

Service Manual

Pitco Frialator



GAS FRYER

with

FILTER

Model Number

AG14S



PITCO FRIALATOR, INC.

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FOR YOUR SAFETY:

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

TO THE PURCHASER

POST IN A PROMINENT LOCATION INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THAT AN OPERATOR SMELLS GAS. OBTAIN THIS INFORMATION FROM YOUR LOCAL GAS SUPPLIER.

WARNING:

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE MANUALS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

WARNING

This appliance is equipped with a grounding plug. This is for your protection against shock hazard in the event of equipment malfunction. Always plug the unit into a properly grounded receptacle. DO NOT cut or remove the grounding prong.

WARNING

DO NOT use an open flame to check for gas leaks! Keep all open flames away from the machine at all times.

WARNING

Machines equipped with casters and a flexible power cord, must be connected to a gas supply with a Quick-Disconnect device. This quick disconnect must comply with ANSI Z24.41. To limit the movement of the unit without depending on the connector or quick disconnect, a restraining device must also be installed.

WARNING

There is an open flame inside the machine. The unit may get hot enough to set nearby materials on fire. Keep the area around the unit free from combustibles.

WARNING

Ensure that the machine can get enough air to keep the flame burning correctly. If the flame is starved of air it

can give off a dangerous carbon monoxide gas. Carbon Monoxide is a clear odorless gas that can cause suffocation.

WARNING

Carbon Monoxide gas can build up if you obstruct the flue. Blocking the flue will also cause the unit to overheat. DO NOT obstruct the flow of combustion/ventilation or air opening around the machine. Ensure that you meet the minimum clearances specified in the installation instructions. Adequate clearance around the unit is necessary for servicing and proper burner operation.

WARNING

If the machine should shut down unexpectedly wait 5 minutes before attempting to restart it. This will allow time for any excess gas in the unit to dissipate.

WARNING

The power supply must be disconnected before servicing or cleaning the unit.

WARNING

DO NOT supply the fryer with a gas that is not identified on the data plate, located on the inside of one of the doors of the machine. If you need to convert the machine to another type of fuel, contact your dealer or Authorized Pitco Service Agency.

WARNING

If your Pitco Frialator fryer is equipped with a Gas Hose, Quick Disconnect and restraining device, when the fryer is in its operating location, lock the casters and reattach the restraining device to the rear of the machine.

WARNING

Shortening, when it is at cooking temperatures, is very HOT and DANGEROUS! Use extreme caution when handling! Use the proper protective gear such as insulated gloves, aprons, face shield and sleeves when handling hot shortening. DO NOT attempt to move any machine that has hot oil in it. Allow the oil to cool to room temperature or drain the oil into a suitable container before moving the fryer.

Retain this manual for future reference.

ORIGINAL EQUIPMENT LIMITED WARRANTY - ADVANCED FRYERS

General Warranty

Pitco Frialator, Inc. warrants to the original user of its **Advanced Fryer** cooking appliance that said appliances and related equipment will be free from defects in material and workmanship under normal use for a period of one (1) year from the date of installation, with appropriate documentation, subject to the following additions, exceptions, exclusions and limitations.

What is covered

This warranty is limited to the repair or replacement at the Company's option, without charge, of any part found to be defective within the warranty period and reasonable expenses incurred for freight and material for the installation of such part; in addition, the Company's obligation shall be limited to reimbursement for normal labor on such parts.

Pitco Frialator, Inc. agrees to pay the G.S. Blodgett Corporation Authorized Service and Parts Distributor, for any labor and material required to repair or replace, at the Company's option, any part which may fail due to defects in material or workmanship during the above general warranty period.

Fry Tanks

In addition, the Company warrants to the original user of any fry tank to be free from defects for a period of ten (10) years from the date of manufacture. Labor and freight shall be the responsibility of the user. This shall only obligate the Company to repair or replace, at its option, any fry tank which it determines to be defective. Claims under this item shall be supported by a statement detailing the defect, and the Company may require the return of the fry tank claimed to be defective.

Computer or Digital Cooking Controller

In addition, the Company warrants to the original user of any Cooking Computer or Digital Controller to be free from defects for a period of two (2) years, from the date of manufacture. During the two (2) year period all charges involved in the replacement of a Pitco Computer or Digital Controller will be the responsibility of Pitco Frialator Inc.

Burner

In addition, Company warrants to the original user of any Advanced Fryer Burner to be free from defects for a period of five (5) years from the date of manufacture. Labor and freight shall be the responsibility of the user.

How to Keep Your Warranty in Force

- € Make sure any shipping damages are reported immediately. Damages of this nature are the responsibility of the carrier.
- € Install the unit properly. This is the responsibility of the installer and the procedures are outlined in the manual. Do not install it in a home or residence.
- € Maintain the unit properly. This is the responsibility of the user, the procedures are outlined in the manual.

What is NOT covered under this Warranty

- € Adjustments, such as calibration, leveling, tightening of fasteners or plumbing or electrical connections normally associated with initial installation are not covered under this warranty. These procedures are outlined in the installation manual.
- € Damaged due to flood, fire or other acts of Nature are not covered under this warranty.
- € If the unit is used for a purpose other than for which it was intended or designed, resulting damages are not covered under the warranty.
- € Failures due to erratic voltage or gas supplies are not covered under the warranty.
- € Material alterations or modifications from the condition in which the unit left the factory are not covered under the warranty.
- € Units with unreadable, obliterated or removed serial number rating plates are not covered by the warranty.
- € Any parts other than Genuine OEM parts from Pitco Frialator, Inc. or its Authorized Parts and Service Distributors are not covered by the warranty.
- € Any other failure which is not attributable to a defect in materials or workmanship is not covered by the warranty.

This warranty specifically excludes parts which wear or would be replaced under normal usage, including, but not limited to, electric lamps, fuses, interior or exterior finishes and gaskets.

Limits to the Warranty

Outside the United States of America and Canada, this warranty is limited to the replacement of parts and Pitco Frialator, Inc. will not bear any other expense be it labor, mileage, freight or travel.

Charges for mileage over one hundred (100) miles, travel time over two (2) hours, overtime, and holiday charges are not covered under this warranty. These charges are the responsibility of the individual or firm requesting these services.

If any oral statements have been made regarding the appliance, these statements do not constitute warranties and are not part of the contract of sale. This limited warranty constitutes the complete, final and exclusive statement with regard to warranties.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES WHETHER WRITTEN, ORAL OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR WARRANTY AGAINST LATENT DEFECTS.

Limitations of Liability

In the event of a warranty or other claim, the sole obligation of Pitco Frialator, Inc. will be the repair or replacement, at the Company's option, of the appliance or the component part. This repair or replacement will be at the expense of Pitco Frialator, Inc. except as limited by this warranty statement. Any repair or replacement under this warranty does not constitute an extension in time to the original warranty. Parts covered under this warranty will be repaired or replaced, at the Company's option, with new or functionally operative parts. The liability of Pitco Frialator, Inc. on any claim of any kind, including claims based on warranty, express or implied contract, negligence, strict liability or any other legal theories will be exclusively the repair or replacement of the appliance. This liability will not include, and the purchaser specifically renounces any right to recover special, incidental, consequential or other damages of any kind, including, but not limited to, injuries to persons, damage to property, loss of profits or anticipated loss of the use of this appliance.

If any provision of this warranty is unenforceable under the law of any jurisdiction, that provision only will be inapplicable there, and the remainder of the warranty will remain unaffected. The maximum exclusion or limitation allowed by law will be substituted for the unenforceable provision.

How to Obtain Warranty Service

First direct your claim to the G.S. Blodgett Corporation Authorized Service and Parts Distributor closest to you giving complete model, serial and code numbers, voltage, gas type, and description of the problem. Proof of the date of installation and/or the sales slip may also be required. If this procedure fails to be satisfactory, write the National Service Manager, Pitco Frialator, Inc., P. O. Box 501, Concord, NH. 03302-0501. USA

This warranty gives you certain specific legal rights; you may have other rights which vary from state to state.

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INSTALLATION INSTRUCTIONS

CAUTION:

This equipment is manufactured for the use on a particular type of gas and electrical voltage which is specified on the rating plate located on the inside of the door.

When your fryers arrive, look them over carefully noting any damage on the freight bill. If concealed damage is found after you have accepted the equipment, report it to the carrier immediately, as all claims must be filled within 15 days of the receipt of the shipment. Also, be sure to keep any packing materials as these will be necessary to make a claim.

Follow these installation instructions carefully. A proper installation is important for the operation of the fryers.

In the United States, all installations must conform to all local and state codes and well as the National Fuel Gas Code (ANSI 223.1 1992). In Canada, installations must be made in accordance to Canadian Standard CAN 1-B149.1 or .2 "Installation Codes for Gas Burning Appliances & Equipment."

Electrically operated appliances must be electrically grounded in accordance with local codes; or in the absence of local codes, with the National Electric Code ANSI/NFPA No. 70-1996; in CANADA, with CSA C22-1 Canadian Electrical Code Part 1.

Ventilation:

A proper ventilation system is also an important part of the installation. For information on the construction and installation of ventilating hoods, please see "Standard for the Installation of Equipment for the Removal of Smoke and Grease Laden Vapors from Commercial Cooking Equipment", N.F.P.A. No. 96-1987. Copies can be obtained by writing to the National Fire Protection Association, Battery March Park, Quincy, MA 02269.

Note: It is recommended that the ventilation system be cleaned and maintained on a regular basis.

Quick Disconnect Gas Connection:

Units equipped with casters must be installed with connectors that comply with the standards for connectors for Movable Gas Appliances, ANSI Z21.69-1987, and Addenda Z21.69A-1989. (CAN/CGA - 6.16 and CAN/CGA - 6.9.) This connection should include a quick disconnect device that complies with the Standard for Quick Disconnect Devices for use with Gas Fuel, ANSI Z21.41-1989. When installing a quick disconnect you must also install a means of limiting the movement of the fryer. This device will prevent the gas line or quick disconnect from being strained.

Fuel Supply Line Leak and Pressure Testing:

The fuel supply system must be tested before the machine can be used. If the fuel line is going to be tested at a pressure greater than ($>$) $\frac{1}{2}$ PSI (3.45 kPa), make sure that the unit is disconnected from the fuel line. If the fuel line is going to be tested at a pressure equal to or less than (\leq) $\frac{1}{2}$ PSI (3.45 kPa), the machine can be connected to the supply but the gas valve must be shut.

Clearances:

Minimum clearance of 6" (15cm) must be maintained from combustible construction on each side and the rear of the equipment. This equipment may be installed on combustible floors. Maintain a minimum of 24" (61cm) clearance in front of the fryer to provide for proper operation, maintenance and servicing.

NOTE: Do not block the area around the bottom or underneath the fryer. The air required to support the gas combustion is drawn from the underneath and sides of the fryer.

Leveling the fryers:

Leveling the fryers will help ensure proper opera-

tion. To level the fryers loosen the two set screws on the caster/leg stem. Rotate the collar of the caster/leg to raise or lower the height of the unit. Tighten the set screws to lock the adjustment in place.

Filling the fryer with oil:

CAUTION:

Never operate this equipment empty. Always make sure there is the correct amount of shortening or in the case of cleaning, water in the fry tank before turning the unit ON.

It is very important to make sure the oil level is correct before attempting to heat shortening in your Pitco fryer.

Liquid shortening can be poured directly into the fry tank until the correct level has been reached. This is indicated by a line on the right or left hand sides of the inside of the fry tank. "C" is the level for Cold shortening and "H" is the level for Hot shortening.

For solid shortening, the shortening must be cut into small blocks about 1" (2.54 Cm) in size. These small blocks must be placed under and around the heat tubes.

Regular cleaning of this equipment, as well as the hood, is an important part of proper maintenance. Clean the fry tanks using the Boil Out procedure described in the operating manual.

A wiring diagram is located in the back of this manual and inside the fryers.

Retain this manual for future reference.

HOW DOES IT WORK?

The Advanced Gas Fryer will have certain reactions to what is happening, knowing what these reactions are and knowing what the machine is trying to do will enable us to diagnose most of the problems likely to be encountered.

Heating System

- Power to the machine is turned ON.
- The computer is supplied with 24VAC and, if the Drain Valve Handle is closed, the Proximity Switch will supply 24 VAC to the DVI (Drain Valve Interlock) Input at the computer. As soon as the computer is powered up it will show something on the display.
- Computer calls for heat.
- Full Tank - The Heat Demand Relay will energize, supplying the Blower, the Pilot Solenoid on the Gas Valve and the Ignition Control Modules with power. Both Ignition Control Modules supply power to the Spark Ignitors. At the same time one of the Ignition Control Modules supplies power to the Gas Cut Off Relay. The Gas Cut Off Relay energizes allowing the second Ignition Control Module to supply power to the normally open Pressure Switch. When the Blower comes up to speed, which should take a couple of seconds, the Pressure Switch will close allowing 24 VAC to the Main Solenoid of the Gas Valve. This will also supply the computer with a heat feedback signal. Since there are two burners in a full vat machine each of the Ignition Control Modules alternately sends a spark signal to the Ignitor and tests for a flame sense signal from the same Ignitor. When a flame sense signal is received it will cease to send the spark signal and continue to sense flame. If, after 10 seconds, a flame sense signal has not been established the Ignition Control Module will "Lock Out" and cease to run until reenergized.
- Split Vat - The same power that supplies the computer also supplies 24 VAC to the normally open Pressure Switch. When the computer energizes the Heat Demand Relay the Blower will be supplied with power and come up to speed. At this time the air pressure from the blower will close the Pressure Switch and allow 24 VAC to go to the second set of

contacts within the Heat Demand Relay. Since the Heat Demand Relay is now closed the Ignition Control Module and Hi Limit Switch will receive 24 VAC. If the Hi Limit Switch is NOT tripped it will allow 24 VAC to be supplied to the Pilot Solenoid of the Gas Valve. The Ignition Control Module supplies 24VAC to the Main Solenoid of the Gas valve. The Ignition Control Module alternately sends a spark signal to the Ignitor and tests for a flame sense signal from the same Ignitor. When a flame sense signal is received it will cease to send the spark signal and continue to sense flame. If, after 10 seconds, a flame sense signal has not been established the Ignition Control Module will "Lock Out" and cease to run until it re-energizes.

Hi - Limit System:

When the Hi Limit trips it causes the power to the Pilot Solenoid to stop and gas will cease to flow through the gas valve. This will cause a Lock Out condition and the burners will not light. The Hi Limit Switch should be manually reset by pressing the Power Switch to the OFF position and pressing it back to the ON position.

Filter System:

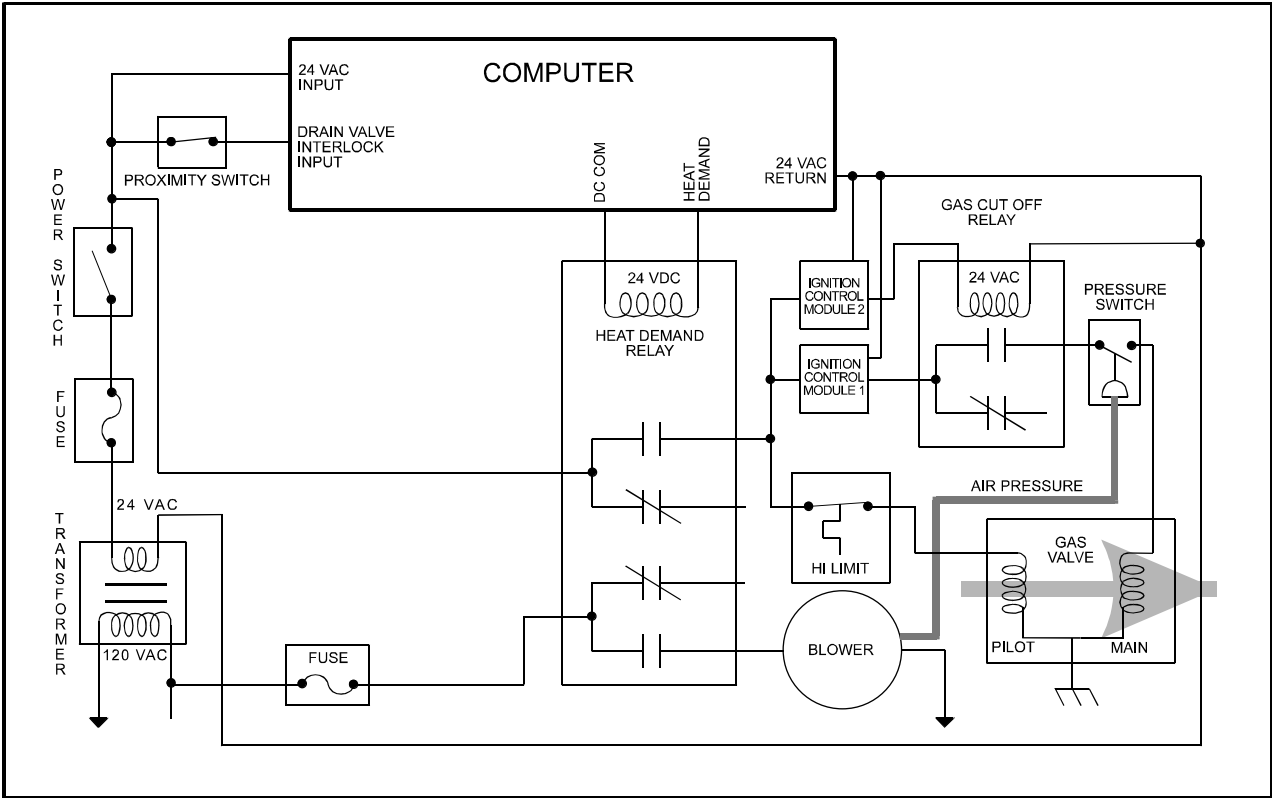
With the Filter Circuit Breaker in the ON position, opening the RED Return Valve Handle will cause the Pump On Relay to be energized and the pump will begin to operate. Closing the Return Valve Handle will de-energize the Relay and the Pump will stop running.

Heat Tape:

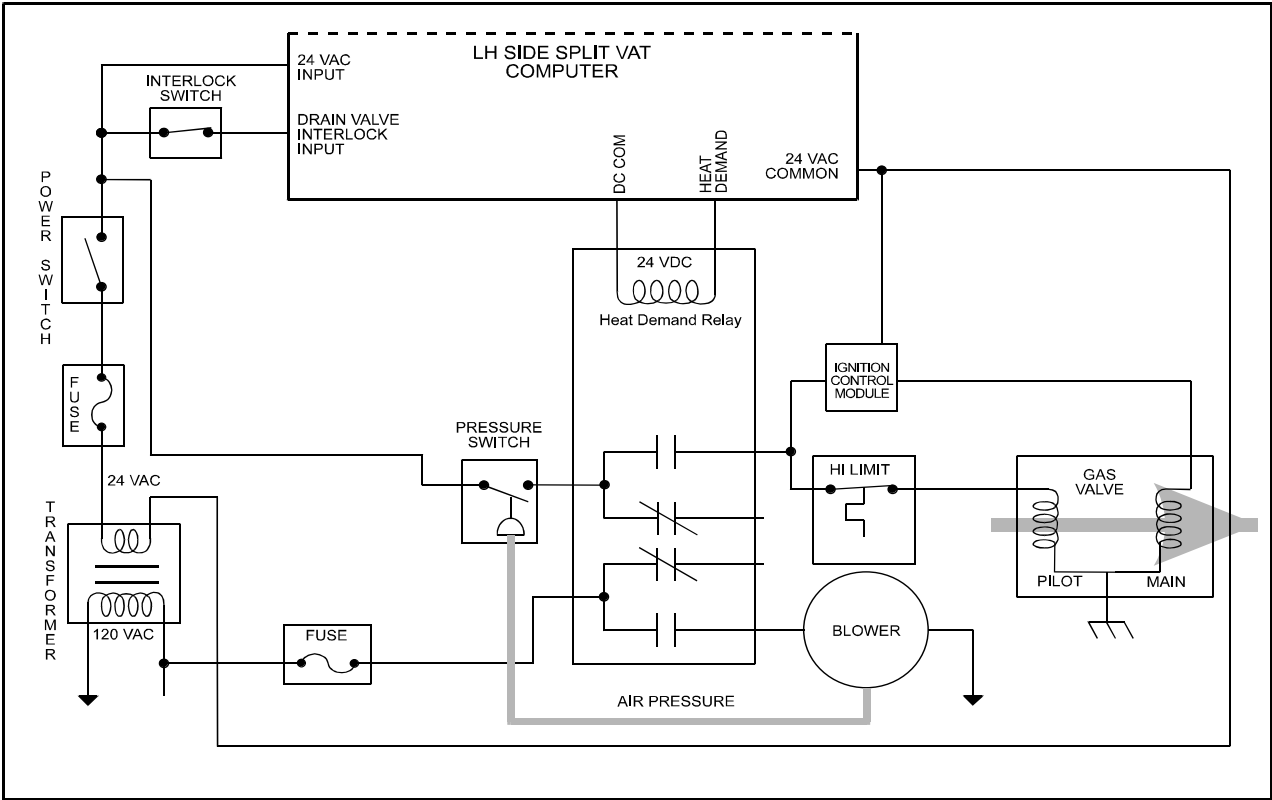
All Advanced fryers are equipped with Heat Tape which has an indicator light that will illuminate when the piping is up to operating temperature, do not attempt to pump unless the Filter Ready Light has illuminated.

LADDER DIAGRAMS

Full Vat Fryers:



Split Vat Fryers:



COMPONENT TROUBLESHOOTING

Temperature Probe:

The resistance of the probe decreases as the temperature rises. The lower the temperature the greater the resistance change will be per degree of temperature change, as the temperature approaches the working range of the probe, the resistance change will slow and become more linear. If the probe is suspect, check its resistance and the oil/air temperature at which it was taken. Compare these values on the chart below.

TEMP °F	RESISTANCE Ohms Ω	TEMP °F	RESISTANCE Ohms Ω
60°	139055 Ω	330°	1192 Ω
80°	84644 Ω	335°	1123 Ω
100°	53146 Ω	340°	1058 Ω
120°	34328 Ω	345°	998 Ω
140°	22755 Ω	350°	942 Ω
160°	15446 Ω	355°	890 Ω
180°	10716 Ω	360°	841 Ω
200°	7586 Ω	365°	795 Ω
210°	6427 Ω	370°	752 Ω
220°	5470 Ω	375°	712 Ω
240°	4013 Ω	380°	675 Ω
260°	2991 Ω	385°	640 Ω
280°	2262 Ω	390°	607 Ω
300°	1734 Ω	395°	576 Ω
320°	1347 Ω	400°	547 Ω
325°	1267 Ω		

If the probe returns an open circuit or 0 Ohms reading it should be replaced. If the resistance varies more than 20 Ohms from the above chart when being checked between 325-375°F (162°C - 190°C) the probe will give a false temperature reading on the computer and should be replaced. However, it will continue to operate at a slightly higher or lower temperature. Allow the oil to cool and check the probe resistance at a lower temperature. As can be seen from the chart a greater degree of offset can be allowed at a lower temperature.

Relays:

Relays will energize when the correct voltage is sup-

plied to the coil. When energizing, the relay Switching Contacts will close, thus connecting the Common and Normally Open terminals.

Hi Limits:

A Hi - Limit switch is a normally closed switch until the temperature at its probe reaches 435°F ± 15° (225°C ± 15°). In order to test this switch it will be necessary to bypass the Heat Demand Relay. This will cause the fryer to heat until the temperature of the oil reaches the necessary temperature to trip the Hi Limit.

WARNING

Do NOT leave the machine during this test. This test will cause the oil to heat past the normal operating temperature and can cause damage to the machine and its operator. Always use an external temperature probe to observe the oil temperature during this procedure

In order to cause the oil to reach a temperature where the Hi Limit will trip it will be necessary to bypass the Heat Demand Relay. To do this, use a small jumper wire and join the Normally Open (Terminal #5) and Common (Terminal #3) terminals on the switch section of the relay

If the switch does not trip between the prescribed limits it is defective and should be replaced. Once tripped, the switch cannot be reset until the oil has cooled to approximately 400°F (204°C). If the switch cannot be reset it is defective.

Drain Valve & Return Valve Switches:

These switches are magnetically operated Reed switches. When the Drain Valve handle is moved to the open position, the Actuator will move away from the switch causing the Reed switch to open. When the Drain Valve is closed the Reed switch will close. This switch can also be checked with an Ohm meter. The normal gap between the Actuator and the Sensor switch on the Drain Valve handle is 1/8" - 1/4" (3 - 6 mm).

Transformer:

Transformers are multiple input voltage, 24 volt output voltage and can be checked by reading the input and output voltages.

Blower:

Check the voltage between the wires going to the Blower. If 120 VAC is found and the Blower is NOT turning it is defective.

Pressure Switch:

As the blower speed rises the amount of vacuum on the suction side of the pressure switch rises past approximately 1.3" WC (0.325 kPa) the Pressure Switch will close. When the vacuum falls below approximately 0.8" WC (0.2 kPa) the Pressure Switch will open. With the Blower running, check the IN and OUT voltage of the Switch. If 24VAC can be found on one side but NOT the other the Pressure Switch is defective.

Gas Valve:

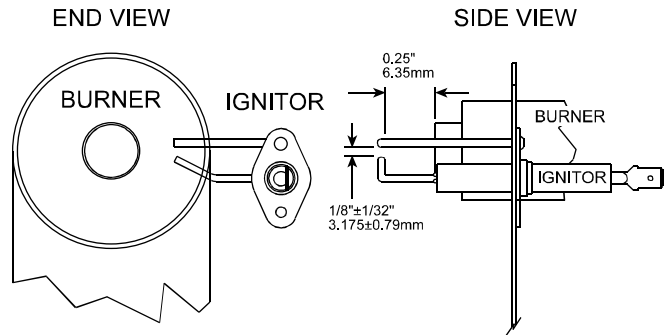
The Knob should be in the ON position. Check for 24VAC between the terminals marked MV and MV/PV and between PV and MV/PV. If voltage IS found between both of these connections and the Gas Valve does not open the Gas Valve is defective. If voltage is NOT present at both of the coils on the Gas Valve, troubleshoot and repair the machine until voltage IS present at both coils, retest the Gas Valve as previously described.

Ignition Control Modules:

When the Ignition Control Module is supplied with 24 VAC from the temperature control system at the TH terminal it will send a signal to the Ignitor which will begin to spark. At the same time the Ignition Control Module will also have a 24 VAC output signal on the MV terminal. The Ignition Control Module will cause the Ignitor to spark for 10 seconds and then look for a flame sense signal, if it does not receive a flame sense within 10 seconds signal it will "Lock Out".

Ignitors:

When an Ignitor is supplied with power and does NOT spark the Spark Gap should be checked. The distance between the Ignitor and the Ground post should be approximately $1/8" \pm 1/32"$.



If the Ignitor is sparking but the Burner does not light, check for a gas supply and make sure the Ignitor is located in the correct position as shown in the drawing.

TROUBLESHOOTING GUIDE

Fryers:

It is assumed that, before starting any troubleshooting, the power is turned on and the gas lines are connected correctly.

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Computer does not come on nothing shows in either display	<ul style="list-style-type: none"> A. Power Switch is NOT turned ON B. Main circuit breaker is turned off C. Fryer fuse is blown D. Transformer 	<ul style="list-style-type: none"> A. Press switch to the ON position. B. Locate the correct circuit breaker and turn OFF and back ON again. C. Check and Replace as needed D. Check Transformer
Computer heat light comes on but burners do not	<ul style="list-style-type: none"> A. If the oil is hot the Hi Limit may be tripped B. Ignition Lockout 	<ul style="list-style-type: none"> A. Allow the oil to cool, the Hi Limit will reset itself. Turn the computer OFF and back ON again to reset the computer. B. Check gas supply, Flame Sensor, Hi Limit, Gas Valve, Ignition Control Module/s, Pressure Switch (Full Tank), Gas Cut Off Relay (Full Tank), Blower (Full Tank)
No Spark heard, blower IS running	<ul style="list-style-type: none"> A. Heat Demand Relay B. Ignition Control Module C. Spark Ignitor 	<ul style="list-style-type: none"> A. Check and replace where needed. B. Check and replace where needed. C. Check / adjust / replace where needed.
Spark sound can be heard, Blower NOT running	<ul style="list-style-type: none"> A. F2 fuse blown B. Blower C. Heat Demand Relay 	<ul style="list-style-type: none"> A. Check and replace where needed. B. Check and replace where needed. C. Check and replace where needed.
Spark sound can be heard, Blower IS running but main burners do not run	<ul style="list-style-type: none"> A. Ignition Control Module B. Gas Valve Relay (Full Tank Only) C. Defective Pressure Switch D. Tripped or defective Hi limit E. Gas Valve 	<ul style="list-style-type: none"> A. Check and replace where needed. B. Check and replace where needed. C. Check and replace where needed. D. Check and replace where needed. E. Check and replace where needed.
Burner comes ON for short time, does not come back on	<ul style="list-style-type: none"> A. Flame Sensor B. Ignition Control Module C. Gas Valve 	<ul style="list-style-type: none"> A. Check / adjust / replace where needed. B. Check and replace where needed. C. Check and replace where needed.

Filters:

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Red Return Valve is open but no pump sound can be heard	<ul style="list-style-type: none"> A. Red Return Valve NOT fully open B. Filter Circuit Breaker may be tripped C. Filter Motor Thermal Overload may be tripped D. Sensor switch may be loose or bad 	<ul style="list-style-type: none"> A. Pull slightly on the Red handle to check that it is fully open. B. Locate the circuit breaker and reset. C. Push Red reset button located on end of filter motor. D. Check that the switch is tight in its mounting. If switch is bad replace it.
Drain valve is closed and the computer has been reset but still shows "DRAINING" or "TURN OFF"	<ul style="list-style-type: none"> A. Green Drain Valve is NOT fully Closed B. Sensor switch may be loose or bad 	<ul style="list-style-type: none"> A. Apply a little more pressure to the Green Handle to check that it is fully closed. B. Check that the switch is tight in its mounting. If switch is bad replace it.
Drain Valve is OPEN, the oil is draining slowly or not at all.	<ul style="list-style-type: none"> A. Green Drain Valve is NOT fully open B. Drain is plugged with debris 	<ul style="list-style-type: none"> A. Apply a little more pressure to the Green Handle to check that it is fully closed. B. Use the Clean Out Rod from inside the Fry Vat to clear the Drain Valve. If this NOT clear the blockage, CLOSE the Green Drain Valve and follow these instructions for clearing the main drain line. <p style="text-align: center; margin-top: 20px;">CAUTION:</p> <p>Some HOT oil may still come out when the cap is removed. Remove the two screw from the end cap (Do NOT lose these.) Use the Clean Out Rod to clear the main drain tube. Install the end cap along with its gasket and two screws. Do not overtighten these screws.</p>

COMPONENT CHANGEOUT

It is assumed that for all (except where noted) of these component changeout instructions the fryer has been shut down and disconnected from the power and gas supplies, cooled and drained of oil.

Probes:

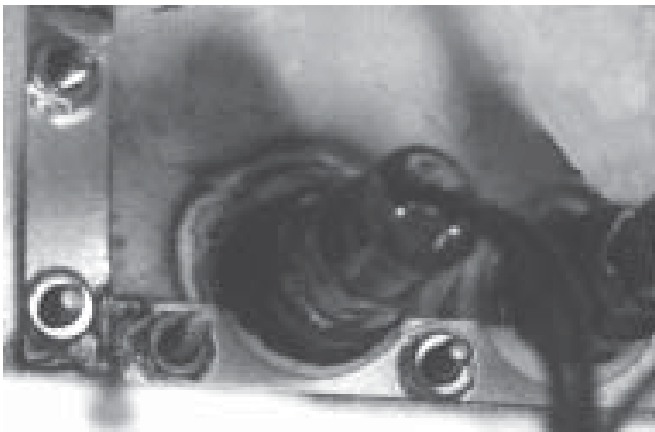
1. Unplug the wiring connector.
2. Unscrew the small nut on the probe seal.
3. Slide the probe from the seal.



Install in the reverse order using the new ferrule supplied with the new probe.

Hi Limits:

1. Unplug the wiring connector.
2. Unscrew the Hi Limit from the front of the fry tank.



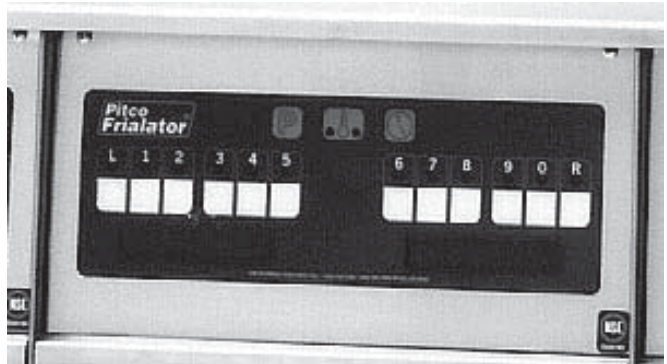
Install in the reverse order.

Computers:

CAUTION:

Take care not to drop any of the components from the front panel as this will damage them.

1. Remove the two screws from the upper mount of the front panel.



2. Unplug the wiring connection at the rear of the computer.

NOTE: On split tank machines you will find 2 wiring connections to unplug.



Install in the reverse order.

Components mounted in the front panel:

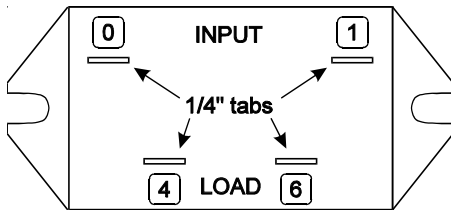
To access all of the components mounted in the front panel follow the instructions below:

1. Remove the computer as described previously. The components within the front panel area can now be accessed.

Filter Relays:



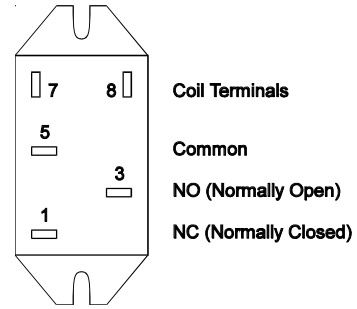
This relay is wired in the following manner -



Control Relays:

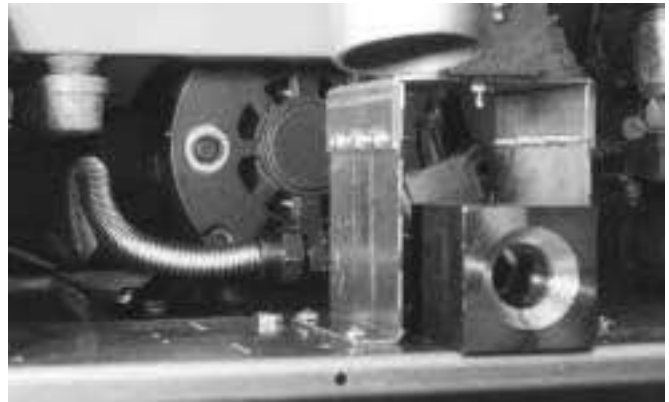


Control relays are always wired in the following manner -



Filter Pumps:

1. From the front of the machine, pull the ring back on each of the 2 quick disconnects and release the couplings.
2. Remove the 2 screws, and the front of the Pump/Motor assembly will drop. The assembly can be removed from the machine by lifting the rear slightly and pushing back. The front of the mount can be lowered until the assembly can be removed from the machine.

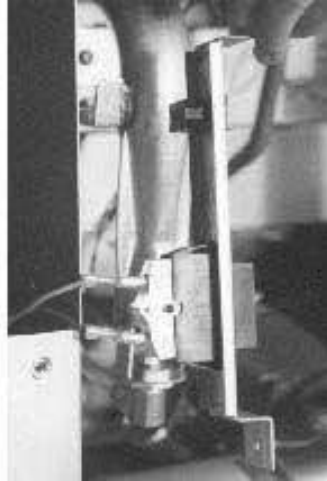


Install in the reverse order.

Circuit Breaker:

1. Remove the 2 mounting screws on either side of the door magnet catch. Remove the door magnet catch.
2. Remove the 2 mounting screws from the top and bottom of the cover.
3. Depress the 4 catches that hold the circuit breaker in the cover.

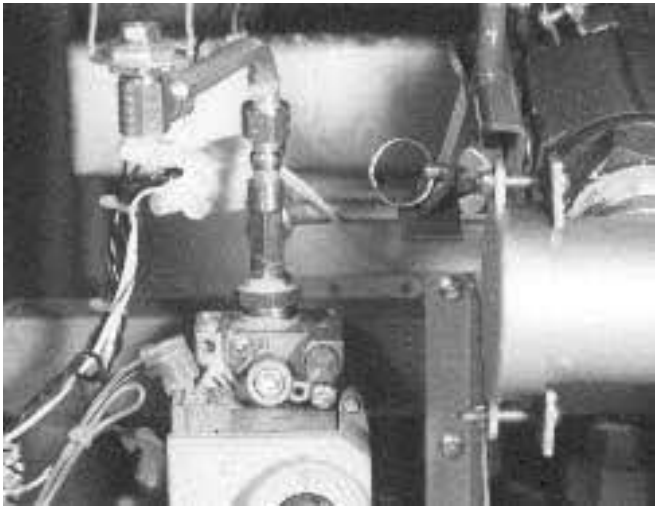




Install of the reverse order.

Gas Valves:

1. Unscrew the fittings to the gas outlet tubes at the top of the gas valve.



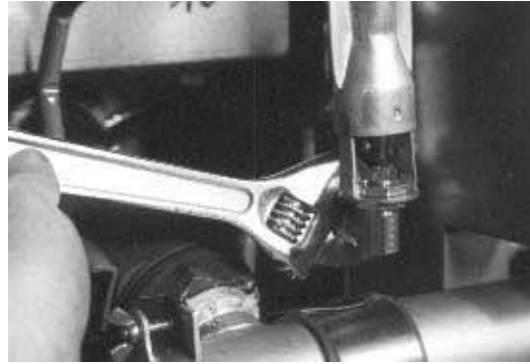
2. Unscrew the pipe union, located behind the gas valve.
3. Unplug the 3 wires that plug into the gas valve.

Install in the reverse order.

Burners and Spark Ignitors:

NOTE: If the ignitor is to be removed without the burner start the procedure at step 2.

1. Unscrew the fitting for the gas supply tubing on the bottom of the burner.



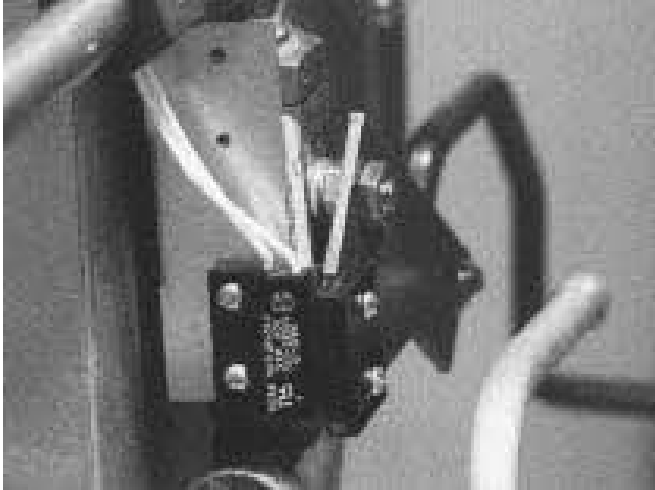
2. Unplug the wire to the spark ignitor.
3. Remove the 2 screws that hold the spark ignitor and burner in place.



The burner and spark ignitor may be removed together. Install in the reverse order.

Proximity Switches:

1. The actuator can be removed by removing the 2 mounting screws.



2. The sensor may be removed by disconnecting the wiring harness and by removing the 2 mounting screws.

Install in the reverse order.

Blowers:

1. Unplug the wiring connector.
2. Remove the 3 screws from the mounting flange.



3. Using a flat screwdriver, break the seal at the motor flange.
4. The motor can now be lowered out of the machine.

NOTE: The new blower will be shipped with the blower housing attached. Remove the motor from the blower housing in the above manner. Clean the sealant from the new motor and the old housing (still attached to the machine). Apply a small amount of high temperature silicone sealant to the motor mounting flange.

Install the motor in the reverse order of removal.

Pressure Switches:

1. Unscrew the plastic fitting from the air connection on the pressure switch.
2. Unplug the 2 wires from the switch.



3. Remove the 2 screws from the mounting bracket.

Install in the reverse order.

Fry Tanks:

Full Fry Tanks-

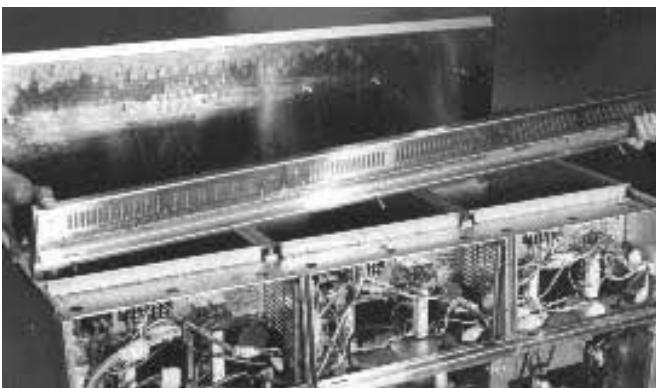
1. Remove ALL of the computer/controllers from the machine.
2. Remove the burners and ignitors from the tank to be removed.
3. Disconnect the drain valve switch wires.
4. Disconnect the return valve switch wires.
5. Disconnect the blower wires.
6. Remove the drain line from the left and right ends of the drain valve tee.
7. Disconnect the filter return piping at the rear of the Fry Tank.
8. Remove the 3 screws from the front of each unit.



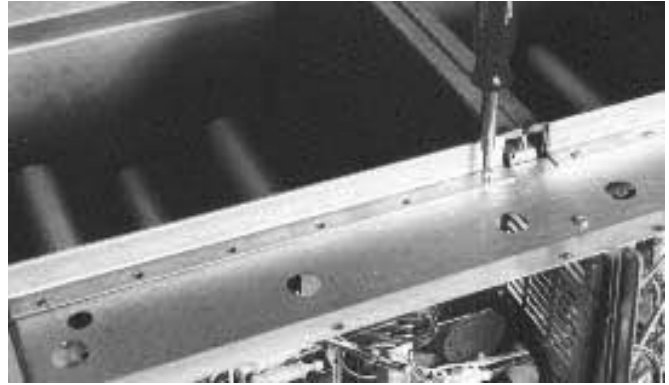
9. Remove all of the nuts and washers holding the splash deck in place.



10. Remove the front deck from the machine.



11. Remove all of the screws holding the front of the tank.



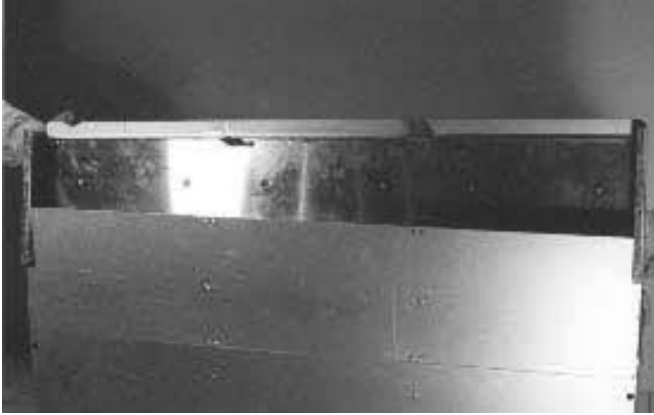
12. Remove the brackets located inside the splash back.



13. Remove the upper rear cover.



14. Remove the complete splash back assembly.



NOTE: To disconnect the filter return piping (as in step # 15) unscrew the union connecting the return piping to the tanks.

Install in the reverse order.

15. Remove the lower rear back cover.
16. Unscrew the compression fitting at the rear of the tank.
17. Remove the air tube from the air box (the blower is mounted to this box).
18. Grasp the tank by the middle tube and remove it from the rear of the cabinet.



Split Fry Tanks-

Split Fry Tanks should be removed and installed as pairs in the same manner as Full Fry Tanks. There are 3 sets of clamps that hold the two Split Fry Tanks together:

1. On the rear of the tank.
2. On the bottom of the tank accessed by first removing the blower.
3. On the bottom of the tank at the front.

Parts

Operational Components:

Part Number	Schematic Nomenclature	Description
PP11254	A1	Computer
PP11286	A1	Computer
PP11144	A2/A3	Ignition Control Module
PP11067	M1	Blower
PP11131		Ignitor/Flame Sensor
PP11065	RT1	Probe
PP11140	V1	Gas Valve, NAT
PP11141	V1	Gas Valve, LP
PP11064	S2	Hi Limit
PP11068	K1	Relay, Heat Demand
PP11068	K2	Relay, Gas Valve
PP11033	K3	Relay, Hood System
PP10210	T1	Transformer
PP11066	S4	Pressure switch
PP10262	S3	Proximity Switch, Sensor
PP10263	S3	Proximity Switch, Actuator
P5045717	F1	Fuse, 2 Amp Slow Blow
P5045720	F2	Fuse, 4 Amp Slow Blow
PP11042		Power Cord

Filter:

Part Number	Description
PP10101	Motor
PP10416	Motor Only
PP10417	Pump Only
PP10262	Proximity Switch, Sensor
PP10263	Proximity Switch, Actuator
PP10058	Relay, Filter
PP10460	Circuit Breaker
PP11138	Gasket, Drain Line End
PP11172	Clamp, Band
PP10032	Gasket
B6641101	Filter Pan Assembly
B6640801	Filter Drawer Assembly
B6641001	Lid, filter (Front)
A7013502	Lid, filter (Rear)
P6071516	Handle, Lid
B6640901	Retainer, Paper
A7001202	Support, Paper
PP10409	O-Ring

A7001701	Bracket, Drawer Roller Mount
B4002001	Handle, Return Valve LH
B4002002	Handle, Return Valve RH
P6071780	Valve, Ball 3/8"
PP11181	Gasket, Drain End
PP11182	Gasket, Tee Clean Out
A7004401	Cover, Tee Clean Out
A6643701	Thumb Screw

Miscellaneous:

Call Factory	Tank, Full Tank
Call Factory	Tank - LT Split Tank, w/ Gaskets
Call Factory	Tank - RT Split Tank, w/ Gaskets
B1003001	Baffle, Heat Tube
B3502301	Flue
PP10814	Caster, 9" Non Lock
PP	Caster, 9" Locking
Part Number	Description

B2302301	Door, LH
B2302302	Door, RH
A3802901	Hinge, Top
A3802903	Hinge, Bottom
B3801301	Hinge Rod
PP11006	Handle, Door
P6071305	Magnet Catch
PP10368	Drain Valve, Full Tank
P6071769	Drain Valve, Split Tank
A1401202	Clamp, Hi Limit Bulb
PP11130	Burner, Main
B4001601	Handle, Drain Valve, Full Tank
B4001701	Handle, Drain Valve, Split Tank LH
B4001702	Handle, Drain Valve, Split Tank RH
A4015801	Handle, Lever Stop Release
PP11059	Plunger
PP11132	Orifice, #31 Nat Gas
PP11170	Orifice, #49 LP Gas
B2100904	Cover, Full Tank
B2100901	Cover, Split Tank
P6071516	Handle, cover
A8022301	Bracket, LH Ignitor
A8022303	Bracket, RH Ignitor
P6073148	Rack Tube, Full Vat
B4510401	Rack Tube, Split Vat

Wiring Harnesses:

B6728001	Harness, Filter Pump
B6730801	Harness, Full Tank
B6730701	Harness, Split Tank
B6731101	Harness, Control Cable
B6731201	Harness, Filter Option
PP11128	Wire, Ignitor

Parts Identification



Computer/Controller
PP11254



Proximity switch, Sensor
PP10262



Ignition Control Module
PP11144



Proximity Switch, Actuator
PP10263



Blower
PP11067



Motor, Filter
PP10101



Ignitor/Flame sensor
PP11131



Relay, Filter
PP10058



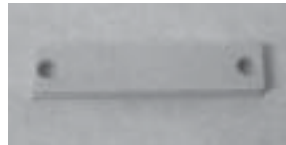
Probe
PP11065



Circuit Breaker
PP10460



Gas Valve
PP11140 - Nat Gas
PP11141 - LP



Gasket, Clean Out Port
PP11182



Hi Limit Switch
PP11064



Gasket, Drain Line
PP10032



Relay, Heat Demand & Gas Valve
PP11068



Clamp, Band
PP11172



Relay, Hood System
PP11033



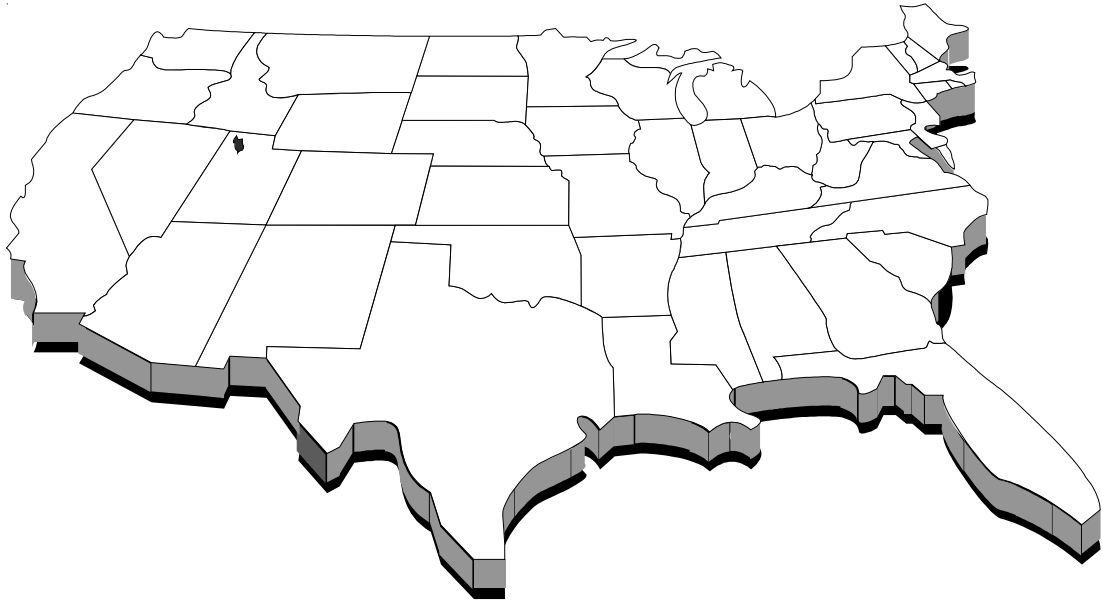
Valve, Ball 3/8"
P6071780



Transformer
PP10210



Pressure Switch
PP11066



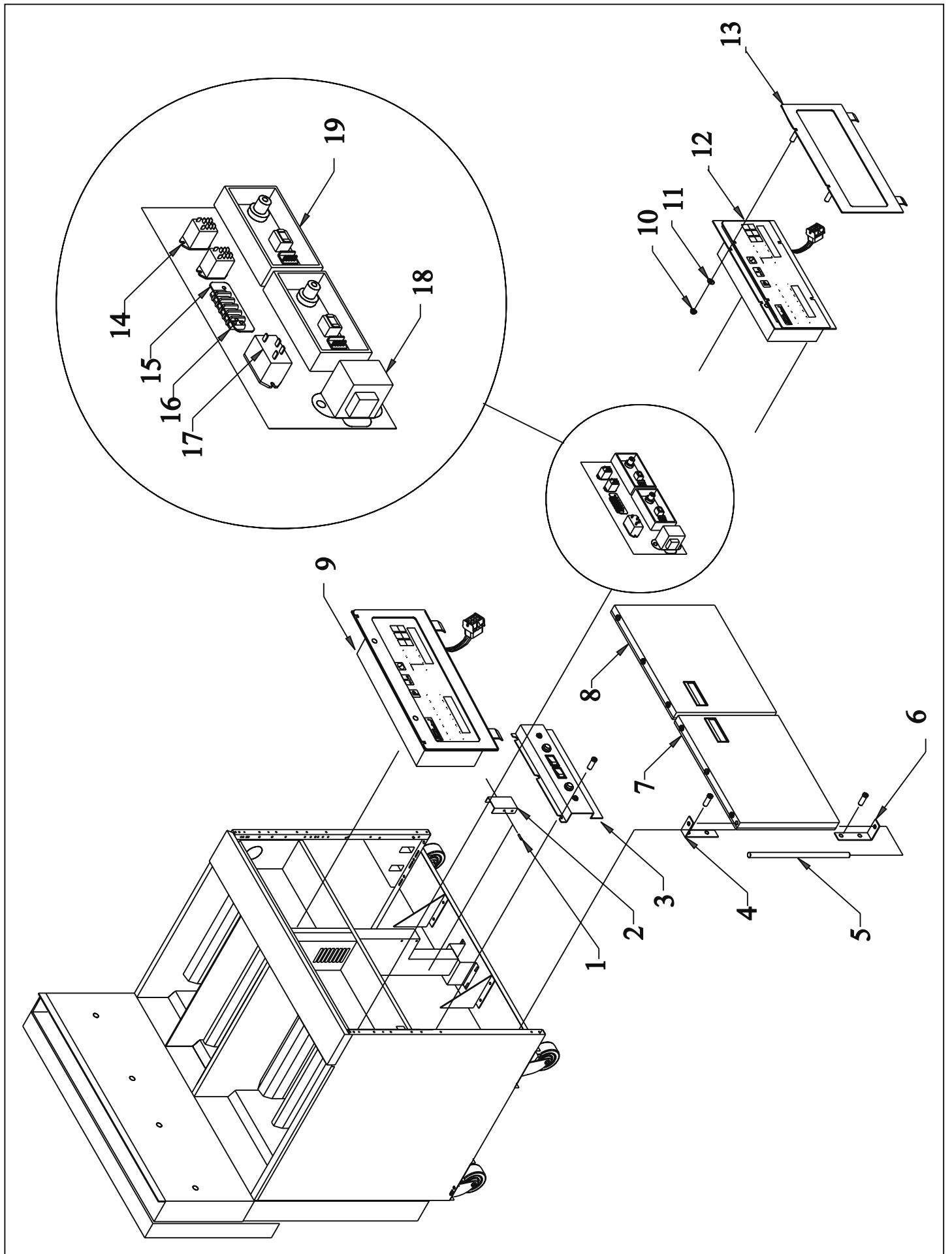
In the event of problems with or questions about your order, please contact the Pitco Frialator factory, from 8:00 a.m. - 5:00 p.m., Eastern Standard Time, Monday through Friday, toll-free at:

(800)258-3708 US and Canada only or
(603)225-6684 World Wide

AG14 FRYER PARTS BREAKDOWN

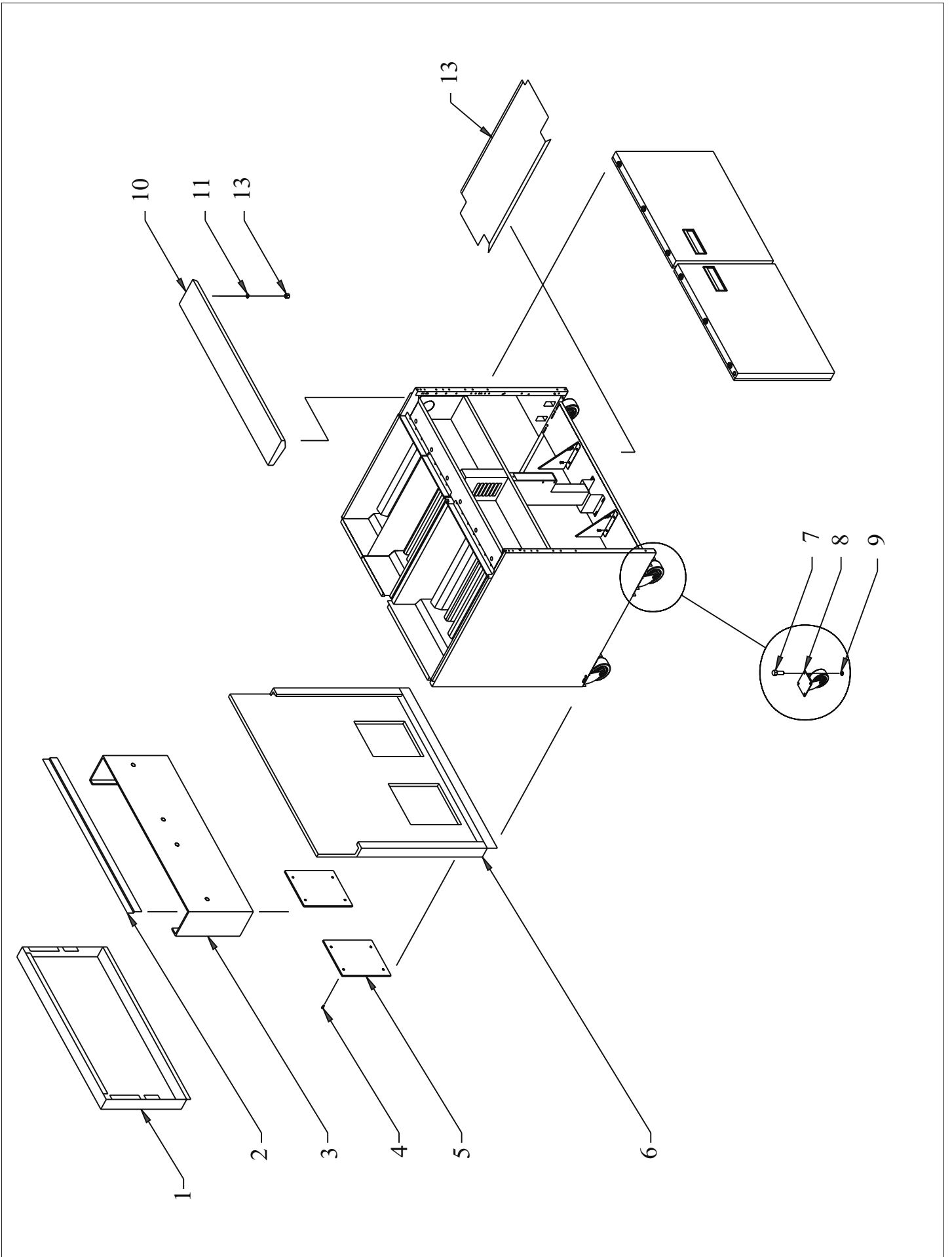
AG14 FRYER FRONT PARTS LISTS

I.D. #	PART #	PART DESCRIPTION
1	PP10752	10-32 X 1/2" SCREW
2	A1830901	MAGNET STRIKER PLATE
.....	A1835001	MAGNET STRIKER PLATE COVER
3	A1837501	SWITCH MOUNTING PLATE
4	A3802901	TOP RIGHT & LEFT DOOR HINGE
5	B3801301-C	DOOR HINGE PIN
6	A3802903	BOTTOM RIGHT & LEFT DOOR HINGE
7	B2302301-C	LEFT DOOR ASSEMBLY
8	B2302302-C	RIGHT DOOR ASSEMBLY
9	B3626803-C	CE COMPUTER BEZLE ASSEMBLY FULL
.....	B3626804-C	CE COMPUTER BEZLE ASSEMBLY SPLIT
10	P0092300	10-24 HEX NUT
11	P0080601	#10 FLAT WASHER
12	PP11370	I-12 COMPUTER (SINGLE)
.....	PP11372	I-12 COMPUTER (DUAL)
13	B362601-C	COMPUTER BEZLE
14	PP11068	HEAT DEMAND RELAY
.....	P5046688	MAIN GAS VALVE RELAY
15	A5059102	TERMINAL STRIP COVER
16	P5045282	WIRE TERMINAL STRIP
17	PP11058	FILTER PUMP RELAY
18	PP10429	TRANSFORMER CE
.....	PP10210	TRANSFORMER DOMESTIC
19	PP11225	SPARK IGNITION MODULE DOMESTIC
.....	PP11145	SPARK IGNITION MODULE CE



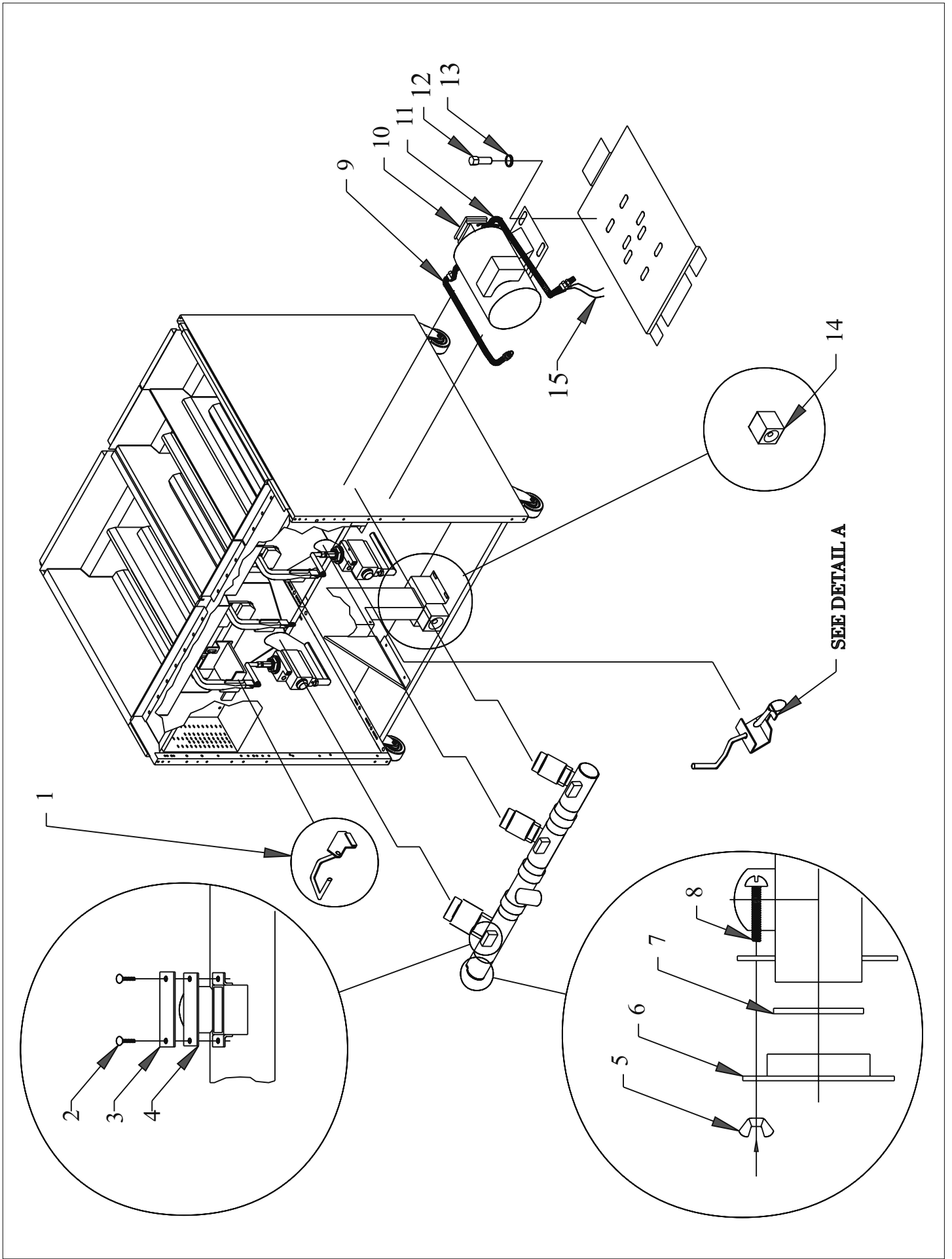
AG14 FRYER CABINET PARTS LISTS

I.D. #	PART #	PART DESCRIPTION
1	A1834301	DUAL FRYER CABINET COVER (STAND-
(For fryers without capping piece).	A1834101	TRIPLE FRYER CABINET COVER OFF)
	A1834301+ A1834301	QUAD FRYER CABINET COVER
	A1834301+ A1834101	QUINT FRYER CABINET COVER
2	A4106302	SINGLE BACK SPLASH SEAL ANGLE
(For fryers without capping piece)	A4105502	DUAL BACK SPLASH SEAL ANGLE
	A4105602	TRIPLE BACK SPLASH SEAL ANGLE
	A4105702	QUAD BACK SPLASH SEAL ANGLE
	A4105802	QUINT BACK SPLASH SEAL ANGLE
3	B4101601-C	SINGLE FRYER BACK SPLASH
	B4101001-C	DUAL FRYER BACK SPLASH
	B4101101-C	TRIPLE FRYER BACK SPLASH
	B4101201-C	QUAD FRYER BACK SPLASH
	B4101701-C	QUINT FRYER BACK SPLASH
4	PP10752	10-32 X 1/2" SCREW
5	A1623901	REAR CABINET ACCESS PLATE (STEEL)
	A1623902	REAR CABINET ACCESS PLATE (SS)
6	A1623501+A1623502	SINGLE FRYER CABINET BACK
(1 st #galvanized, 2 nd # stainless)	A1623601+A1623502	DUAL FRYER CABINET BACK
	A1623701+A1623702	TRIPLE FRYER CABINET BACK
	A1623801+A1623802	TRIPLE FRYER CABINET BACK TOP
	USE DUAL TWICE	QUAD FRYER CABINET BACK
	USE DUAL & TRIPLE	QUINT FRYER CABINET BACK
7	P0020600	1/4" X 5/8" BOLT
8	PP10815	9" LOCKING CASTER
8	PP10814	9" NON-LOCKING CASTER
9	P0093300	1/4" X 20 NUT
10	B3622401-C	SINGLE FRONT PANEL TOP DECK
	B3627001-C	DUAL FRONT PANEL TOP DECK
	B3627201-C	TRIPLE FRONT PANEL TOP DECK
	B3627401-C	QUAD FRONT PANEL TOP DECK
	B3628201-C	QUINT FRONT PANEL TOP DECK
11	P0080650	1/4" FLAT WASHER
12	P0093300	1/4" X 20 NUT
13	A1838101	SINGLE CABINET BOTTOM PLATE
	A1834501	CABINET BOTTOM PLATE LEFT HAND
(Non-filter)	A1839301	DUAL CABINET BOTTOM PLATE
(Non filter)	A1839303	TRIPLE CABINET BOTTOM
(Filter)	A1839401	TRIPLE CABINET BOTTOM RIGHT H.
	A1839501	PUMP BOTTOM COVER



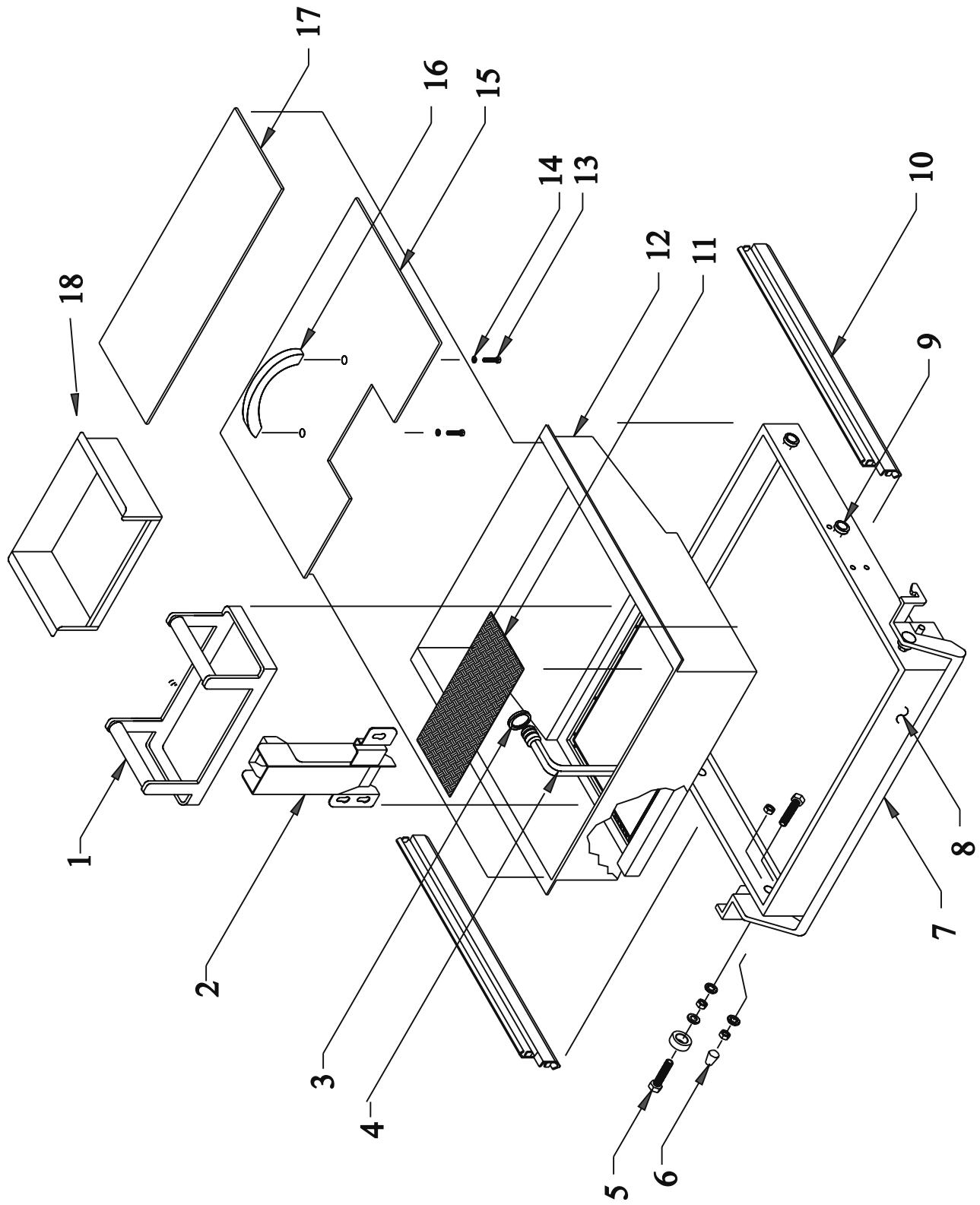
AG14 FRYER FILTER PARTS LISTS

I.D. #	PART #	PART DESCRIPTION
1	B4003203-C	OIL RETURN HANDLE FULL & RH SPLIT
	B4003204-C	OIL RETURN HANDLE LH SPLIT
2	P0079500	10-24 X 1/2" SCREW
3	A7004401	DRAIN LINE CLEAN OUT COVER
4	PP11182	CLEAN OUT COVER GASKET
5	PP10568	10-24 WING NUT
6	B6643101-C	FILTER DRAIN LINE END CAP
7	PP11181	DRAIN LINE END CAP GASKET
8	PP10696	10-24 X 1/2" SCREW
9	PP11241	FLEX TUBING WITH FITTINGS 18"
10	B6638601-C	PUMP & MOTOR ASSEMBLY 115VAC
(Including tubing & heat tape) ...	B6638602-C	PUMP & MOTOR ASSEMBLY 240VAC
(Including tubing & heat tape) ...	B6638603-C	PUMP & MOTOR ASSEMBLY 220VAC
(Pump & motor only)	PP10101	PUMP & MOTOR ASSEMBLY 115-230VAC
	PP10416	MOTOR ONLY 115-230VAC
(Pump & motor only)	PP10171	PUMP AND MOTOR ASSEMBLY
	PP10417	PUMP ONLY
11	PP11242	FLEX TUBING WITH FITTINGS 20"
12	P0020600	1/4-20 X 5/8 BOLT
13	P0080650	1/4 FLAT WASHER
14	B6652601-C	FILTER RETURN RECEPTICLE ASSY.
15	PP10039	HEAT TAPE 165 WATT 110VAC 79"
	PP10080	HEAT TAPE 165 WATT 240VAC 79"
	PP10194	HEAT TAPE 96 WATT 110VAC 48"
	PP10598	HEAT TAPE 96 WATT 240VAC 48"



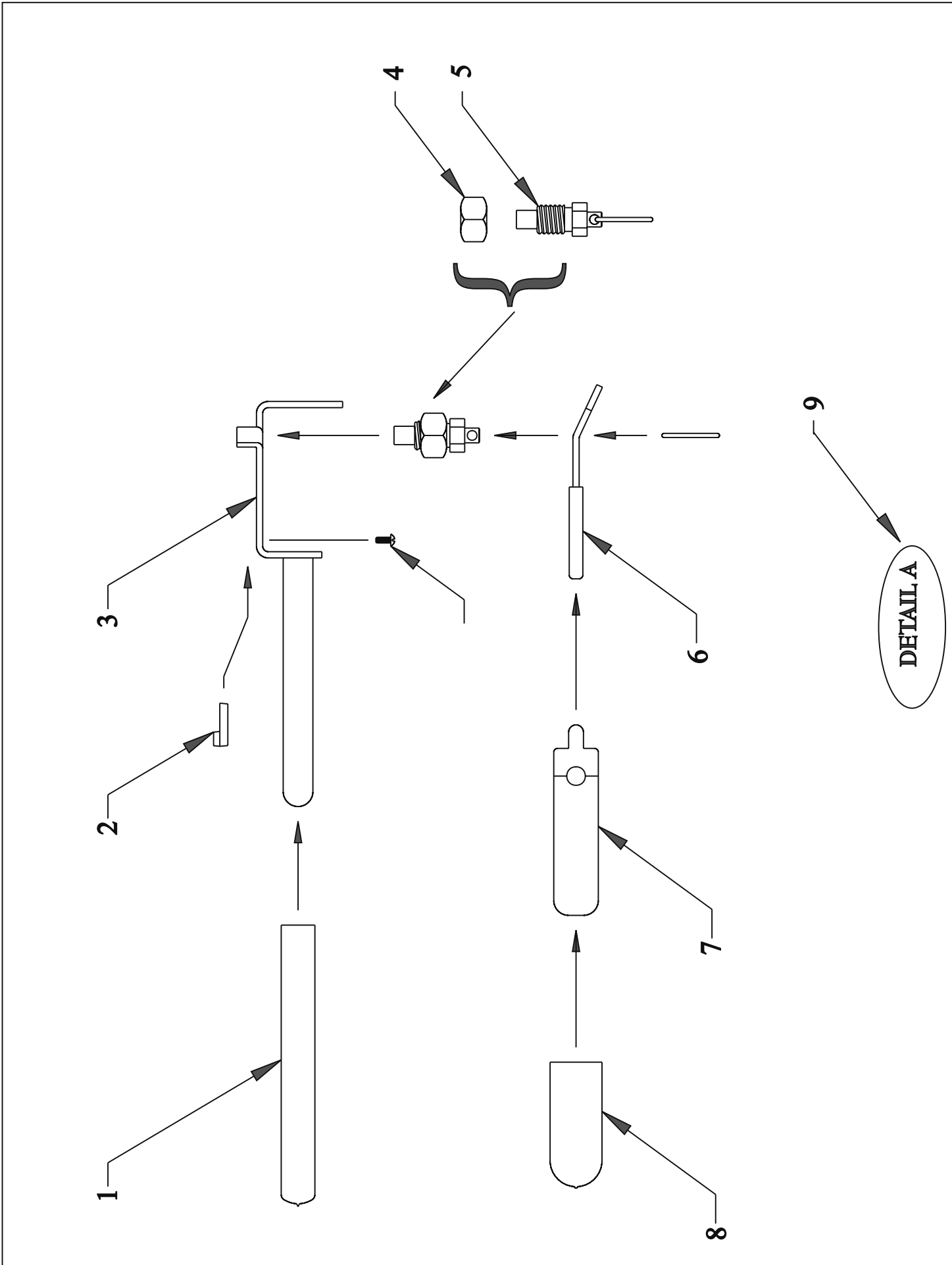
AG14 FRYER FILTER DRAWER PARTS LISTS

I.D. #	PART #	PART DESCRIPTION
1	B6640901-C	PAPER RETAINING RACK
2	B6647701-C	OIL DRAIN CATCH TOWER
3	PP10409	FILTER COUPLING "O" RING
4	B6661601-C	FILTER PICK-UP ASSEMBLY
5	P0020900	1/4-20 HEX HEAD SCREW
	P6071020	1/4" NYLON BUSHING
	P0080650	1/4" FLAT WASHER
	P0093300	1/4-20 NUT
6	PP10177	VINYL PROTECTIVE COVER
	P0093300	1/4-20 NUT
	P0080650	1/4" FLAT WASHER
	P0020900	1/4-20 HEX HEAD SCREW
7	B6640701-C	FILTER DRAWER HANDLE
8	B6640601-C	FILTER DRAWER WELDMENT
9	PP11152	ROLLER WHEEL KIT
10	B6656801-C	FILTER DRAWER EXTENSION RAIL (RH)
	B6656802-C	FILTER DRAWER EXTENSION RAIL (LH)
11	A7008302	PAPER SUPPORT RACK
12	B6661501-C	FILTER PAN
13	P0007300	8-32 X 1/4" SCREW
14	PP10900	FLAT WASHER
15	B6641001-C	FRONT FILTER PAN COVER W/HANDLE
	A7001102	FRONT FILTER PAN COVER NO HANDLE
16	P6071516	FILTER PAN COVER HANDLE
17	A7013502	REAR FILTER PAN COVER
18	B6654101-C	CRUMB CATCH BASKET



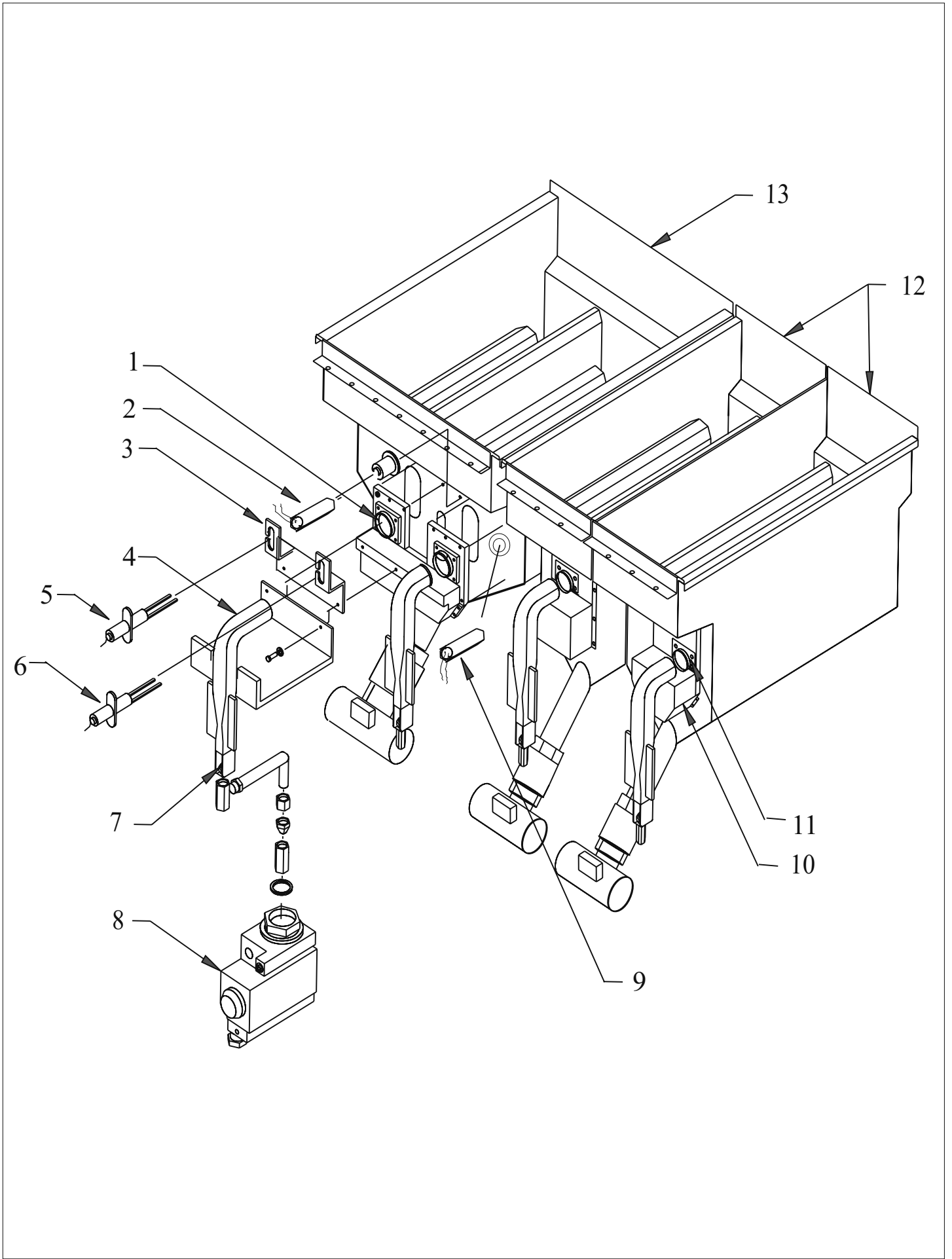
AG14 FRYER DRAIN VALVE HANDLE PARTS ASSEMBLY

I.D. #	PART #	PART DESCRIPTION
1	PP11302	VINYL DRAIN VALVE HANDLE COVER
2	PP10263	DRAIN PROXIMITY SWITCH ACTUATOR
3	B4002902-C	DRAIN VALVE HANDLE FULL, RH SPLIT
	B4002901-C	DRAIN VALVE HANDLE LH SPLIT VAT
4	PP10266	4-40 X 1/4" SCREW
5	PP10647	1/2-13 NUT
6	PP11059	PLUNGER ASSEMBLY
7	A4015801	DRAIN HANDLE RELEASE LEVER
8	PP11303	RELEASE LEVER VINYL COVER
9	B4003001-C	FULL VAT HANDLE ASSEMBLY
(Complete drain valve handle assy)	B4003003-C	LH SPLIT VAT HANDLE ASSEMBLY
	B4003005-C	RH SPLIT VAT HANDLE ASSEMBLY



AG14 GAS & BURNER SYSTEM PARTS LISTS

I.D. #	PART #	PART DESCRIPTION
1	B3317701-C	FULL VAT BURNER BOX ASSEMBLY
	B3321101-C	FULL VAT BURNER BOX INSULATION KIT
2	PP11064	HI LIMIT SWITCH
3	A8027301	IGNITOR MOUNTING BRACKET
4	B8022301-C	BURNER (DOMESTIC)
	B8027001-C	BURNER (CE GERMANY)(CE LP)
5	PP11131	IGNITOR (DOMESTIC)
	PP11193	IGNITOR (CE)
6	PP11193	FLAME SENSOR (CE)
7	CALL SERVICE AGENT FOR #BURNER ORIFICE	
8	PP10958	CE GAS VALVE (NAT)
	PP11112	CE GAS VALVE (PROPANE)
9	B3316801-C	TEMPERATURE PROBE ASSEMBLY
10	B3314801-C	SPLIT VAT BURNER BOX ASSEMBLY LH
	B3314802-C	SPLIT VAT BURNER BOX ASSEMBLY RH
	B3321201-C	SPLIT VAT BURNER BOX INSULATION KIT
11	B8021602-C	COMBUSTION TUBE (FULL & SPLIT VAT)
12	B3316601-C	SPLIT VAT TANK
13	B3316501-C	FULL VAT TANK



AG14 FRYER ACCESSORIES PARTS LISTS

I.D. #	PART #	PART DESCRIPTION
1	B2100903-C	COVER ASSEMBLY (SPLIT VAT)
2	PP11332	FRYER COVER HANDLE
3	P0082400	
4	PP10693	
5	A1103202	BASKET HANGER
6	A1907504	CHANNEL STRIP INTERIOR OF A SPLIT
	A1906804	CHANNEL STRIP (SPLIT TO SPLIT VAT)
7	A1906804	CHANNEL STRIP (SPLIT TO FULL, FULL TO FULL VAT)
8	P6073148	TUBE RACK (FULL VAT)
	B4510401-C	TUBE RACK (SPLIT VAT)
9	B2100904-C	COVER ASSEMBLY (FULL VAT)

