

GAS FRYER with FILTER MODEL MG14S-C/MFD MANUFACTURED EXCLUSIVELY FOR

MCDONALD'S®



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Literature # L20-140 Rev 0

Rev Date 9 July 1996

Made in the United States of America

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 IN-STRUCTIONS 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, OP-ERATING 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 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

To prevent tipping of the machine and splashing of HOT oil your Pitco Frialator fryer is equipped with a Gas Hose Quick Disconnect and restraining device. This attaches the rear of the machine to the wall. 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.

WARRANTY STATEMENT

Pitco Frialator, Inc. makes the following limited warranties to the original purchaser only for this equipment and replacement parts:

1. WARRANTY PROVISIONS - FRYERS

- A. Pitco Frialator, Inc. warrants all parts, with the exception of the frypot, computer, burner and Heat Tube Baffle for 1 year after the date of installation of the fryer.
- B. If any parts become defective during the first year after the installation date, Pitco Frialator will also pay for the labor, freight and travel costs involved in replacing said part.

2. WARRANTY PROVISIONS - FRYPOTS

- A. If a frypot develops a leak due to a defect in material or workmanship within the first 10 years after installation, Pitco Frialator, Inc. will either weld or replace, at its discretion, the frypot.
- B. The customer will be responsible for all freight, labor and travel charges for this repair, except within the period stated in section 1-B.

3. WARRANTY PROVISIONS - COMPUTER

- A. Pitco Frialator, Inc. will warrant the Intelli-fry Computer from defects in material or workmanship for a period of two years.
- B. If the computer is found to be defective during the first 2 years after the installation date, Pitco Frialator Inc. will also pay for the labor, freight and travel costs involved in replacing said part.

4. WARRANTY PROVISIONS - BURNERS

- A. Pitco Frialator, Inc. will warrant the Burners from defects in material or workmanship for a period of 10 years.
- B. The customer will be responsible for all freight, labor and travel charges for this repair, except within the period stated in section 1-B.

- 5. WARRANTY PROVISIONS HEAT TUBE BAFFLES
 - A. Pitco Frialator, Inc. will warrant the Heat Tube Baffles from defects in material or workmanship for a period of 3 years.
 - B. The customer will be responsible for all freight, labor and travel charges for this repair, except within the period stated in section 1-B.

Retain this manual for future reference

Table of Contents

WARRANTY STATEMENT	
INSTALLATION INSTRUCTIONS	1
Ventilation	1
A note on Excessive Air Velocities within Hood systems	1
Quick Disconnect Gas Connection	1
Fuel Supply Line Leak and Pressure Testing	2
Clearances	2
Leveling the fryers	2
Filling the fryer with oil	2
Chapter 1: HOW DOES IT WORK?	3
Heating System	3
Hi - Limit System	3
Filter System	3
Hood Relay System	3
Chapter 2: COMPONENT TROUBLESHOOTING.	5
Probe	5
Relays	5
Hi Limits	5
Drain Valve & Return Valve Switches	5
Transformer.	6
Blower	6
Pressure Switch	6
Gas Valve	6
Chapter 3: TROUBLESHOOTING GUIDE	7
Frvers	.7
Filters	8
Chapter 4: COMPONENT CHANGEOUT.	9
Prohes	9
Hi Limits	9
Computers	9
Components mounted in the front panel	10
Hood & Filter Relays	10
Control Relays	10
Circuit Breaker	11
Gas Valves	11
Burners and Spark Ignitors	11
Proximity Switches	12
Blowers	12
Pressure Switches.	12
Fry Vats	13
Chapter 5: Parts	15
Operational Components	15
Filter	15
Miscellaneous	15
Wiring Harnesses	16
Chapter & Darts Identification	17
Chapter 7: Schemetics	1/
	10

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-B 149.1 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.

NOTE: Should you experience a power failure, your fryers will shut off automatically. If this happens, do not attempt to restart the fryers until the power is restored.

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 Na tional Fire Protection Association, Battery March Park, Quincy, MA 02269

NOTE: It is recommended that the ventilation system be cleaned and maintained in accordance with the procedures laid out in the appropriate Preventa-tive Maintenance Card.

<u>A note on Excessive Air Velocities within Hood</u> systems:

Extended recovery times and flame outage problems may occur if Hood Air Velocities are excessively high.

The installation of a small baffle may be necessary if problems occur.



The baffle should be installed in the position shown in the picture, using two self drilling screws.

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 (>) 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 ([) 1/2 PSI (3.45 kPa), the machine can be connected to the supply but the gas valve must be shut.

Clearances:

WARNING:

Area must be kept clear of all combustible materials.

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.

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

The control (interlock) voltage for this equipment must be 120 VAC (US & Canada). For other countries please check the rating plate.

Regular cleaning of this equipment, as well as the hood, is an important part of proper maintenance. Refer to Maintenance Requirement Cards for proper procedure and frequency.

Leveling the fryers:

Leveling the fryers will help ensure proper operation. To level the fryers loosen the two set screws on the caster stem. Rotate the collar of the caster to raise or lower the height of the unit. Tighten the set screws to lock adjustment.

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 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 heating elements.

Clean the fry tanks using the Boil Out procedure on Maintenance Card Number 14A

Retain this manual for future reference.

Chapter 1: HOW DOES IT WORK?

The McDonald's 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 (S3) will supply 24 VAC to the DVI (Drain Valve Interlock) Input at the computer.

The computer is turned ON:

The first computer in the "battery" of fryers (this includes either side of a split vat) to be turned ON will energize a Relay (K15) that will turn the Hood system ON.

Computer calls for heat:

The Heat Demand Relay (K1) will energize supplying the Blower, the Pilot Solenoid on the Gas Valve and the Ignition Control Modules (El & E2) with power. Both Ignition Control Modules supply power to the Spark Ignitors. At the same time one of the Ignition Control Modules (E2) supplies power to the Gas Cut Off Relay (K6). The Gas Cut Off Relay (K6) energizes allowing the second Ignition Control Module (El) to supply power to the normally open Pressure Switch (S9). When the Blower comes up to speed, which should take a couple of seconds, the Pressure Switch (S9) 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 (El & E2) 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 (El & E2) will "Lock Out" and cease to run until reenergized. On Split Vat machines the same power that supplies the computer also supplies 24 VAC to the normally open Pressure Switch (S9). When the computer en

ergizes the Heat Demand Relay (K1) 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 (S9) and allow 24 VAC to go to the second set of contacts within the Heat Demand Relay (K1), since the Heat Demand Relay (K1) is now closed the Ignition Control Module (El) and Hi Limit Switch (SI) will receive 24 VAC. If the Hi Limit Switch (S1)iis NOT tripped it will allow 24 VAC to be supplied to the Pilot Solenoid of the Gas Valve. The Ignition Control Module (SI) supplies 24VAC to the Main Solenoid of the Gas valve. The Ignition Control Module (El) 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 (El) will "Lock Out" and cease to run until reenergizes.

Hi - Limit System:

When the Hi Limit (SI) 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 computer will show "IGNITION" "FAILURE". The Hi Limit (SI) is an automatic reset type switch. In order to make the computer recognize that the Hi Limit (SI) has reset it must be turned OFF and back ON again.

Filter System:

Opening the RED Return Valve Handle will cause the Pump On Relay to be energized and the pump will begin to pump. Closing the Return Valve Handle will de - energize the Relay and the Pump will stop pumping.

Hood Relay System:

There is one Hood Relay (K15) per "battery" of fryers, it is wired in parallel to every computer (both sides of a split vat). When any side of any computer is turned ON this Relay (K15) will energize and will stay energized until all of the computers are turned OFF.



Chapter 2: COMPONENT TROUBLESHOOTING:

Probe:

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

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 $325-375^{\circ}F$ ($162^{\circ}C - 190^{\circ}C$) 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:

The Heat Demand and Hood relays are 24VDC relays and will energize when the correct voltage is supplied to the coil. When energizing, the relay Switching Contacts will close, thus connecting the Common and Normally Open terminals. The Hi -Limit relay is a 24VAC relay and may be checked in the same manner as the above relay.

<u>Hi Limits:</u>

A Hi - Limit switch is a normally closed switch until the temperature at the probe reaches $435^{\circ}F \pm 15^{\circ}$ $(225^{\circ}C \pm 15^{\circ})$. In order to test this switch it will be necessary to bypass the Heat Demand Relay. Follow the Hi Limit testing proceedure outlined on page 8 of the Operating Manual.

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.

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

Drain Valve & Return Valve Switches:

This switch is a magnetically operated Reed switch. 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.

Chapter 3: 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	A. Main circuit breaker is turned off B. Fryer fuse is blown	A. Locate the correct circuit breaker and turn OFF and back ON again.
	C. Transformer	B. Check and Replace as needed C. Check Transformer
Computer heat light comes on but burners do not	A If the oil is hot the Hi Limit may be tripped	A. Allow the oil to cool, the Hi Limit will reset itself. Turn the computer OFF and back ON again to reset the computer.
Computer display shows "OFF" and cannot be turned "ON"	A. Computer	A. Switch circuit breaker OFF and ON again to try to reset computer, if this does not remedy the problem, replace computer.
Heat Light ON, Computer shows "IGNITION" "FAILURE"	 A. Heat Demand Relay B. F2 Fuse may be blown C. Blower D. Pressure Switch E. Gas Valve F. Ignition Module (One or both) G. Gas Valve Relay (Full Vat Only) H. Tripped or defective Hi Limit 	 A. Check Heat Demand Relay. B. Check and replace as needed. C. Check and replace as needed. D. Check and replace as needed. E. Check and replace as needed. F. Check and replace as needed. G. Check and replace as needed. H. Allow the oil to cool, the Hi Limit will reset itself. Turn the computer OFF and back ON again to reset the computer. Check and replace is needed.
No Spark heard, blower IS running	A. Heat Demand Relay B. Ignition Control Module C. Spark Ignitor	A. Check and replace where needed.B. Check and replace where needed.C. Check and replace where needed.
Spark sound can be heard, Blower NOT running	A. F2 fuse blown B. Blower C. Heat Demand Relay	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	 A. Ignition Control Module B. Gas Valve Relay (Full Vat Only) C. Bad Pressure Switch D. Tripped or defective Hi limit E. Gas Valve 	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	A. Flame Sensor B. Ignition Control Module C. Gas Valve	A. Check and replace where needed.B. Check and replace where needed.C. Check and replace where needed.
Computer controls left side of split vat only	A. Wiring harnesses attached in wrong order	A. Remove power to machine, power up again. Unplug both sides of computer, plug in right side first then the left side.

<u>Filters:</u>

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Red Return Valve is open but no pump sound can be heard	A. Red Return Valve NOT fully open B. Filter Circuit Breaker may be tripped	A. Pull slightly on the Red handle to check that it is fully open.
	C. Filter Motor Thermal Overload may	B. Locate the circuit breaker and reset.
	be tripped	C. Push Red reset button located on end of
	D. Sensor switch may be loose or bad	filter motor.
		D. Check that the switch is tight in its
		mounting. If switch is bad replace it.
Drain valve is closed and the	A. Green Drain Valve is NOT fully	A. Apply a little more pressure to the
computer has been reset but	Closed	Green Handle to check that it is
still shows "DRAINING" or	B. Sensor switch may be loose or bad	fully closed.
"TURN OFF"		B. Check that the switch is tight in its
		mounting. If switch is bad replace it.
Drain Valve is OPEN, the oil	A. Green Drain Valve is NOT fully open	A. Apply a little more pressure to the
is draining slowly or not at all.	B. Drain is plugged with debris	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.
		CAUTION:
		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.

Chapter 4: COMPONENT CHANGEOUT:

Computers:

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 vat.



Install in the reverse order.

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 vat machines you will find 2 wiring connections to unplug.



Install in the reverse order.

NOTE: When installing computers in Split Vat machines, the right side harness must be plugged in before the left side harness or the computer will NOT operate in Split Vat mode. If the computer is in Full Vat mode on a Split Vat machine, remove electrical power from the machine. When the power is returned to the fryer the computer will reset itself to Split Vat operation.

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 in the above instructions.

The components within the front panel area can now be accessed.

Hood & Filter Relays:



These relays are always wired in the following manner -



Control Relays:



Control relays are always wired in the following manner -



<u>Filter Pumps:</u>

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.



- 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.

Gas Valves:

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





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.



3. 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 attatched. Remove the motor from the blower housing in the above manner. Clean the sealant from the new motor and the old housing (still attatched 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.



4. Remove the 2 screws from the mounting bracket.

Install in the reverse order.

Fry Vats:

Full Vats-

- 1. Remove ALL of the computer/controllers from the machine.
- 2. Remove the burners and ignitors from the vat 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. Remove the 3 screws from the front of each unit.



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



9. Remove the front deck from the machine.



10. Remove all of the screws holding the front of the vat.



11. Remove the brackets located inside the splash back.



12. Remove the upper rear cover.



13. Remove the complete splash back assembly.



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



Split vats-

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

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

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

Install in the reverse order.

14. Remove the lower rear back cover.

Chapter 5: Parts

Operational Components:

Part	Schematic	Description
Number	Nomenclature	
PP11163	Al	Computer/Controller
PP11144	A2/A3	Ignition Control Module
PP11067	Ml	Blower
PP11131		Ignitor/Flame Sensor
PP11065	RT1	Probe
PP11140	VI	Gas Valve, NAT
PP11141	VI	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	S 3	Proximity Switch, Sensor
PP10263	S 3	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	PP10409	O-Ring
PP10/16	Motor Only	A7001701	Bracket, Drawer Roller Mount
DD10417	Prove Only	P6071123	Quick Disconnect, Male
PP10417	File U O (1.)	B4002001	Handle, Return Valve LH
B6602417	Filter Hose, Outlet	B4002002	Handle, Return Valve RH
P60/1122	Quick Disconnect, Female	P6071780	Valve Ball 3/8"
PP10262	Proximity Switch, Sensor	PP11181	Gasket Drain End
PP10263	Proximity Switch, Actuator	DD11101	Gasket, Drain Lind
PP10058	Relay, Filter	FF11162	
PP10460	Circuit Breaker	A7004401	Cover, Tee Clean Out
PP11138	Gasket, Drain Line End	A6643701	Thumb Screw
PP11172	Clamp, Band		
PP10032	Gasket	Miscellaneous:	
B6641101	Filter Pan Assembly	Call Factory	Tank Full Vat
B6640801	Filter Drawer Assembly	Call Eastern	Tonk, I of Split Vot. w/ Cockete
B6641001	Lid, filter		Tank - Left Spint Val, w/ Gaskets
P6071516	Handle. Lid	Call Factory	Tank - Right Split Vat, w/ Gaskets
B6640901	Retainer Paper	B1003001	Baffle, Heat Tube
A7001202	Support Paper	B3502301	Flue
A7001202	Support, I apor	PP10814	Caster, 9" Non Lock

Part Number	Description
B2302301	Door, LH
B2302302	Door, RH
A3802901	Hinge, Top
A3 802903	Hinge, Bottom
B3801301	Hinge Rod
PP11006	Handle, Door
P6071305	Magnet Catch
PP10368	Drain Valve, Full Vat
P6071769	Drain Valve, Split Vat
A1401202	Clamp, Hi Limit Bulb
PP11130	Burner, Main
B4001601	Handle, Drain Valve, Full Vat
B4001701	Handle, Drain Valve, Split Vat LH
B4001702	Handle, Drain Valve, Split Vat RH
A4015801	Handle, Lever Stop Release
PP11059	Plunger
PP11132	Orifice, #31 Nat Gas
PP11170	Orifice, #49 LP Gas
B2100904	Cover, Full Vat
B2100901	Cover, Split Vat
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 Vat
B6730701	Harness, Split Vat
B6731101	Harness, Control Cable
B6731201	Harness, Filter Option
PP11128	Wire, Ignitor

Chapter 6: Parts Identification



Computer/Controller PP11163



Ignition Control Module PP11144



Blower PP11067



Ignitor/Flame sensor PP11131



Probe PP11065



Gas Valve PP11140-Nat Gas PP11141 -LP



Hi Limit Switch PP11064



Relay, Heat Demand & Gas Valve PP11068



Relay, Hood System PP11033



Transformer PP10210



Pressure Switch PP11066





Proximity switch. Sensor PP10262

Proximity Switch, Actuator PP10263

Motor, Filter

PP10101





Quick Disconnect P6071122 (Female) P6071123(Male)



Relay, Filter PP10058



Circuit Breaker PP10460



Gasket, Clean Out Port PP11182



Gasket, Drain Line PP10032



Clamp, Band PP11172



Valve, Ball 3/8" P6071780

Chapter 7 : Schematics

Schematic Description	Drawing Number
McDonalds Full Vat Domestic	700250
McDonalds Split Vat Domestic	700251

- To obtain copies of any McDonalds Operating or Service Manuals please contact Pitco Frialator at the address below, please reference the literature number for the publication you require:
 - L20-137 McDonalds Electric Operating Manual
 - L20-138 McDonalds Gas Operating Manual
 - L20-139 McDonalds Electric Service Manual
 - L20-140 McDonalds Gas Service Manual

In the event of problems with or questions about you 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

In the event of problems with or questions about you equipment, please contact the Pitco Frialator Authorized Service and Parts representative (ASAP) covering you area, through the National Service Network at:

(800)298-1862 US only, 24 hours