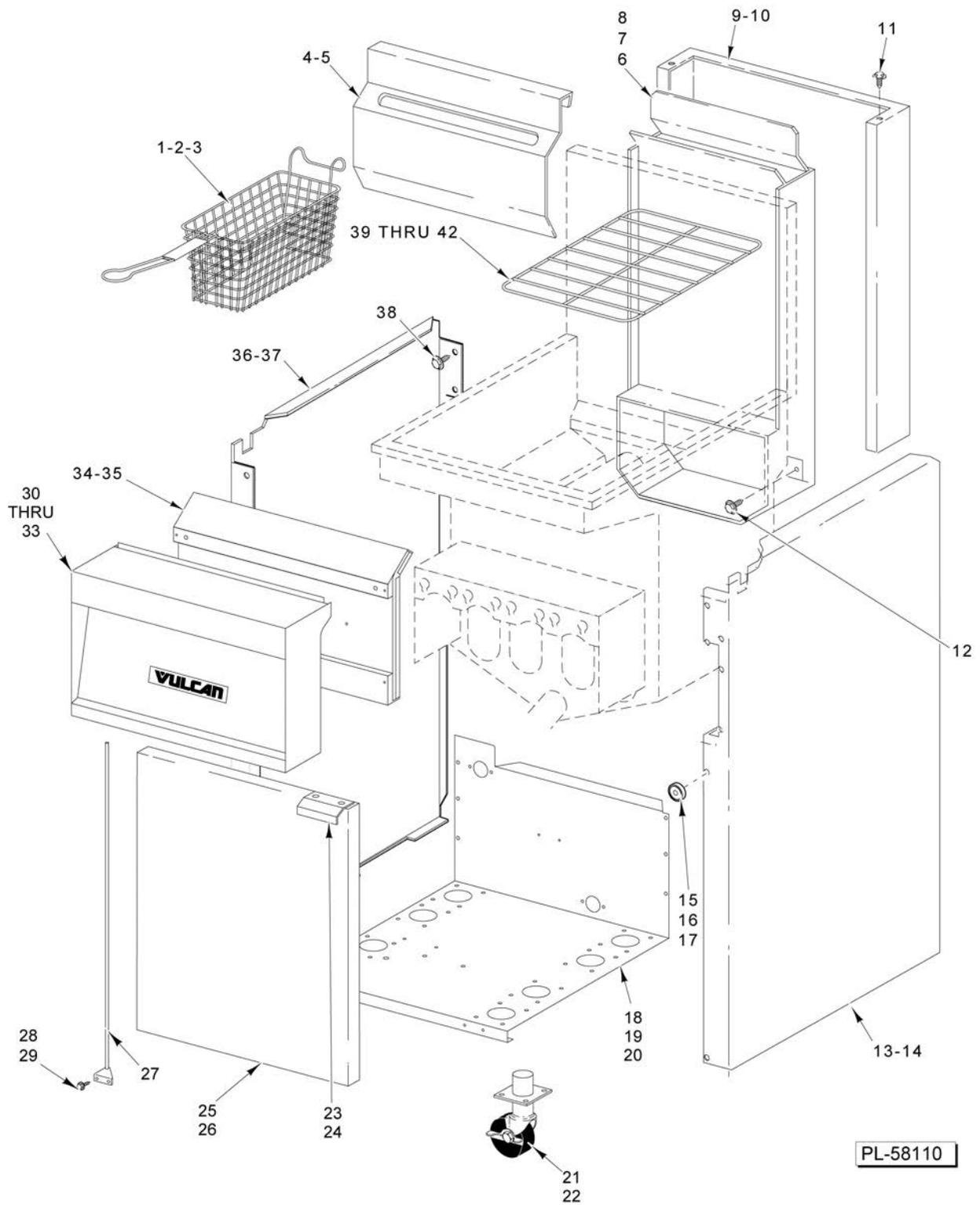
* Order items 1, 2, & 22 for replacement.



**BODY UNIT
(1GRC & 1GRD SERIES)**

**BODY UNIT
(1GRC & 1GRD SERIES)**

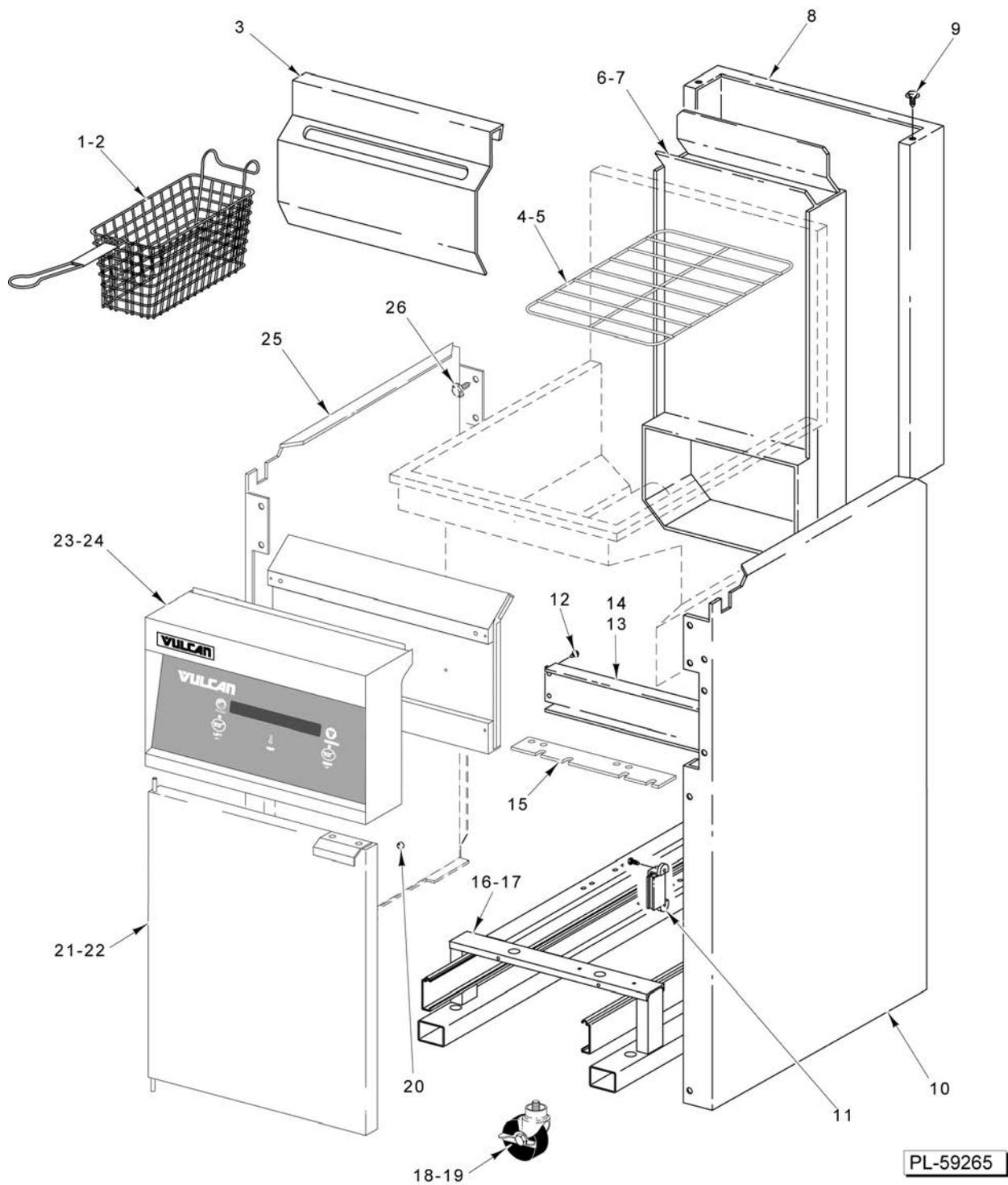
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-58109			
1	00-499223-00001	Basket - Twin (1GR45C & 1GR45D).....	2
2	00-499223-00002	Basket - Twin (1GR65C & 1GR65D).....	2
3	00-499223-00003	Basket - Twin (1GR85C & 1GR85D).....	1
4	00-417056-00002	Hanger - Basket (1GR45C & 1GR45D).....	2
5	00-418321-00002	Hanger - Basket (1GR65C/D & 1GR85C/D).....	2
6	00-418201-000G2	Flue Assy. (4 Tube) (1GR45C & 1GR45D).....	1
7	00-418205-000G1	Flue Assy. (5 Tube) (1GR65C/D & 1GR85C/D).....	1
8	00-416959-00002	Wrap - Flue (3 Tube or 4 Tube) (1GR45C & 1GR45D).....	1
9	00-418336-00002	Wrap - Flue (5 Tube) (SST) (1GR65C/D & 1GR85C/D).....	1
10	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	2
11	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT.....	4
12	00-419648-00002	Body - RH Side (SST) (1GR45/65C & 1GR45/65D).....	1
13	00-420596-00004	Body - Side (SST) (RH) (1GR85C & 1GR85D).....	1
14	00-428699-00001	Brace - Rear (1GR45C & 1GR45D).....	1
15	00-428749-00001	NLA - Obsolete--Brace - Rear (1HG65C & 1HG65/85D).....	1
16	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	2
17	00-428688-00001	Bracket - Power Supply Mounting.....	1
18	RS-033-04	Rivet - Pop.....	1
19	00-497296-000G2	Magnet Assy.....	1
20	00-497428-00001	Body - Bottom (1GR45C & 1GR45D).....	1
21	00-497428-00003	Body - Bottom (1GR65C/D & 1GR85C/D).....	1
22	00-421893-00001	Mount Plate - Caster.....	AR
23	00-421893-00002	Caster 4 In. (No Brake).....	AR
24	00-419653	Handle - Door.....	1
25	RS-033-09	Rivet - Pop (0.187).....	2
26	00-499487-000G1	Door Assy. (LH) (1GR45C & 1GR45D).....	1
27	00-499487-000G5	Door Assy. (LH) (1GR65C/D & 1GR85C/D).....	1
28	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	2
29	NS-044-09	Nut Assy. 10-24 Hex KEPS.....	2
30	00-428023-000G2	Hinge Assy.....	1
31	00-420769-00001	Bumper - Rubber.....	1
32	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	AR
33	00-419592-00001	Clip - Thermistor Probe.....	1
34	00-419379-00001	Probe - Thermistor.....	1
35	00-427883-00002	Screen - Basket Support (1GR45C & 1GR45D).....	1
36	00-427883-00003	Screen - Basket Support (1GR65C & 1GR65D).....	1
37	00-427883-00004	Screen - Basket Support (1GR85C & 1GR85D).....	1
38	00-419648-00001	Body - LH Side (SST) (1GR45/65C & 1GR45/65D).....	1
39	00-420596-00003	Body - LH Side (SST) (1GR85C & 1GR85D).....	1
40	00-428548-00001	Heat Shield (1GR45C & 1GR45D).....	1
41	00-428548-00002	Heat Shield (1GR65/85C & 1GR65/85D).....	1
42	00-428542-00001	Deflector Assy. (1GR45C & 1GR45D).....	1
43	00-428689-00001	Deflector Assy. (1GR65C/D & 1GR85C/D).....	1
44	00-428541-00001	Plate - Control Mounting (1GR45C & 1GR45D).....	1
45	00-428690-00001	Plate - Control Mounting (1GR65C/D & 1GR85C/D).....	1
46	00-419317	Terminal - Stationary.....	1
47	SC-060-23	Mach. Screw 4-40 x 1/4 Slotted Rd. Hd.....	2
48	00-427759-00001	Control - Interface.....	1
49	SD-024-40	Self-Tapping Screw 6-32 x 5/8 Phil. Pan Hd., Type TT.....	4
50	00-426806-000G1	Frame - Front Assy. (1GR45C & 1GR45D).....	1
51	00-426806-000G4	Frame - Front Assy. (1GR65C/D & 1GR85C/D).....	1



BODY UNIT (1GRM)

BODY UNIT (1GRM)

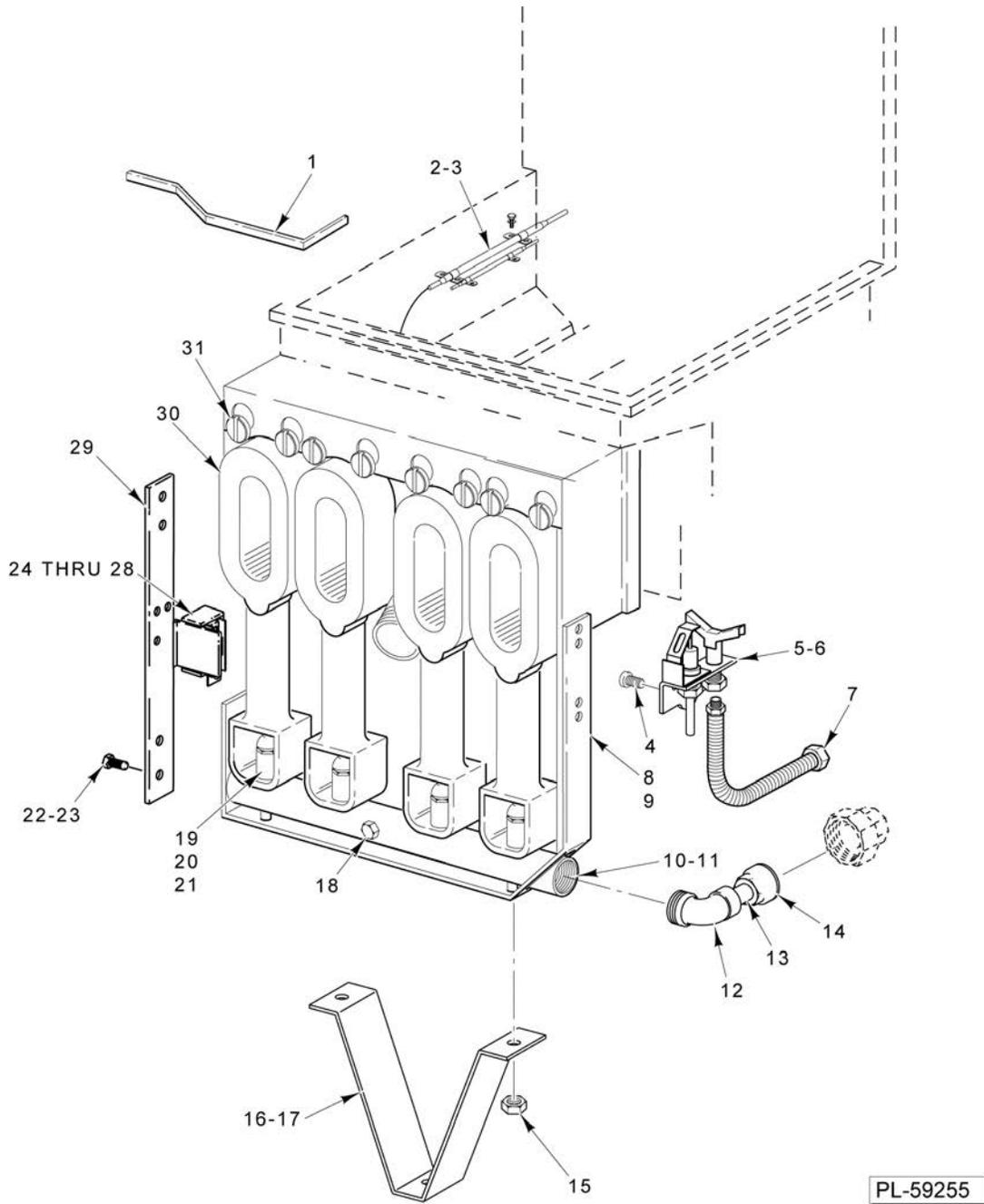
ILLUS. PL-58110	PART NO.	NAME OF PART	AMT.
1	00-499223-00001	Basket - Twin (1GR35M & 1GR45M).....	2
2	00-499223-00002	Basket - Twin (1GR65M).....	2
3	00-499223-00003	Basket - Twin (1GR85M).....	1
4	00-417056-00002	Hanger - Basket (1GR35M & 1GR45M).....	2
5	00-418321-00002	Hanger - Basket (1GR65M & 1GR85M).....	2
6	00-416994-000G2	Flue Assy. (3 Tube) (1GR35M).....	1
7	00-418201-000G2	Flue Assy. (4 Tube) (1GR45M).....	1
8	00-418205-000G2	Flue Assy. (5 Tube) (1GR65M & 1GR85M).....	1
9	00-416959-00002	Wrap - Flue (3 Tube or 4 Tube) (SST) (1GR35M & 1GR45M).....	1
10	00-418336-00002	Wrap - Flue (5 Tube) (SST) (1GR65M & 1GR85M).....	1
11	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	2
12	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT.....	4
13	00-419648-00002	Body - RH Side (SST) (1GR35M, 1GR45M, & 1GR65M).....	1
14	00-420596-00004	Body - Side (SST) (RH) (1GR85M).....	1
15	00-497296-00001	Magnet - Door.....	1
16	RS-033-04	Rivet - Pop.....	1
17	00-497296-000G2	Magnet Assy.....	2
18	00-497428-00001	Body - Bottom (1GR35M & 1GR45M).....	1
19	00-497428-00003	Body - Bottom (1GR65M).....	1
20	00-497428-00004	Body - Bottom (1GR85M).....	1
21	00-421893-00001	Mount Plate - Caster.....	AR
22	00-421893-00002	Caster 4 In. (No Brake).....	AR
23	00-419653	Handle - Door.....	1
24	RS-033-09	Rivet - Pop (0.187).....	2
25	00-499487-000G1	Door Assy. (LH) (1GR35M & 1GR45M).....	1
26	00-499487-000G5	Door Assy. (LH) (1GR65M & 1GR85M).....	1
27	00-428023-000G2	Hinge Assy.....	1
28	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	2
29	NS-044-09	Nut Assy. 10-24 Hex KEPS.....	2
30	00-428116-000G1	Frame - Front Assy. (1GR35M & 1GR45M).....	1
31	00-428116-000G2	Frame - Front Assy. (1GR65M & 1GR85M).....	1
32	00-417700-00002	Nameplate (6 In.).....	1
33	NS-047-79	Pal Nut 3/16.....	2
34	00-418379-000G1	Heat Shield (1GR35M & 1GR45M).....	1
35	00-418324-000G1	Heat Shield (1GR65M & 1GR85M).....	1
36	00-419648-00001	Body - LH Side (SST) (1GR35M, 1GR45M, & 1GR65M).....	1
37	00-420596-00003	Body - Side (SST) (LH) (1GR85M).....	1
38	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	AR
39	00-427886-00001	Screen - Basket Support (1GR35M).....	1
40	00-427883-00002	Screen - Basket Support (1GR45M).....	1
41	00-427883-00003	Screen - Basket Support (1GR65M).....	1
42	00-427883-00004	Screen - Basket Support (1GR85M).....	1



**BODY UNIT
(FRYERS WITH FILTER)**

**BODY UNIT
(FRYERS WITH FILTER)**

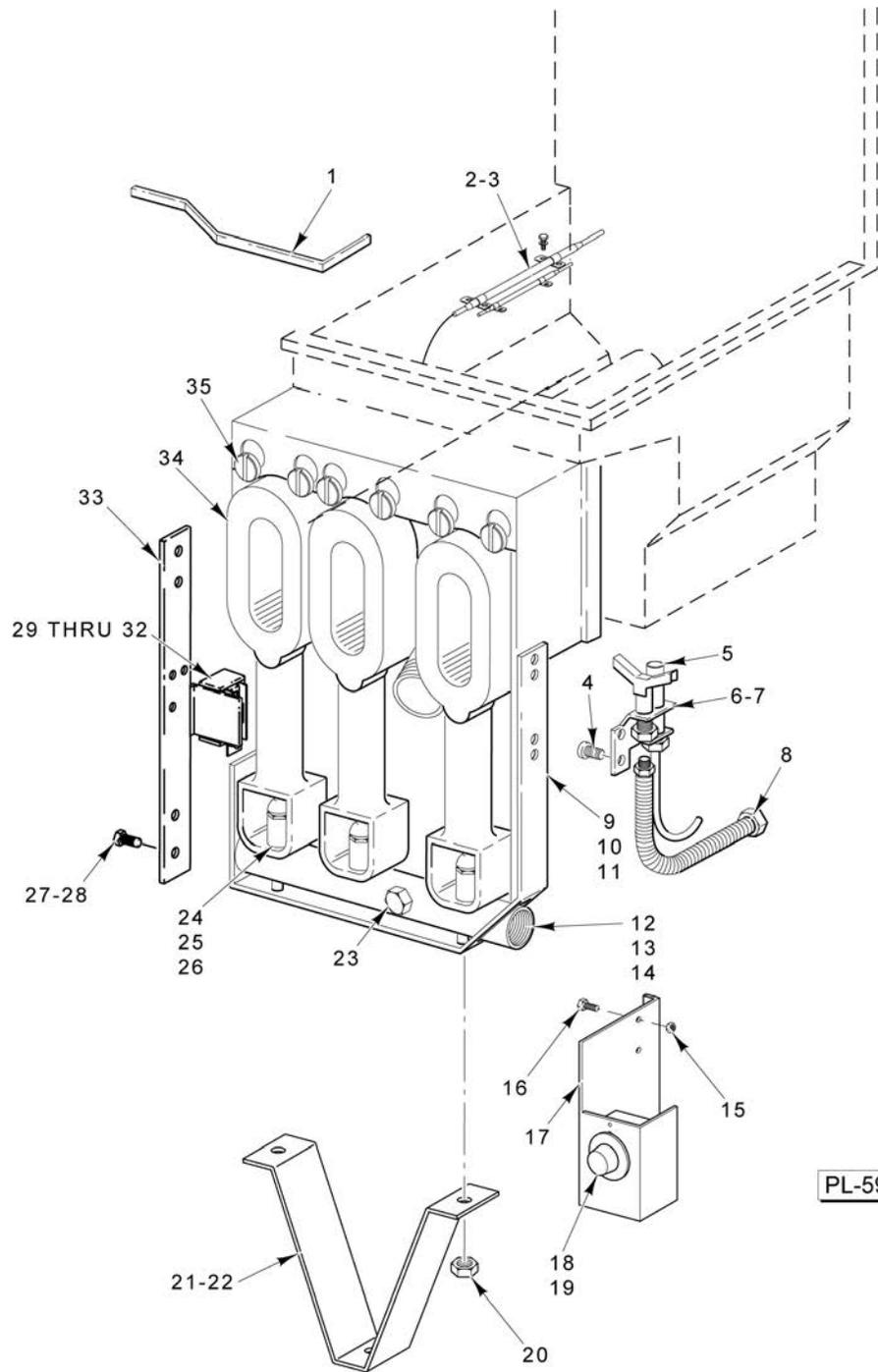
ILLUS. PL-59265	PART NO.	NAME OF PART	AMT.
1	00-499223-00003	Basket - Twin (1GR85CF/DF).....	AR
2	00-499223-00001	Basket - Twin (1GR45CF/DF).....	1
3	00-418321-00002	Hanger - Basket (1GR85CF/DF).....	1
4	00-427883-00004	Screen - Basket Support (1GR85CF/DF).....	1
5	00-427883-00002	Screen - Basket Support (1GR45CF/DF).....	1
6	00-418205-000G2	Flue Assy. (1GR85CF/DF).....	1
7	00-418201-000G3	Flue Assy. (1GR45CF/DF).....	1
8	00-418336-00002	Flue - Wrap (SST) (1GR85CF/DF).....	1
9	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	AR
10	00-419777-00004	Body - RH Side (SST).....	1
11	00-497296-000G2	Magnet Assy. - Door.....	1
12	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	AR
13	00-428699-00002	Brace - Rear (1GR45CF/DF).....	1
14	00-428749-00002	NLA - Obsolete--Brace - Rear.....	1
15	00-428688-00001	Bracket - Power Supply Mounting.....	1
16	00-956903-000G1	Base Assy. - Frame (1GR45CF/DF).....	1
17	00-956906-000G3	Base Assy. - Frame (1GR85CF/DF).....	AR
18	00-418907-00001	Caster - Swivel Assy. (Adjustable).....	2
19	00-418907-00003	Caster - Plate Mount (4 In.).....	2
20	00-420769-00001	Bumper - Rubber.....	1
21	00-499487-000G7	Door Assy. - With Hinge (LH) (1GR85CF/DF).....	1
22	00-499487-000G3	Door Assy. - With Hinge (LH) (1GR45CF/DF).....	1
23	00-426806-000G1	Frame - Front Assy. (1GR45CF/DF).....	AR
24	00-426806-000G4	Frame - Front Assy. (1GR85CF/DF).....	1
25	00-419777-00003	Body - LH Side (SST).....	1
26	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT.....	AR



**BURNER COMPONENTS
(1GRC & 1GRD SERIES)**

BURNER COMPONENTS (1GRC & 1GRD SERIES)

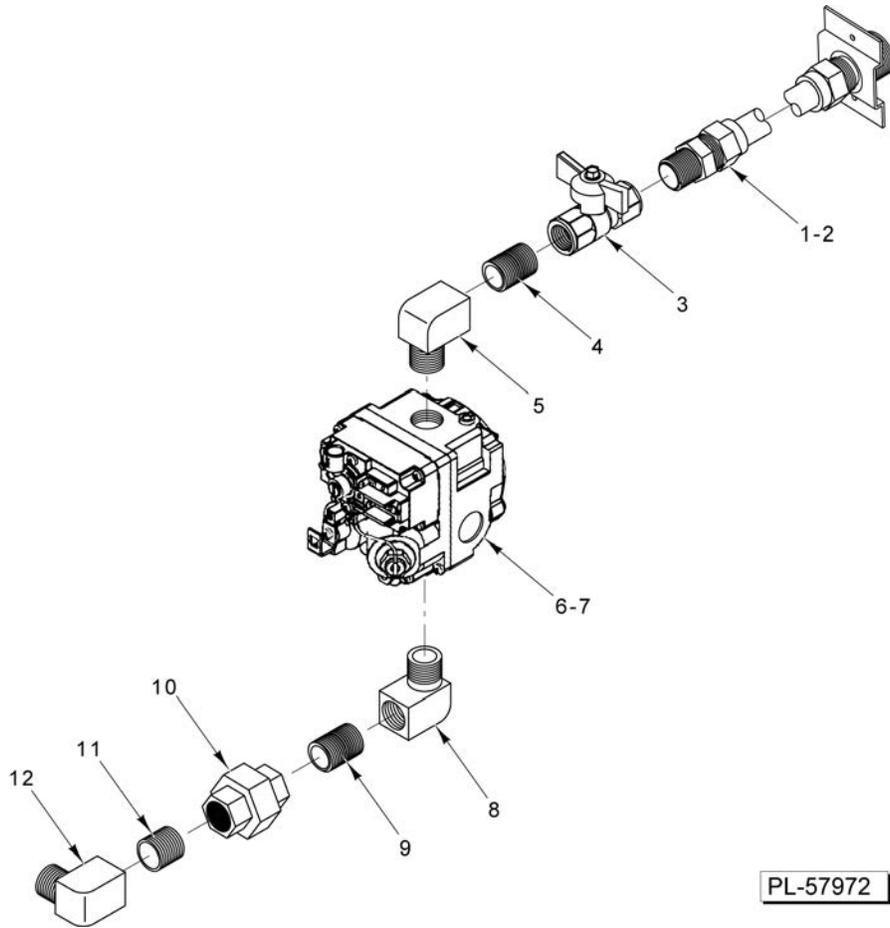
ILLUS. PL-59255	PART NO.	NAME OF PART	AMT.
1	00-409300-00005	Rod - Clean-Out.....	1
2	00-417522-00003	Clip - Capillary.....	4
3	SD-035-02	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	4
4	SC-018-32	Mach. Screw 8-32 x 3/8 Pan Hd.....	2
5	00-419316-00001	Pilot (Nat. Gas) (W/Electronic Ignition).....	1
6	00-419316-00002	Pilot (L.P. Gas) (W/Electronic Ignition).....	1
7	00-426505-00023	Tube - Flex 1/4 O.D. x 23 In. Lg.....	1
8	00-418211-00001	Hanger - Manifold (4 Tube).....	1
9	00-418317-00001	Hanger - Manifold (5 Tube).....	1
10	00-418212-00001	Manifold - Burner (4 Tube).....	1
11	00-418318-00001	Manifold - Burner (5 Tube).....	1
12	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
13	FP-059-01	Pipe 1/2 x 1 3/4 TBE.....	1
14	FP-022-11	Union - Pipe.....	1
15	NS-047-72	Lock Nut 1/4-20.....	2
16	00-420561-00001	Bracket - Support (1GR45C & 1GR45D).....	1
17	00-420562-00001	Bracket - Support (1GR65/85C & 1GR65/85D).....	1
18	FP-085-53	Pipe Plug 1/8.....	1
19	00-010901-00039	Orifice - Spud (39 Drill).....	AR
20	00-010901-00052	Orifice - Spud (LP Gas) (Sea Level - 3499 Ft.).....	AR
21	00-410695-00001	Extension - Orifice.....	AR
22	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT.....	AR
23	NS-046-52	Nut Assy. 1/4-20 Hex.....	AR
24	00-419548	Bracket - Hi-Limit.....	1
25	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT.....	4
26	NS-046-52	Nut Assy. 1/4-20 Hex.....	4
27	SD-036-80	Self-Tapping Screw 8-32 x 3/8 Hex Washer Hd., Type TT.....	2
28	00-410840-00002	Box - Control With Stuffing Hi-Limit.....	1
29	00-417714-00001	Extension - Hanger.....	1
30	00-410681-00001	Burner.....	AR
31	00-428035-00001	Bolt - Shoulder.....	AR
	00-427953-00001	Bracket - Tank To Pilot.....	1
	00-427952-00001	Bracket - Pilot Mounting.....	1
	SC-027-55	Mach. Screw 10-32 x 1/4 Slotted Rd. Hd. (Brass).....	2
	00-419359	Cable - Spark Ignitor (36 In.).....	1



**BURNER COMPONENTS
(1GRM SERIES)**

BURNER COMPONENTS (1GRM SERIES)

ILLUS. PL-59256	PART NO.	NAME OF PART	AMT.
1	00-409300-00005	Rod - Clean-Out.....	1
2	00-417522-00003	Clip - Capillary.....	4
3	SD-035-02	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	4
4	SC-018-32	Mach. Screw 8-32 x 3/8 Pan Hd.....	2
5	00-410839-00004	Thermopile - Millivolt (500 MV).....	2
6	00-412212-00007	Pilot (Nat. Gas).....	1
7	00-412212-00002	Pilot (L.P. Gas).....	1
8	00-426505-00023	Tube - Flex 1/4 O.D. x 23 In. Lg.....	1
9	00-418208-00001	Hanger - Manifold (3 Tube) (1GR35M).....	1
10	00-418211-00001	Hanger - Manifold (4 Tube) (1GR45M).....	1
11	00-418317-00001	Hanger - Manifold (5 Tube) (1GR65/85M).....	1
12	00-418209-00001	Manifold - Burner (3 Tube) (1GR35M).....	1
13	00-418212-00001	Manifold - Burner (4 Tube) (1GR45M).....	1
14	00-418318-00001	Manifold - Burner (5 Tube) (1GR65/85M).....	1
15	NS-046-52	Nut Assy. 1/4-20 Hex.....	6
16	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT.....	2
17	00-497089-00001	Bracket - Control.....	1
18	00-408659-00005	Knob - Thermostat.....	1
19	00-411506-00013	Thermostat - Reed.....	1
20	NS-047-72	Lock Nut 1/4-20.....	2
21	00-420561-00001	Bracket - Support (1GR35/45M).....	1
22	00-420562-00001	Bracket - Support (1GR65/85M).....	1
23	FP-085-53	Pipe Plug 1/8.....	1
24	00-010901-00039	Orifice - Spud (39 Drill).....	AR
25	00-010901-00052	Orifice - Spud (LP Gas) (Sea Level - 3499 Ft.).....	AR
26	00-410695-00001	Extension - Orifice.....	AR
27	SD-015-24	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT.....	AR
28	NS-044-14	Nut 1/4-20 Hex KEPS.....	AR
29	SD-037-70	Self-Tapping Screw 1/4-20 x 1/2 Hex Washer Hd., Type TT.....	4
30	NS-046-52	Nut Assy. 1/4-20 Hex.....	4
31	SD-036-80	Self-Tapping Screw 8-32 x 3/8 Hex Washer Hd., Type TT.....	2
32	00-410840-00002	Box - Control With Stuffing - Hi-Limit.....	1
33	00-417714-00001	Extension - Hanger.....	1
34	00-410681-00001	Burner.....	AR
35	00-428035-00001	Bolt - Shoulder.....	AR



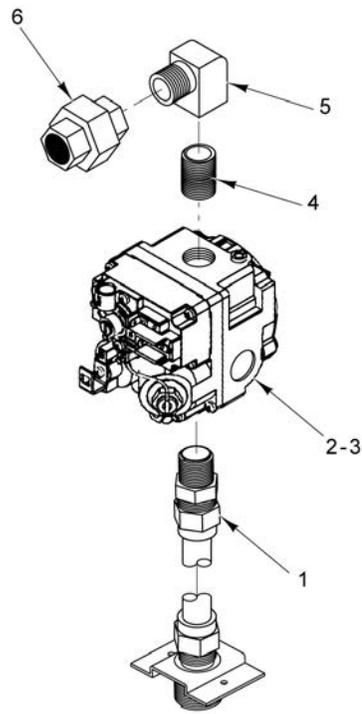
PL-57972

**GAS VALVE
(1GRC & 1GRD SERIES)
(PREVIOUS CONSTRUCTION)**

**GAS VALVE
(1GRC & 1GRD SERIES)
(PREVIOUS CONSTRUCTION)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-57972A			
1	00-427882-000G2	Gas Inlet (1GR45C & 1GR45D).....	1
2	00-427882-000G3	Gas Inlet (1GR65/85C & 1GR65/85D).....	1
3	00-428472-00001	Valve - Ball.....	1
4	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
5	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
*6	00-410841-00028	Valve - Combination (NAT) (Electronic Ignition).....	1
*7	00-410841-00029	Valve - Combination (LP) (Electronic Ignition).....	1
8	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
9	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
10	FP-022-11	Union - Pipe.....	1
11	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
12	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
	00-427751-000G1	Harness - Section.....	1

* Order harness 00-427751-000G1 when replacing valve.

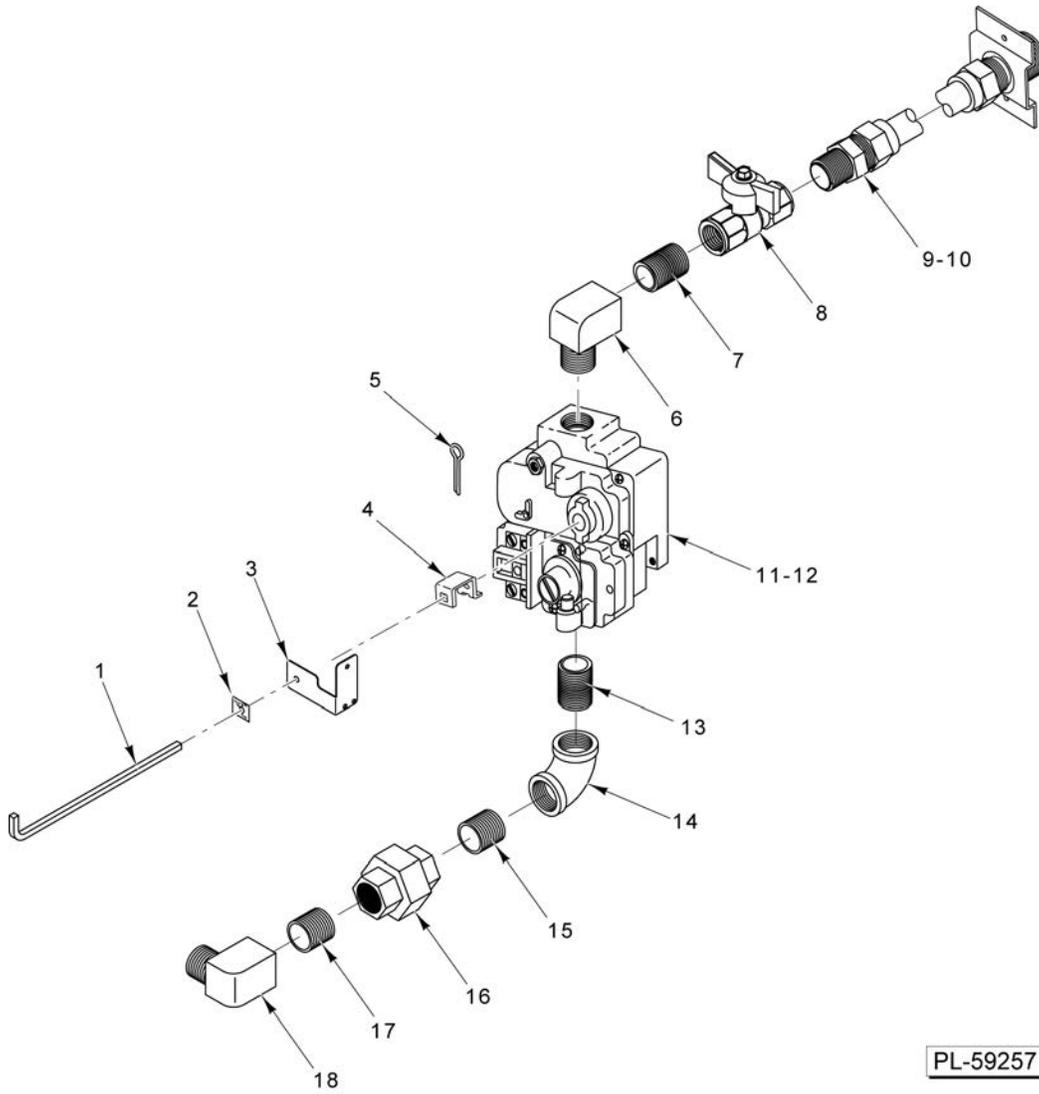


PL-59258

**GAS VALVE
(1GRC & 1GRD SERIES)
(CURRENT CONSTRUCTION)**

**GAS VALVE
(1GRC & 1GRD SERIES)
(CURRENT CONSTRUCTION)**

ILLUS. PL-59258	PART NO.	NAME OF PART	AMT.
1	00-427882-000G3	Tube - Flex (Gas Inlet).....	1
2	00-410841-00028	Valve - Combination (NAT) (Electronic Ignition).....	1
3	00-410841-00029	Valve - Combination (LP) (Electronic Ignition).....	1
4	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
5	FP-035-95	Pipe 1/2 x 2 TBE.....	1
6	FP-022-11	Union - Pipe.....	1

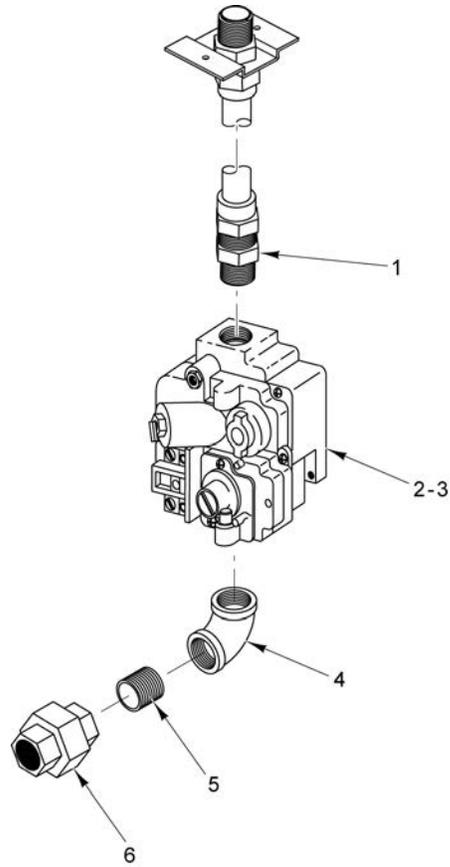


PL-59257

**GAS VALVE
(1GRM SERIES)
(PREVIOUS CONSTRUCTION)**

**GAS VALVE
(1GRM SERIES)
(PREVIOUS CONSTRUCTION)**

ILLUS. PL-59257	PART NO.	NAME OF PART	AMT.
1	00-413433-00006	Lever - Valve.....	1
2	00-417896-00001	Plate - Control Valve.....	1
3	00-428755-00002	Bracket - Pilot Lever.....	1
4	00-412080-00001	Adapter - Knob (Use Existing Screw Provided With Knob).....	1
5	PC-003-38	Pin - Cotter.....	1
6	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1
7	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
8	00-428472-00001	Valve - Ball.....	1
9	00-427882-000G1	Gas Inlet (1GR35M, 1GR45M, 1GR65M).....	1
10	00-427882-000G2	Gas Inlet (1GR85M).....	1
11	00-410841-00022	Valve - Combination (NAT) (Manual Ignition).....	1
12	00-410841-00023	Valve - Combination (LP) (Manual Ignition).....	1
13	FP-035-95	Pipe 1/2 x 2 TBE.....	1
14	FP-077-68	Elbow 1/2 x 90 Deg.....	1
15	FP-035-94	Pipe 1/2 x 1-1/2 TBE.....	1
16	FP-022-11	Union - Pipe.....	1
17	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
18	FP-086-74	Elbow - Street 1/2 x 90 Deg. (Brass).....	1

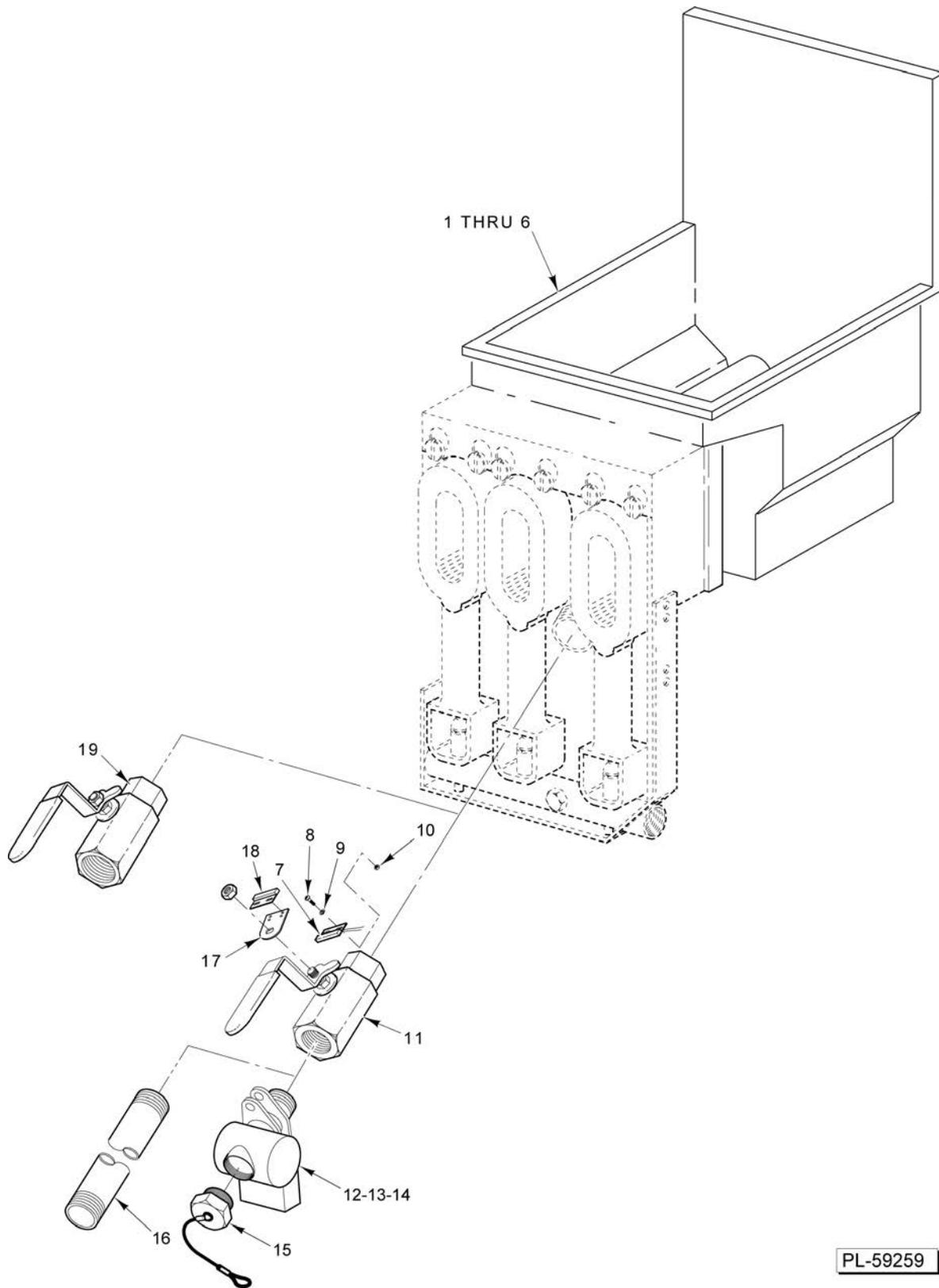


PL-59264

**GAS VALVE
(1GRM SERIES)
(CURRENT CONSTRUCTION)**

**GAS VALVE
(1GRM SERIES)
(CURRENT CONSTRUCTION)**

ILLUS. PL-59264	PART NO.	NAME OF PART	AMT.
1	00-427882-000G3	Tube - Flex (Gas Inlet).....	1
2	00-410841-00022	Valve - Combination (NAT) (Manual Ignition).....	1
3	00-410841-00023	Valve - Combination (LP) (Manual Ignition).....	1
4	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
5	FP-035-95	Pipe 1/2 x 2 TBE.....	1
6	FP-022-11	Union - Pipe.....	1

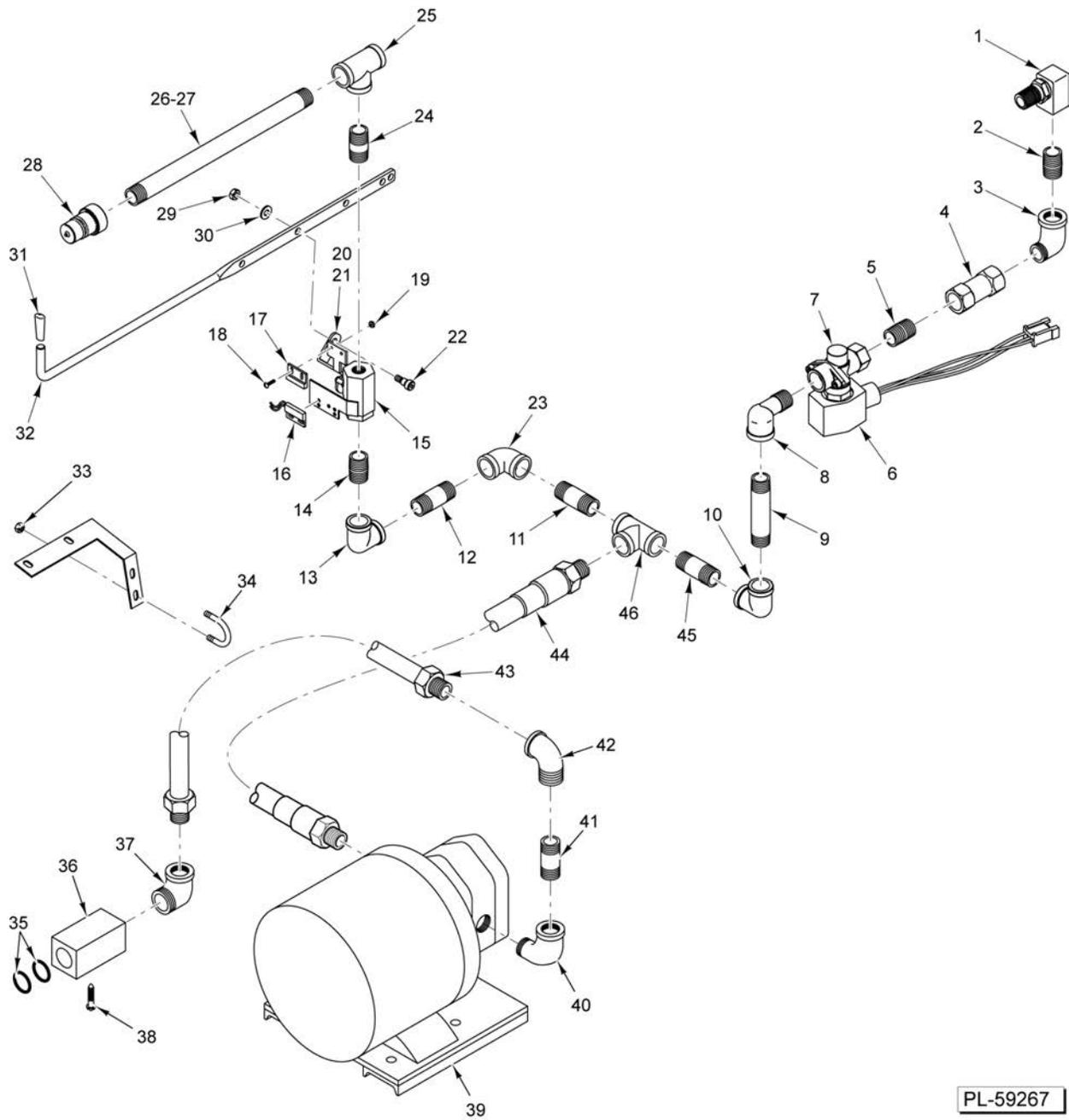


PL-59259

TANK AND DRAIN ASSEMBLY

TANK AND DRAIN ASSEMBLY

ILLUS. PL-59259	PART NO.	NAME OF PART	AMT.
1	00-499700-000G2	Tank Assy. (1GR35M) (SST).....	1
2	00-499701-000G2	Tank Assy. (1GR45 Series) (SST).....	1
3	00-499702-000G2	Tank Assy. (1GR65 Series) (SST).....	1
4	00-499703-000G2	Tank Assy. (1GR85C/D & 1GR85CF/DF) (SST).....	1
5	00-956908-000G1	Tank Assy. (1GR45CF/DF).....	1
6	00-956908-000G2	Tank Assy. (1GR65CF/DF).....	1
7	00-426805-000G1	Switch Assy. (1GR45C/D & 1GR65C/D).....	1
8	SC-018-55	Mach. Screw 4-40 x 1/2 Phil. Pan Hd.....	4
9	WL-003-03	Lockwasher #4 Helical.....	4
10	NS-044-01	Nut Assy. 4-40 KEPS.....	4
11	00-426803-000G9	Valve - Drain Assy. (1-1/4) (RH) (With Magnet) (1GR45C/D & 1GR85C/D).....	1
12	00-956829-000G1	Pipe - Drain (1GR45CF/DF & 1GR85CF/DF).....	1
13	00-420726-00002	Flange - Pipe (1 1/4 In.) (1GR45CF/DF & 1GR85CF/DF).....	1
14	00-420553-00002	Gasket - Silicone (1GR45CF/DF & 1GR85CF/DF).....	1
15	00-497571-000G1	Plug - Drain (1GR45CF/DF & 1GR85CF/DF).....	1
16	FP-085-74	Pipe 1 1/4 x 63/4 (1GR35, 1GR45C/D, 1GR65C/D, & 1GR85C/D).....	1
17	00-426798-00002	Plate - Switch (1GR45C/D & 1GR65C/D).....	1
18	00-426801-00002	Magnet - Switch Element Head (1GR45C/D & 1GR65C/D).....	1
19	00-958392-000G2	Valve Assy. - Drain (RH) (1 1/4 In.) (1GR35/45/65/85M).....	1
	FP-028-14	Pipe - Plug 1/2 Sq. Hd.....	1
	00-499486-00001	Clip - Drain Pipe.....	1
	00-497572-000G2	Pipe - Boil Out Bypass (With Hose Fitting).....	1

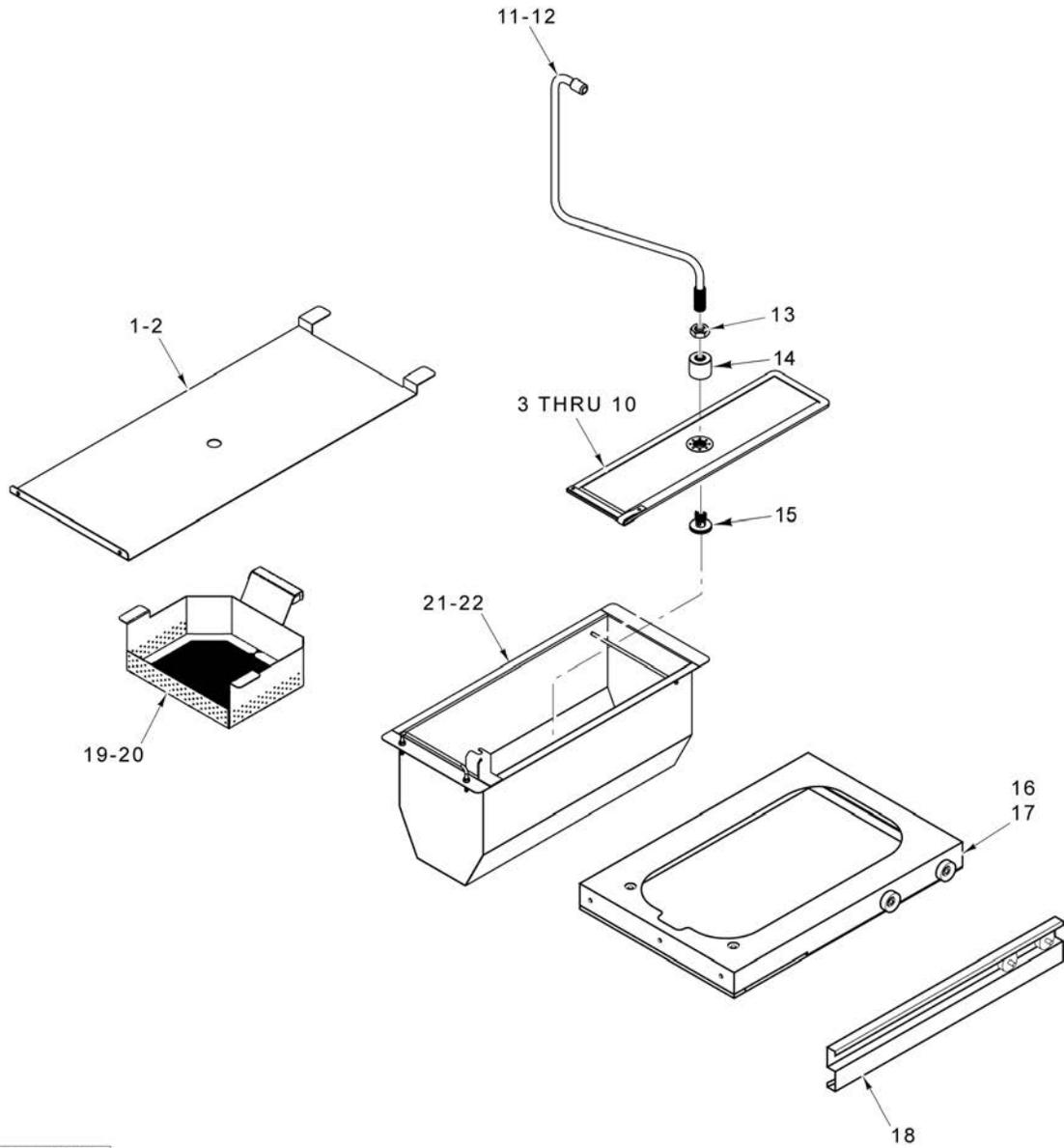


PL-59267

**OIL RETURN
(1GR45CF/DF & 1GR85CF/DF)**

**OIL RETURN
(1GR45CF/DF & 1GR85CF/DF)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-59267			
1	00-419251-00001	Fitting - 90 Deg. Swivel.....	1
2	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
3	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
4	00-418786-00001	Valve - Check.....	1
5	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
6	00-428691-00002	Valve - Solenoid (120 V.).....	1
7	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
8	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
9	FP-035-96	Pipe 1/2 x 2-1/2 TBE.....	1
10	FP-077-68	Elbow 1/2 x 90 Deg.....	1
11	FP-035-95	Pipe 1/2 x 2 TBE.....	1
12	FP-035-95	Pipe 1/2 x 2 TBE.....	1
13	FP-077-68	Elbow 1/2 x 90 Deg.....	1
14	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
15	00-428753-00001	Valve - Oil Discharge.....	1
16	00-426805-000G2	Switch - Magnetic (Wired).....	1
17	00-426801-00002	Switch - Valve Mounted.....	1
18	SC-018-55	Mach. Screw 4-40 x 1/2 Phil. Pan Hd.....	4
19	NS-044-01	Nut Assy. 4-40 KEPS.....	4
20	00-428697-00001	Actuator - Oil Discharge.....	1
21	00-428694-000G1	Valve - Discard (LH) (Incls. Items 15 thru 20).....	1
22	SC-116-19	Shoulder Screw 1/4-20 x 3/8 Hex. Socket Hd.....	1
23	FP-077-68	Elbow 1/2 x 90 Deg.....	1
24	FP-035-95	Pipe 1/2 x 2 TBE.....	1
25	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
26	FP-036-91	Pipe 1/2 x 91/2 TBE (1GR45CF/DF).....	1
27	FP-090-81	Pipe 1/2 x 13-1/2 TBE (1GR65CF/DF & 1GR85CF/DF).....	1
28	00-418781-00001	Quick Disconnect.....	1
29	NS-046-52	Nut Assy. 1/4-20 Hex.....	1
30	WS-029-49	Washer.....	1
31	00-416435-00002	Grip (Yellow).....	1
32	00-428693-00005	Rod - Pull Kleenscreen.....	1
33	NS-046-52	Nut Assy. 1/4-20 Hex.....	2
34	00-521820	U-Bolt.....	1
35	00-426567-00002	O-Ring (Viton).....	2
36	00-426567-00003	Receptacle - Oil Suction.....	1
37	FP-013-17	Elbow - Street 1/2 x 90 Deg.....	1
38	SC-114-01	Mach. Screw 10-32 x 3/8 Hex Washer Hd.....	1
39	00-417792-00005	Pump Motor Assy. (115 V., 60 Hz.) (8 G.P.M.).....	1
40	FP-077-68	Elbow 1/2 x 90 Deg.....	1
41	FP-035-95	Pipe 1/2 x 2 TBE.....	1
42	FP-077-68	Elbow 1/2 x 90 Deg.....	1
43	00-426602-00004	Tube - Flex (19 In.) Suction.....	1
44	00-426602-00001	Tube - Flex (12 In.).....	1
45	FP-035-91	Pipe 1/2 x 1-1/8 TBE.....	1
46	FP-019-25	Tee 1/2 x 1/2 x 1/2.....	1
	00-422281-00008	Hose - Discard (4 Ft.).....	1
	00-956900-00001	Bracket - Suction Block.....	1

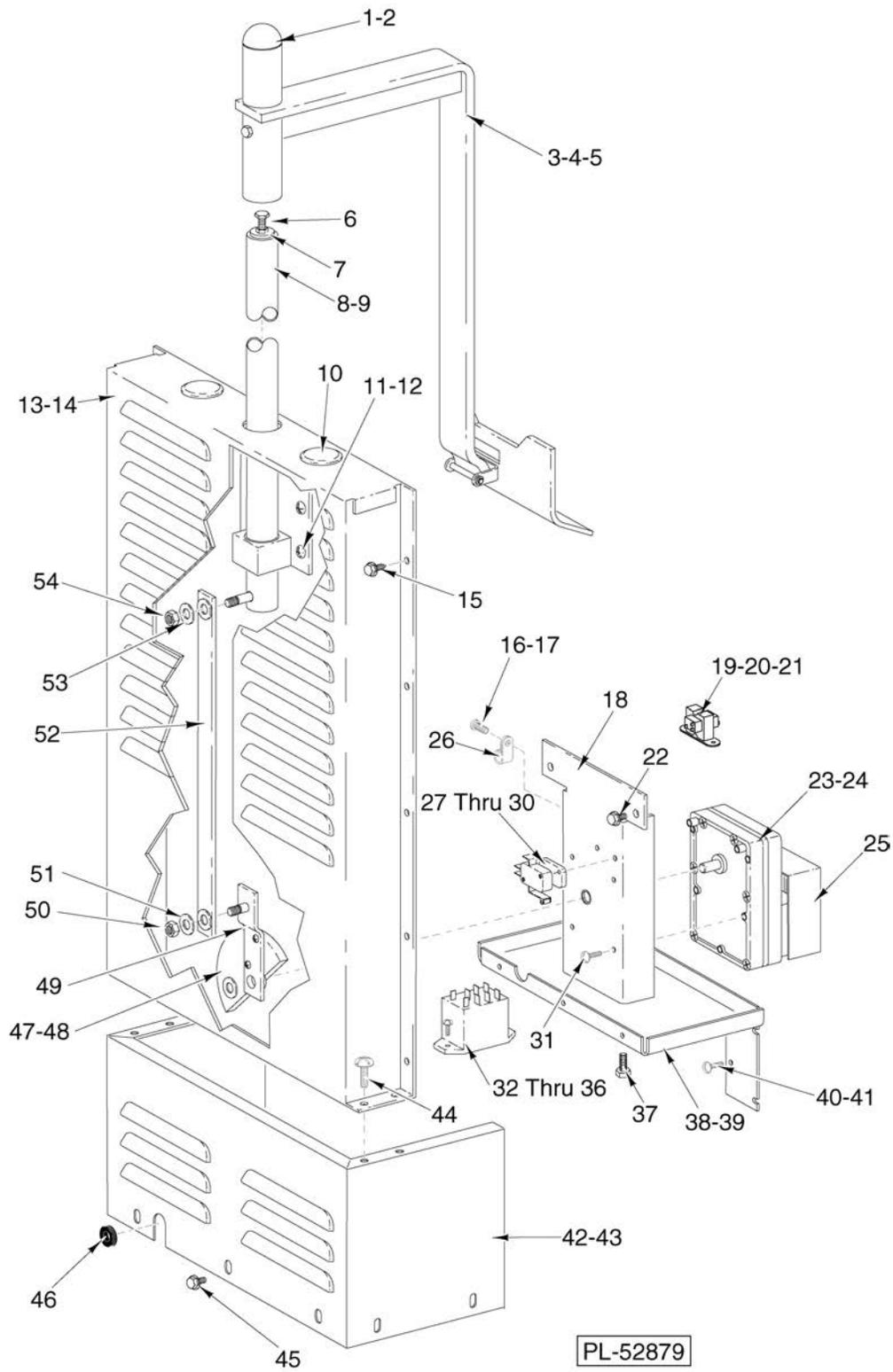


PL-59266

FILTER ASSEMBLY

FILTER ASSEMBLY

ILLUS. PL-59266	PART NO.	NAME OF PART	AMT.
1	00-956904-00001	Splash Guard (1GR45CF/DF).....	1
2	00-956904-00002	Splash Guard (1GR65CF/DF & 1GR85CF/DF).....	1
3	00-499087-00002	Screen - Fine Mesh Filter (1GR45CF/DF).....	1
4	00-499087-00004	Screen - Fine Mesh Filter (1GR65CF/DF & 1GR85CF/DF).....	1
5	00-499085-00003	Insert - Filter Screen (1GR45CF/DF).....	1
6	00-499085-00006	Insert - Filter Screen (1GR65CF/DF & 1GR85CF/DF).....	1
7	00-499086-00002	Filter - Envelope (1GR45CF/DF).....	1
8	00-499086-00003	Filter - Envelope (1GR65CF/DF & 1GR85CF/DF).....	1
9	00-499089-00002	Clip - Filter (1GR45CF/DF).....	1
10	00-499089-00003	Clip - Filter (1GR65CF/DF & 1GR85CF/DF).....	1
11	00-499081-000G5	Tube - Suction (1GR45CF/DF).....	1
12	00-499081-000G7	Tube - Suction (1GR65CF/DF & 1GR85CF/DF).....	1
13	NS-017-49	Jam Nut 3/4-16 Hex.....	1
14	00-499083-00002	Coupling - Suction.....	1
15	00-499084-00002	Knob - Port Suction.....	1
16	00-428180-000G6	Drawer Assy. (1GR45CF/DF).....	1
17	00-428180-000G7	Drawer Assy. (1GR65CF/DF & 1GR85CF/DF).....	1
18	00-958026-000G2	Guide - Roller.....	1
19	00-426606-000G5	Basket - Scrap (1GR45CF/DF).....	1
20	00-426606-000G7	Basket - Scrap (1GR65CF/DF & 1GR85CF/DF).....	1
21	00-958000-000G1	Pan Assy. - Filter (1GR45CF/DF).....	1
22	00-958000-000G2	Pan Assy. - Filter (1GR65CF/DF & 1GR85CF/DF).....	1
	00-499486-00001	Clip - Drain Pipe.....	1
	00-413927-00001	Grommet - Rubber.....	1
	00-499085-00005	Insert - Envelope (1GR45CF/DF).....	1
	00-499085-00006	Insert - Envelope (1GR65CF/DF & 1GR85CF/DF).....	1



BASKETLIFT COMPONENTS (OPTIONAL)

BASKETLIFT COMPONENTS (OPTIONAL)

ILLUS. PL-52879	PART NO.	NAME OF PART	AMT.
1	423374-1	Cap - Rod End.....	1
2	SC-047-35	Set Screw 5/16-18 x 1/2 Hdls, Cup Pt.....	1
3	422495-G1	Lift Assy.....	1
4	422495-G2	Lift Assy.....	1
5	422495-G3	Lift Assy.....	1
6	418118-1	Bolt - Adjusting.....	1
7	NS-018-01	Jam Nut 14-20 Hex.....	1
8	418479-G2	Tube - Basketlift.....	1
9	423262-G1	Tube - Basketlift.....	1
10	PB-004-04	Plug Button (1-1/4).....	2
11	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	6
12	422247-G1	Bearing Support Assy.....	1
13	422017-1	Wrap - Top.....	1
14	422018-1	Wrap - Top.....	1
15	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	10
16	SC-109-10	Mach. Screw 6-32 x 3/8 Slotted Pan Hd. (SST).....	1
17	NS-009-07	Nut 6-32 Hex.....	1
18	418123-G1	Plate - Motor.....	1
19	411500-12	Transformer (120 V., A.C., 24 V., 20 VA).....	AR
20	411500-13	Transformer (200-240 V.A.C., 28 V., 20 VA).....	AR
21	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	2
22	SD-037-80	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	6
23	418156-1	Gear Motor (115V.,60 Hz.).....	1
24	418156-2	Gear Motor (208V).....	1
25	418517-1	Shroud - Motor.....	1
26	078752-12	Clamp - Cable.....	1
27	418159-1	Block - Cam Switch.....	1
28	411496-F3	Switch - Micro.....	1
29	SC-112-90	Mach. Screw 4-40 x 1 Slotted Pan Hd.....	2
30	NS-009-12	Nut 8-32 Hex.....	2
31	SC-018-47	Mach. Screw 10-32 x 3/4 Pan Hd.....	4
32	416535-4	Relay S.P.D.T. 24 V. Coil (Elect. Ignition) (Located on rear of panel).....	1
33	416535-6	Switch - Relay.....	AR
34	416535-7	Switch - Relay (240V).....	AR
35	SC-109-10	Mach. Screw 6-32 x 3/8 Slotted Pan Hd. (SST).....	2
36	NS-009-07	Nut 6-32 Hex.....	2
37	SD-037-80	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	2
38	422730-1	Base - Motor Mounting.....	1
39	422729-1	Base - Motor Mounting.....	1
40	SC-037-80	Cap Screw 10-24 x 1/2 Hex Hd.....	2
41	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	2
42	418480-1	Wrap - Bottom.....	1
43	418510-1	Wrap - Bottom.....	1
44	SD-036-03	Self-Tapping Screw 8-18 x 3/8 Hex Washer Hd., Type AB.....	14
45	SC-037-80	Cap Screw 10-24 x 1/2 Hex Hd.....	2
46	418482-1	Grommet.....	1
47	418475-G1	Crank-Arm Assy.....	1
48	SC-055-02	Set Screw 1/4-20 x 1/4 Hdls., Cup Pt.....	2
49	SD-015-41	Self-Tapping Screw 8-32 x 1/2 Phil. Pan Hd., "Tapitite".....	2
50	NS-047-73	Lock Nut 5/16-18 Hex.....	1
51	WS-004-33	Washer.....	1
52	418477-G2	Coupler Assy.....	1
53	WS-004-33	Washer.....	1
54	NS-047-73	Lock Nut 5/16-18 Hex.....	1

