PITCO®

IMPORTANT FOR FUTURE REFERENCE

Please complete this information and retain this manual for the life of the equipment:

Model #: _____

Serial #: _____

Date Purchased: _____

ENGLISH

Installation & Operation Manual

MGII: McDonald's Full and Split Gas Fryers with and without Filter

NSF® DESIGN CERTIFIED CERTIFIED CE

L20-234 Rev. 2 (12/06)

TO THE PURCHASER, OWNER AND STORE MANAGER

Please review these warnings prior to posting them in a prominent location for reference.

TO THE PURCHASER

Post in a prominent location the instructions to be followed in the event that an operator smells gas. Obtain this information from your local gas supplier.

WARNING

DO NOT store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WARNING

Improper installation, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this appliance.

WARNING

Installation, maintenance and repairs should be performed by a Pitco Authorized Service and Parts (ASAP) company technician or other qualified personnel. Installation, maintenance or repairs by unauthorized and unqualified personnel will void the warranty.

WARNING

Installation and all connections must be made according to national and local regulations and codes in force.

WARNING

During the warranty period if a customer elects to use a non-original part or modifies an original part purchased from Pitco and/or its Authorized Service and Parts (ASAP) companies, this warranty will be void. In addition, Pitco and its affiliates will not be liable for any claims, damages or expenses incurred by the customer which arises directly or indirectly, in whole or in part, due to the installation of any modified part and/or received from an unauthorized service center.

WARNING

This appliance, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.2, as applicable.

WARNING

Adequate means must be provided to limit the movement or this appliance without depending on the gas or electrical cord connection. Single appliances equipped with legs must be stabilized by installing anchor straps. All appliances equipped with casters must be stabilized by installing restraining chains, or equivalent means.

WARNING

An appliance equipped with casters and a flexible gas line must be connected to the gas supply with a quick disconnect device. This quick disconnect must comply with ANSI Z24.41.

WARNING

DO NOT alter or remove structural material on the appliance to accommodate placement under a ventilation hood.

WARNING

This appliance is intended for professional use only and should be operated by fully trained and qualified personnel.

WARNING

If the appliance is equipped with a power cord and it is damaged, it must be replaced by a Pitco Authorized Service and Parts (ASAP) company technician, or a similarly qualified person in order to avoid a hazard.

WARNING

The power supply must be disconnected before servicing, maintaining or cleaning this appliance.

WARNING

The appliance is NOT jet stream approved. DO NOT clean the appliance with a water jet.

WARNING

DO NOT attempt to move this appliance or transfer hot liquids from one container to another when the unit is at operating temperature or filled with hot liquids. Serious personal injury could result if skin comes in contact with the hot surfaces or liquids.

WARNING

DO NOT sit or stand on this appliance. The appliance's front panel, tank, splash back, tank cover, workshelf, drain board is not a step. Serious injury could result from slipping, falling or contact with hot liquids.

WARNING

NEVER use the appliance as a step for cleaning or accessing the ventilation hood. Serious injury could result from slips, trips or from contacting hot liquids.

WARNING

The oil/shortening level should NOT fall below the minimum indicated level line at any time. The use of old shortening can be dangerous as it will have a reduced flash point and be more prone to surge boiling.

WARNING

The particles, crumbs and cracklings from the crumb tray/catch (if supplied) in a filtering system must be emptied into a fireproof container at the end of the frying operation each day. Some food particles can spontaneously combust into flames if left soaking in certain oil/shortening materials.

WARNING

Completely shut the appliance down when oil/shortening is being drained from the appliance. This will prevent the appliance from heating up during the draining and filling process. Serious injury can occur.

WARNING

This appliance is intended for indoor use only.

WARNING

DO NOT operate appliance unless all panels and access covers are attached correctly.

WARNING

It is recommended that this appliance be inspected by a qualified service technician for proper performance and operation on a yearly basis.

WARNING

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

WARNING

DO NOT supply the appliance with a gas that is not indicated on the data plate. If you need to convert the appliance to another type of fuel, contact your Equipment Supplier or a Pitco Authorized Service and Parts (ASAP) Company.

WARNING

DO NOT use an open flame to check for gas leaks!

WARNING

If gas flow to appliance is interrupted, or pilots extinguish, wait 5 minutes before attempting to relight the pilot to allow any residual gas in appliance to dissipate.

WARNING

Ensure that the appliance can get enough air to keep the flame burning correctly. If the flame is starved for air, it can give off a dangerous carbon monoxide gas. Carbon monoxide is a clear odorless gas that can cause suffocation.

TABLE OF CONTENTS

1. INSTALLATION 5

1.1. CHECKING YOUR NEW APPLIANCE 5

1.2. INSTALLATION CLEARANCES 6

1.3. LEG/CASTER INSTALLATION AND LEVELING 7

1.4. GAS CONNECTION 8

1.4.1. QUICK DISCONNECT CONNECTION 8

1.4.2. FUEL SUPPLY LINE LEAK AND PRESSURE TESTING 8

1.4.3. CE GAS TABLE 9

1.5. ELECTRICAL CONNECTIONS 11

1.6. VENTILATION AND FIRE SAFETY SYSTEMS 12

1.7. INSPECTION 13

1.8. INITIAL ADJUSTMENTS 13

1.8.1. FILLING THE APPLIANCE 13

1.8.2. LIGHTING INSTRUCTIONS 14

1.8.3. PILOT FLAME ADJUSTMENT 14

1.8.4. MAIN BURNER SYSTEM ADJUSTMENT 15

1.8.5. FLUE BAFFLE ADJUSTMENT 15

1.9. INITIAL CLEANING 16

2. OPERATION 18

2.1. OPERATIONAL FEATURES 18

2.1.1. BASIC OPERATIONAL FEATURES (EXTERIOR VIEW) 19

2.1.2. BASIC OPERATIONAL FEATURES (INTERIOR VIEW) 20

2.2. FILLING THE FRYER TANK 22

2.2.1. FILLING THE TANK WITH LIQUID SHORTENING 22

2.2.2. FILLING THE TANK WITH SOLID SHORTENING 22

2.3. APPLIANCE START UP 23

2.4. COOKING 23

2.4.1. McDONALD's COMPUTER CONTROLLER 23

TABLE OF CONTENTS

2.5. APPLIANCE SHUTDOWN 23

2.5.1. STANDBY MODE 23

2.5.2. COMPLETE SHUTDOWN 23

3. PREVENTATIVE MAINTENANCE 24

3.1. DAILY PREVENTATIVE MAINTENANCE 24

3.1.1. FILTERING WITH A FILTER DRAWER 24

3.1.2. REPLACING THE FILTER MEDIA 25

3.1.3. APPLIANCE INSPECTION 27

3.2. WEEKLY PREVENTATIVE MAINTENANCE (REFER ALSO TO MCDONALD'S PM CARD FR014A.) 27

3.2.1. DRAINING THE TANK 27

3.2.2. CLEANING THE FRYER TANK 27

3.2.3. CLEANING THE CABINET 28

3.3. MONTHLY AND QUARTERLY PREVENTATIVE MAINTENANCE (REFER TO MCDONALD'S PM CARDS FR014A AND FR015.) 28

3.4. ANNUAL/PERIODIC PREVENTATIVE MAINTENANCE AND INSPECTION 29

3.4.1. TEMPERATURE PROBE & HIGH LIMIT PROBE 29

3.4.2. CONTROLLER 29

3.4.3. CONTROL BOX & ELECTRICAL COMPONENTS 29

3.4.4. TANK 29

3.4.5. DRAIN SYSTEM & FILTER SYSTEM (IF EQUIPPED) 29

3.5. VENTILATION HOOD 29

4. TROUBLESHOOTING 30

4.1. POWER FAILURE 30

4.2. HIGH TEMPERATURE LIMIT 30

4.3. TROUBLESHOOTING CHART 31

4.4. CONTROLLER WARNING DISPLAYS 34

1. INSTALLATION

1.1. CHECKING YOUR NEW APPLIANCE

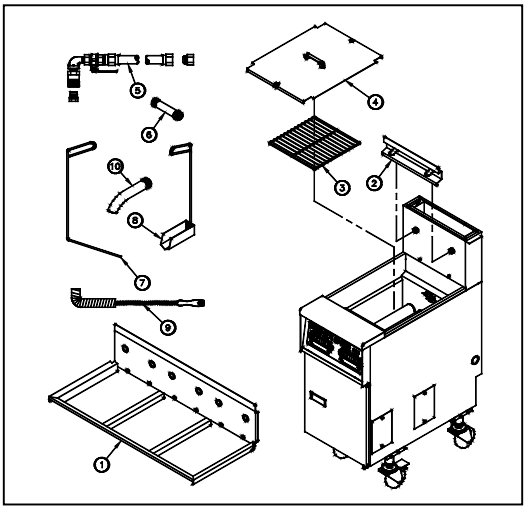
Your new Pitco appliance has been carefully packed into one crate. Every effort has been made to ensure that it is delivered to you in perfect condition. As you unpack your new appliance, inspect each of the pieces for damage. If something is damaged, DO NOT sign the bill of lading. Contact the shipper immediately; the shipper is only responsible for 15 days after delivery. Check the packing list enclosed with your appliance to ensure that you have received all the parts to the appliance. If you are missing any parts, contact the Equipment Supplier from whom the appliance was purchased. As you unpack the appliance and its accessories be careful to keep the weight of the appliance evenly distributed. Refer to the table below to identify which accessories should be included with your appliance.

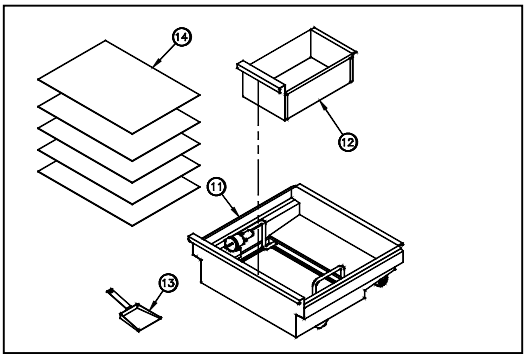
Locate your Pitco model number and serial number on the inner door of the appliance and the find the date purchased. Write this information on the front cover of this manual for future reference.

If you have completed the above steps that are applicable to the appliance you purchased, the appliance is now ready to be installed. Although it may be possible for you to install and set up your new appliance, it is STRONGLY recommended that you have this done by qualified professionals. A qualified professional will ensure that the installation is safe and meets local building and fire codes.

Accessories

#	Description	Quantity
1	Capping Piece (optional)	1/System
2	Basket Hanger	1/Fry tank
3	Tube Rack	1/Fry tank
4	Tank Cover	1/Fry Tank
5	Gas Hose	1/System
6	Pipe Nipple (for gas connection)	1/System
7	Clean Out Rod	1/System
8	Fryer Crumb Scoop	1/System
9	Fryer Cleaning Brush	1/System
10	Drain Nipple	1/System (non-filter units)
11	Filter Pan Assembly	1/System (if so equipped)
12	Filter Crumb Basket	1/Filter System
13	Filter Shovel	1/Filter System
14	Filter Pad or Paper (pkg. of 5)	1/Filter System





WARNING

DO NOT sit or stand on this appliance. The appliance's front panel, tank, splash back, tank cover, workshelf, drain board is not a step. Serious injury could result from slipping, falling or contact with hot liquids.

1.2. INSTALLATION CLEARANCES

The clearances shown below are for combustible and non-combustible installations and will allow for safe and proper operation of your appliance.

	Combustible Construction Inches (centimeters)	Non Combustible Construction Inches (centimeters)
Back	6.0" (15.24 cm)	0.0" (0.0 cm)
Sides	6.0" (15.24 cm)	0.0" (0.0 cm)
Floor	9.0” (22.86 cm)	9.0” (22.86 cm)

In addition to the above clearances there must also be at least 30 inches (76.2cm) of aisle space in front of the unit, to allow for filter pan removal.

WARNING	WARNING
DO NOT obstruct the flow of ventilation, or air openings around the appliance. Adequate clearance around the appliance is necessary for servicing and proper component ventilation. Ensure that you meet the minimum clearance requirements specified in this manual.	**DO NOT install this appliance next to a water cooker. A splash over of water into the hot oil may cause serious injury.**

CAUTION
To prevent equipment damage and/or personal injury, do not tilt the appliance onto any two of its casters or legs, or pull the appliance by the splash back.

1.3. LEG/CASTER INSTALLATION AND LEVELING

When you receive your appliance it is completely assembled with the possible exception of the legs (or casters). This appliance must be installed with legs or casters; it cannot be curb mounted. Curb mounting will seriously inhibit this appliance's ability to effect proper component ventilation. The legs/casters must be installed before connecting the appliance to the power supply. The legs provide the necessary height to meet sanitation requirements and assure adequate air supply to the combustion system. Use the following procedure.

WARNING
This appliance must be installed with the legs or casters provided by the manufacturer.

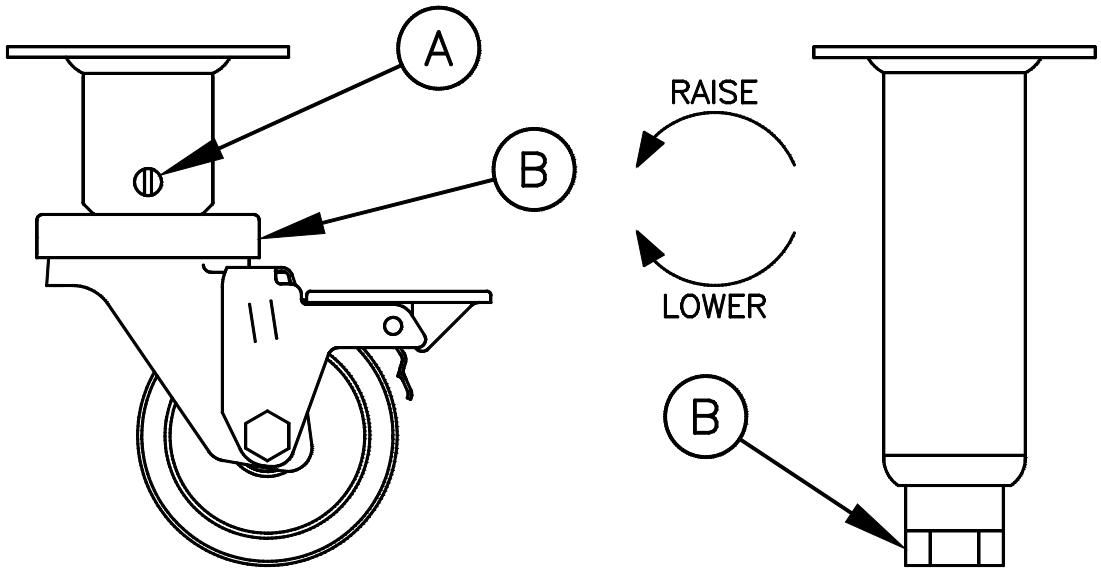
Required tools: 7/16" wrench and socket and a large pair of water pump pliers.

Note: *If the appliance was shipped with the legs or casters already installed proceed to step 4.*

1. Lay the appliance on its back, being careful not to damage the splash back by pulling on it. Protect the outside of the appliance with cardboard or a drop cloth when laying it down.
2. Attach each leg/caster with the hex head screws and nuts supplied. Each leg/caster requires four ¼-20 x 5/8" hex head screws and nuts. Insure that all screws are tight.
3. Mount the screws from the inside of the appliance with the nut on the outside (bottom) of the appliance. The nuts have lock washers attached to them; therefore it is not necessary to use separate lock washers.

WARNING
DO NOT install legs or casters, or perform leveling procedure when appliance is in operation or full of hot liquids. Serious injury could result.

4. When all four legs/casters are securely mounted, stand the unit up, being careful not to put too much weight on any one leg. Adjust the height and level the appliance by adjusting the leveling devices (B) with water pump pliers. On casters, loosen 2 screws (A) before leveling, make your height adjustments, then retighten.



1.4. GAS CONNECTION

Your appliance will give you peak performance when the gas supply line is of sufficient size to provide the correct gas flow. The gas line must be installed to meet the local building codes or National Fuel Gas Code ANS Z223.1 and NFPA 54 (latest editions). In Canada, install the appliance in accordance with CSA B149.1 or .2 and local codes. Gas line sizing requirements can be determined by a qualified installation professional, your local gas company or by referring to the National Gas Fuel Code, Appendix C, Table C-4 (for natural gas) and Table C-16 (for propane). The gas line needs to be large enough to supply the necessary amount of fuel to all appliances without losing pressure to any appliance. **A properly sized and installed gas line will deliver a minimum supply pressure of 7.0" W.C. (17.4mbars, 1.74kPa) natural gas or 13.0" W.C. (32.4mbars, 3.25kPa) propane to all appliances connected to the supply line, operating simultaneously at full demand.**

Each appliance is equipped to operate on one certain fuel type. The type of fuel with which the appliance is intended to operate is stamped on the data plate, which is attached to the inside of the door.

WARNING

NEVER supply the appliance with a gas other than the one that is indicated on the data plate. Using the incorrect gas type will cause improper operation and could result in serious injury or death. If you need to convert the appliance to another type of fuel, contact the Equipment Supplier you purchased it from, or a Pitco Authorized Service and Parts (ASAP) Company.

NOTICE

NEVER use an adapter to make a smaller gas supply line fit the appliance connection. This may not allow proper gas flow for optimum burner operation, resulting in poor performance and improper operation.

1.4.1. QUICK DISCONNECT CONNECTION

Gas appliances equipped with casters must be installed with connectors that comply with the Standard for Movable Gas Appliances, ANSI Z21.69 • CSA 6.16 latest edition. 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 • CSA 6.9 latest edition. When installing a quick disconnect you must also install adequate means for limiting the movement of the appliance without depending on the connector and quick-disconnect device or it's associated piping to limit the movement of the appliance. The restraining device should be attached to the appliance on the back panel.

1.4.2. FUEL SUPPLY LINE LEAK AND PRESSURE TESTING

The fuel supply system must be tested before the appliance is used. If the fuel line is going to be tested at a pressure greater than ½ PISG (3.45 kPa), insure that that appliance is disconnected from the fuel line. If the fuel line is to be tested at a pressure equal to or less than ½ PSIG (3.45 kPa), the appliance can be connected during the test, but the unit's gas valve must be shut. Test all gas line connections for leaks with a solution of soap and water when pressure is applied.

1.4.3. CE GAS TABLE

Refer to the following table for gas specifications for the country of use. If the country of use is NOT listed, refer to the information stamped on the data plate.

Staat	Modell	Gas-Art	Gas	Gerätekategorie	Eingangsleistung (brutto) kW	Engangsleistung (netto) kW	Eingangsdruck (mbar)	Brennerdruck (mbar)	Brennerdüse	Zündflammendüse	Regler	Nennleistung (m^3/hr)	Eingang Messblende (mm)
AT	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
BE	MGII	Nat	G20/G25	I_{2Esi}	23.4	21.1	20/25	10	#46/#44	N22	Nein	2.2/2.6	4.00 mm
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Nein	0.88	N/A
	MGIIT	Nat	G20/G25	I_{2Esi}	23.4	21.1	20/25	10	#46/#44	N22	Nein	2.2/2.6	3.05 mm
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Nein	0.88	N/A
BG	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
CY	MGII	Nat				THIS COUNTRY DOES NOT USE NATURAL GAS							N/A
		LP	G31	I_{3P}	23.4	21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat				THIS COUNTRY DOES NOT USE NATURAL GAS							N/A
		LP	G31	I_{3P}	23.4	21.5	50/37	25.4	#55	LP16	Ja	0.9	
CZ	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
DK	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
EE	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
FI	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
FR	MGII	Nat	G20/G25	I_{2Esi}	23.4	21.1	20/25	10	#46/#44	N22	Ja	2.2/2.6	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.88	
	MGIIT	Nat	G20/G25	I_{2Esi}	23.4	21.1	20/25	10	#46/#44	N22	Ja	2.2/2.6	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.88	
DE	MGII	Nat	G20/G25	I_{2ELL}	23.4	21.1	20/25	10	#46/#44	N22	Ja	2.2/2.6	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.88	
	MGIIT	Nat	G20/G25	I_{2ELL}	23.4	21.1	20/25	10	#46/#44	N22	Ja	2.2/2.6	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.88	
GB	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
GR	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
HU	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
IE	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
IT	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	

Staat	Modell	Gas-Art	Gas	Gerätekategorie	Eingangsleistung (brutto) kW	Engangsleistung (netto) kW	Eingangsdruck (mbar)	Brennerdruck (mbar)	Brennerdüse	Zündflammendüse	Regler	Nennleistung (m^3/hr)	Eingang Messblende (mm)
LT	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
LU	MGII	Nat	G20	I_{2E}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2E}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
LV	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
MT	MGII	Nat			THIS COUNTRY DOES NOT USE NATURAL GAS								N/A
		LP	G31	I_{3P}	23.4	21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat			THIS COUNTRY DOES NOT USE NATURAL GAS								N/A
		LP	G31	I_{3P}	23.4	21.5	50/37	25.4	#55	LP16	Ja	0.9	
NL	MGII	Nat	G25	I_{2L}	23.4	21.1	25	10	#44	N22	Ja	2.6	N/A
		LP	G31	I_{3P}		21.5	50	25.4	#55	LP16	Ja	0.88	
	MGIIT	Nat	G25	I_{2L}	23.4	21.1	25	10	#44	N22	Ja	2.6	N/A
		LP	G31	I_{3P}		21.5	50	25.4	#55	LP16	Ja	0.88	
NO	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
PL	MGII	Nat	G20	I_{2E}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2E}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	37	25.4	#55	LP16	Ja	0.9	
PT	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
RO	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
ES	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
SK	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
SL	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
SE	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP			NOT APPROVED FOR USE WITH LP GAS IN THIS COUNTRY								
CH	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
TR	MGII	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	
	MGIIT	Nat	G20	I_{2H}	23.4	21.1	20	10	#46	N22	Ja	2.2	N/A
		LP	G31	I_{3P}		21.5	50/37	25.4	#55	LP16	Ja	0.9	

1.5. ELECTRICAL CONNECTIONS

It is advised that this power supply be plugged into a wall receptacle that is controlled by the ventilation control. This will prevent the appliance from being operated without the ventilator on. If your appliance requires an electrical connection, the power requirements are listed below.

	North America	International
Input Voltage	120 VAC, 50/60 Hz	220, 230 or 240 VAC 50/60 Hz
Current per unit	0.7 Amp	0.4 Amp
Filter Current	7.5 Amp	4.2 Amp
Heat Tape	0.4 Amp	0.2 Amp

CAUTION

Connecting the appliance to the wrong power supply may damage the appliance and void the warranty.

WARNING

This appliance must be connected to a power supply having the same voltage and phase as specified on the data plate located on the inside of the appliance door.

WARNING

DO NOT attempt to connect the appliance to an electrical supply other then that indicated on the data plate. Electrical connection should be performed by qualified personnel.

WARNING

The electrical connection used by this appliance must comply with local codes. If there are no local codes that apply, refer to the National Electrical Code (NEC), ANSI/NFPA 70 for installation in the US. In Canada, refer to CSA Standard C22.2 and local codes. In all other cases, refer to local and national codes and regulations.

WARNING

The appliance must be grounded in accordance with local code; if there is no local code, comply with the NEC and ANSI/NFPA No. 70 latest edition (for US and Canadian installations). In all other cases, refer to local and national codes and regulations. To comply with European requirements, European models are equipped with an equalization-bonding clamp. An equalization bonding lead must be connected to this clamp to provide sufficient protection against potential difference. This clamp, located on the rear of the appliance is marked with the following universal symbol. 

WARNING

A country approved all pole circuit breaker with a minimum open contact gap of 3mm must be used for proper installation. (CE countries)

WARNING

This equipment must be installed so that the plug is accessible unless other means for disconnection from the power supply (e.g. a circuit breaker) is provided.

WARNING

If this appliance is permanently connected to fixed wiring, it must be connected by means of copper wires having a temperature rating of not less then 167°F (75°C).

WARNING

All copper wiring for this appliance must be made in accordance with the wiring diagram(s) located on the appliance.

WARNING

If your appliance uses line current, it is equipped with an oil-proof, electrical supply cord with a three-prong safety plug. This is to protect operators from electrical shock hazard in the event of an equipment malfunction. DO NOT cut or remove the grounding (third) prong from this plug; it should be plugged into a properly grounded three-prong receptacle.

1.6. VENTILATION AND FIRE SAFETY SYSTEMS

Your new appliance must have proper ventilation to function safely and properly. Exhaust gas temperatures can reach as high as 1100 °F (593 °C). Therefore, it is very important to install a fire safety system. Your ventilation system should be designed to allow for easy cleaning. Frequent cleaning and proper maintenance of the ventilation system and the appliance will reduce the chances of fire. **Ventilation and fire safety systems must comply with local and national codes. For installations in U.S. and Canada, refer to ANSI 83.11 for a list of reference documents that will provide guidance on ventilation and fire safety systems. Additional** information can be obtained from CSA International, 8501 East Pleasant Valley Road, Cleveland, OH, 44131 or visit their website at www.csa-international.org.

It is essential that the appliance be operated only when adequate ventilation is provided. Your ventilation hood should be properly maintained. A qualified installation professional should ensure that the hood is operating properly in conjunction with the appliance. Inadequate ventilation may not properly evacuate appliance all emissions. Excessive or unbalanced ventilation may cause drafts, which could interfere with proper operation of the pilot and burners. Leave at least 18 inches (45.72cm) of open space between the flue of the appliance and the intake of the exhaust hood, (except in McDonald's direct coupled hoods). **See WARNING regarding flue baffles, below.**

WARNING

Ensure that your ventilation system does not cause a down draft at the appliance's flue opening. A down draft will not allow the appliance to exhaust properly and will cause overheating, which may cause permanent damage. Damage caused by down drafts will not be covered by the warranty. NEVER allow anything to obstruct the flow of combustibles or ventilation exiting the appliance. NEVER place anything on top of the flue area, or block the flue in any way. Never place a grease condensating drip pan over the flue opening.

WARNING

When installed in McDonald's direct-coupled hoods, this appliance must be equipped with flue baffles to control the flow of air through the combustion system. The appliance will ship with the flue baffles installed. The flue baffles must be adjusted upon installation to ensure proper operation. See Section 1.8.5. Adjustment should be done by a qualified installer. Failure to properly adjust the flue baffles may result in improper operation, poor temperature recovery, poor ignition, pilot extinction, and damage to the appliance.

If the appliance is not installed in a direct-coupled hood system, (e.g. canopy hood), the flue baffles must be removed before installation for proper operation.

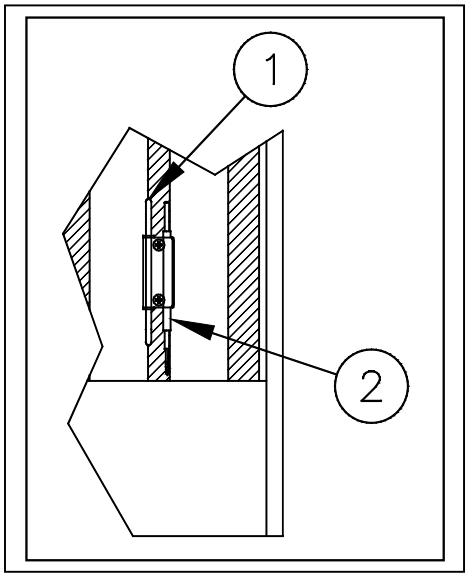
1.7. INSPECTION

Before you begin filling and adjusting the appliance, perform the following visual checks:

- ✓ After the appliance is in its permanent location, check the levelness. Any additional leveling that is necessary can be performed as previously described.
- ✓ Ensure that the probe and high temperature limit are in place and secure. Check the high limit bulb mounting screws to ensure that they are tight.
- ✓ Review the installation portion of this manual and ensure that all steps have been followed and executed properly.

Tank View Diagram.

1) Probe
2) High Temperature Limit



1.8. INITIAL ADJUSTMENTS

After your appliance has been properly installed as described in the installation section of this manual, it will need to be adjusted to ensure that it will perform as designed. A qualified person must perform these adjustments.

To perform these adjustments the following tools will be needed:

• Manometer • Digital Thermometer (Temperature Probe) • DC Microammeter

1.8.1. FILLING THE APPLIANCE

Before performing any adjustments, fill the tank with WATER. Water is used for the installation adjustments because the temperature will never exceed 212°F (100°C), thereby allowing plenty of adjustment time. Never let the water level go below the MIN LEVEL mark stamped on the tank.

WARNING
Oil/shortening or water must completely cover the heat tubes at all times while appliance is on.

WARNING
During operation there is an open flame inside this appliance. The unit may get hot enough to set near by materials on fire. Keep the area around the appliance free from combustibles.

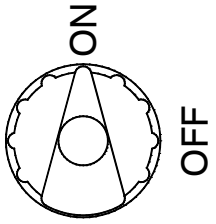
1.8.2. LIGHTING INSTRUCTIONS

There is nothing to manually light on the electronic ignition system. Pilot ignition is performed and controlled by the electronic ignition system. Refer to the following instructions to light the appliance.

WARNING

If pilot extinguishes, wait 5 minutes before attempting to relight the pilot to allow any built up gas to dissipate.

1. Open the gas supply valves to the appliance.
2. Turn the gas valve knob to the ON position.
3. Press the button to turn the controller on.
4. The main burners will light and be controlled by the controller.



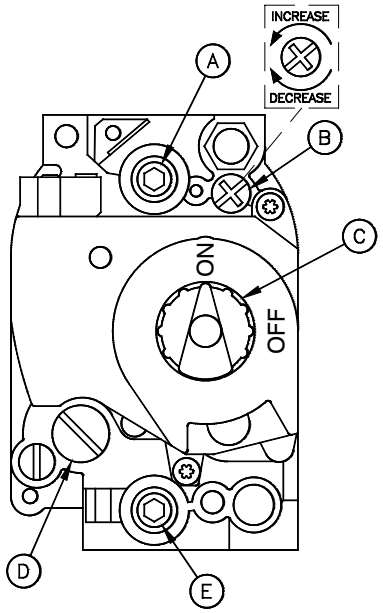
1.8.3. PILOT FLAME ADJUSTMENT

Perform this procedure with the pilot lit.

Note: This procedure requires the use of a DC microammeter. The meter should be wired with a switch that allows the meter to be switched out of the circuit while the ignition system is sparking.

1. Connect the DC microammeter between the flame sensor (spark) terminal and the flame sensor lead, (spark cable). Once the pilot is lit, and sparking has stopped, switch the meter into the circuit. Observe proper polarity: if the meter needle goes below 0, reverse the leads. The flame current reading must be 1.0 μA or greater, (0.15 μA or greater for CE units).
2. Adjust the current reading to the required level by adjusting the pilot flame. Remove the pilot adjustment screw cap screw to expose the pilot adjustment screw. Turning the pilot adjustment screw clockwise will decrease the size of the pilot flame and flame sense current. Turning the pilot adjustment screw counterclockwise will increase the pilot flame size and the flame sense current.
3. Rotate the screw in the direction needed to achieve a reading of 1.0 μA or greater, (0.15 μA or greater for CE units)

   Note: Allow 3 to 5 minutes between flame adjustments to allow the reading to stabilize.
4. Once the pilot flame has been adjusted properly, replace the pilot adjustment screw cap screw and remove the microammeter.



A) Burner Pressure Tap
B) Pilot Adjustment Screw Cap
C) ON/OFF Knob
D) Burner Pressure Regulator Adjustment Screw Cap
E) Inlet Pressure Tap

1.8.4. MAIN BURNER SYSTEM ADJUSTMENT

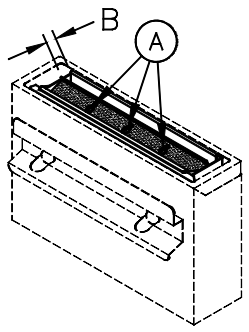
For the main burners to operate the gas supply valve must be open and the controller must be turned on. The main burners receive gas from the main gas supply through the thermostatically controlled valve. When the controller call for heat the gas control valve opens.

The main burners must be adjusted to deliver optimum flame. Refer to the following procedure to adjust the main burners.

1. Ensure that the main gas valve is shut off, remove the burner pressure tap plug and connect an accurate pressure gauge (range of 0-16 “W.C. (0-39.85mbar, 0-3.98kPa) in 0.1” (.25mbar, .02kPa) increments) or manometer.
2. Turn on this and all appliances connected to the gas supply line and light their main burners. The pressure reading of the installed pressure gauge should not drop from the required installation pressure. Any loss of pressure indicates inadequate supply line installation, which will cause poor performance of all appliances during peak usage.
3. The installed pressure gauge reading should be the same, ±0.1” W.C. (.25mbar, .02kPa), as that marked on the data plate on the inside door of the appliance. If the pressure is correct, go to step 6, if it is not; adjust the pressure as outlined in step 4.
4. To adjust the pressure, remove the burner pressure regulator adjustment screw cap and, with a flat head screwdriver, adjust the regulator screw until the proper burner pressure is reached. Turning the screw clockwise will increase the burner pressure. Turning the screw counterclockwise will decrease the burner pressure.
5. When the pressure is correct, replace the regulator adjustment screw cap.
6. Turn off ALL appliances, shut the main gas valve to your Pitco appliance and remove the pressure gauge. Apply pipe joint compound to the burner pressure tap plug and reinstall it.

1.8.5. FLUE BAFFLE ADJUSTMENT

The fryer will ship with the baffle set in the normal position for most McDonald’s “Universal” hoods. (McDonald’s direct-coupled hoods manufactured after 1995 are of the “Universal” type.) If upon installation under the hood, the burner flame is found to be lifting or pulsing, the suction of the hood may be higher than nominal and adjustment of the flue baffle may be necessary. The flame can be viewed by looking through the burner shield. If the flue baffle requires adjustment, pulsing can often be heard when the burners fire.



A. Screws
B. Flue Opening

The baffle can be adjusted as follows:

1. Pull the fryer out from under the ventilation hood.
2. Loosen the screws securing the baffle slide plate, move the plate to a more closed position and retighten the screws.
3. Reinstall fryer under ventilation hood.
4. Recheck burner operation
5. Repeat as necessary

The burners should be rechecked after baffle adjustment. If there is pulsing or the flame is lifting off the burner face, the baffle is still too far open. If there is significant flame roll out on ignition, then the baffle is too far closed. The baffle should be set in the most open position that allows for stable, non-pulsing, non-lifting burner operation.

WARNING!

If the baffle can not be adjusted properly, the facility must have the ventilation system checked immediately to be sure that it is within normal operating specifications. After the ventilation system is corrected, the baffle setting must be rechecked. Failure to correct ventilation problems or properly set flue baffles will result in extremely poor fryer operation and possible equipment damage.

CAUTION
Be careful not to disturb the probe and high temperature limit during operation and cleaning of this appliance.

1.9. INITIAL CLEANING

When your appliance is shipped, many of its parts are covered with a thin coat of oil for protection. Before the appliance is ready for cooking it must be cleaned. This will remove the oil coating and any foreign matter that may have accumulated during storage and shipment. Refer to the following procedure to clean the appliance.

WARNING
Wear protective gloves and clothing when cleaning and draining the appliance and when disposing of water. The water is extremely hot and can cause severe injuries.

CAUTION
DO NOT leave the appliance unattended during cleaning. Never let the water level go below the MIN LEVEL mark stamped on the tank.

1. Read the “operation” section of this manual prior to filling or operating the appliance.

2. The following steps should be followed using a grease dissolving commercial cleaner.

WARNING
Use a commercial grade cleaner formulated to effectively clean and sanitize food contact surfaces. Read the directions and precautionary statements before use. Particular attention must be paid to the concentration of cleaner and the length of time the cleaner remains on the food contact surfaces.

3. Following the manufacturer’s directions, clean the tank interior and all other food contact surfaces.

4. When cleaning is complete, rinse the inside of the tank thoroughly with cool water. Continue to rinse the tank until the cleaner has been completely and thoroughly rinsed from the tank.

5. Using a clean dry cloth, wipe out all of the water.

6. Repeat the previous steps to clean the filter pan, if so equipped.

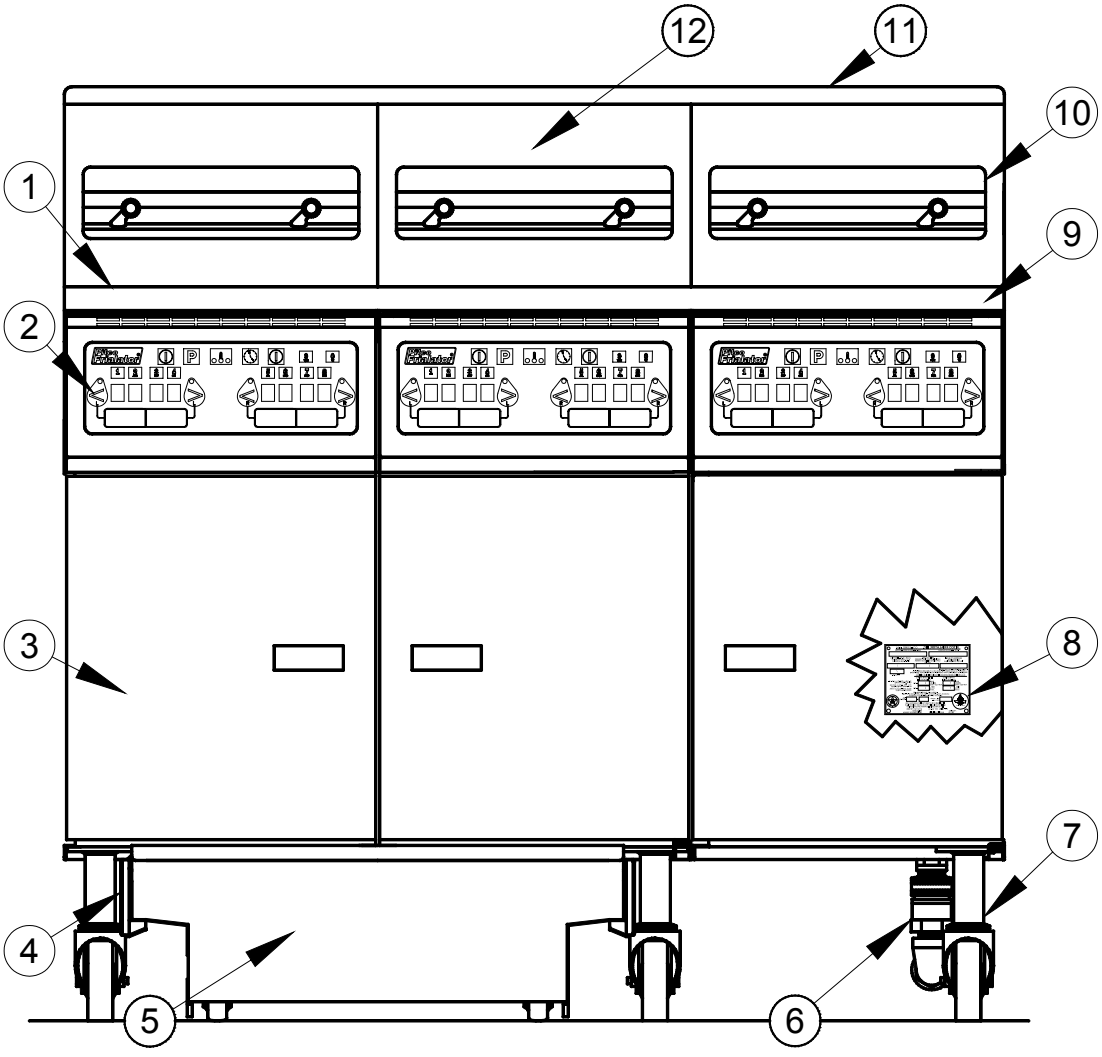
This page intentionally left blank.

2. OPERATION

Operating Instructions for the McDonald's Computer Controller are included with this manual. Refer to the Controller Operating Instructions prior to operating this appliance.

2.1. OPERATIONAL FEATURES

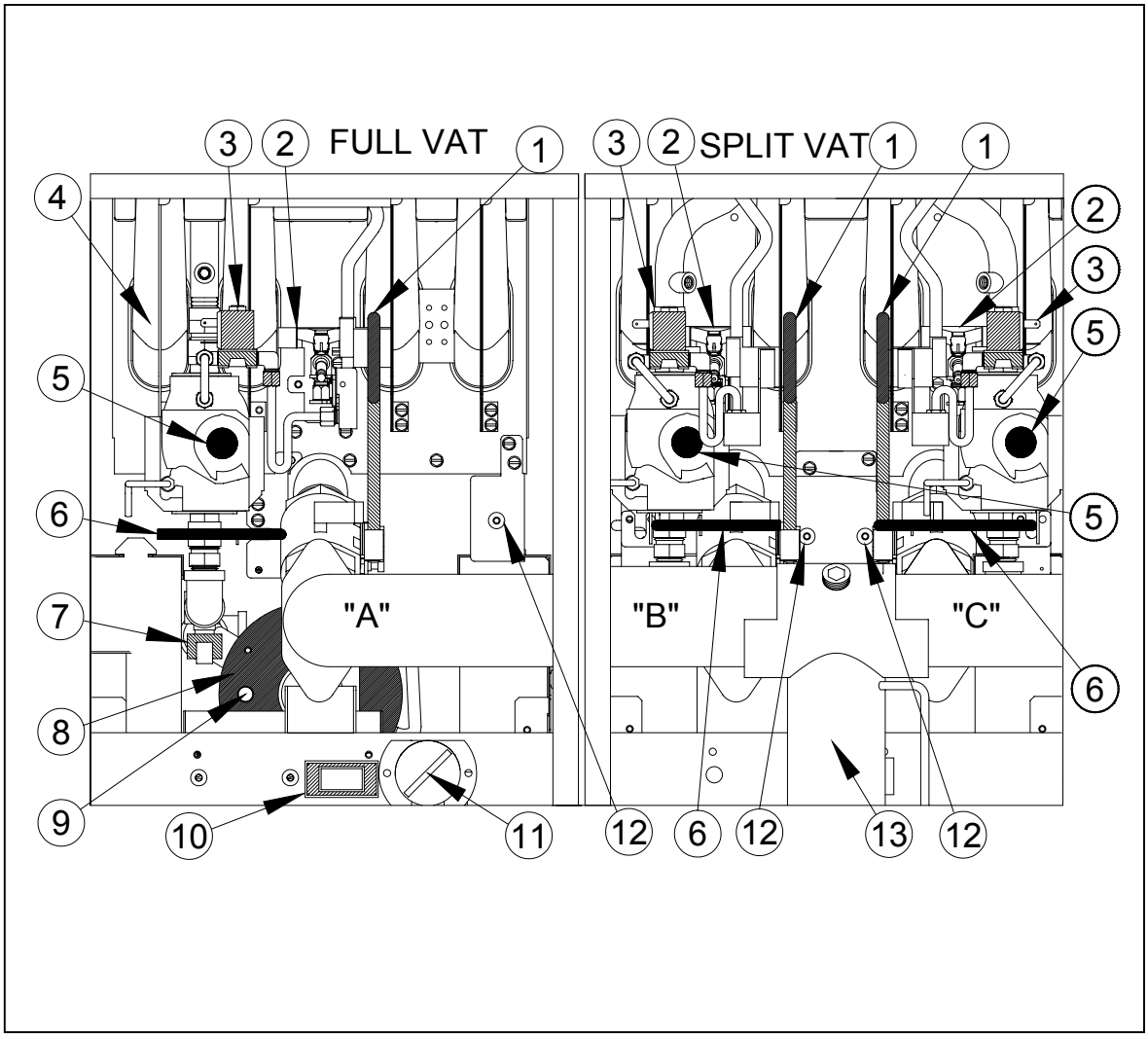
The diagrams below outline some of the key operational components of your appliance. Refer to the following sections of this manual to learn more about these features.



MGII Exterior View (Typical)

2.1.1. BASIC OPERATIONAL FEATURES (EXTERIOR VIEW)

1. **Fry Tank**
   Holds oil/shortening at temperature for cooking.
2. **Computer** (Refer to separate computer instructions)
   Controls fryer temperature. Provides timers for cooking products
3. **Door** (Shown Closed)
   Provides access to:
   Fryer: Drain valve handle, tank drain outlet, high limit reset button, gas valve, pilot, burners, gas shut-off valve, and self-cleaning burner system, (if so equipped).
   Filter (if so equipped): Filter pan, filter pump, and oil/shortening return handle
4. **Filter Pan Guide Rails**
   Guide filter pan into place beneath fryer
5. **Filter Pan** (if so equipped)
   Oil drains from the fry tank in the filter pan. Here it is filtered through the filter media before being pumped back to the fry tank.
6. **Gas Connection**
   Quick disconnect connects gas supply to fryer battery
7. **Casters**
   Provide for height adjustment and mobility of fryer system.
8. **Data Plate** (behind door)
   Provides important information on fryer including Model and Serial Number
9. **Top Deck**
10. **Basket Hanger**
    Used for draining baskets when they are removed from the fry tank.
11. **Hood Seal Angle**
    Mates up to matching angle on Universal ventilation hoods
12. **Splashback**



2.1.2. BASIC OPERATIONAL FEATURES (INTERIOR VIEW)

1. **Drain Valve Handle *(Blue)* *(Shown in closed position)***
   A.) Full Vat
   B.) Split Vat Left Hand
   C.) Split Vat Right Hand
   Opens the drain valve to allow oil/shortening to drain from the fry tank. Equipped with drain valve interlock switch that turns off fryer heat when the drain valve is opened.

2. **Pilot**
   A. Full Vat
   B. Split Vat Left Hand
   C. Split Vat Right Hand
   The pilot lights the main burners when the fry tank requires more heat.

3. **Self-Cleaning Burner System** (if so equipped)
   A. Full Vat
   B. Split Vat Left Hand
   C. Split Vat Right Hand
   The self-cleaning burner system cleans the main burners when the fryer is turned on.

4. **Burner(s)**

Heat the oil/shortening in the fry tank

5. **Gas Valve Knob**
   The gas valve controls the flow of gas to the pilot and burners.
   Turning the gas valve knob to the OFF position shuts off the gas supply to the pilot and burners.

6. **Oil Return Handle *(Red)*** (If equipped with a filter)
   A. Full Vat
   B. Split Vat Left Hand
   C. Split Vat Right Hand
   Opening the return handle starts the filter pump and returns the oil/shortening to the fry tank.

7. **Manual Gas Shut-off Valve**
   Shuts off the supply of gas to the gas valve

8. **Filter Pump** (if equipped with a filter)
   Pumps filtered oil from the filter pan back to the fry tank.

9. **Filter Pump Reset Button** (if equipped with a filter)
   Resets the pump motor thermal overload, if it has tripped.

10. **Filter Pump Circuit Breaker** (if equipped with a filter)
    Interrupts electricity to the filter pump in the event of an over-current condition. May also be used to turn off electricity to the filter pump.

11. **Filter Pump Pick-up Connection** (if equipped with a filter)
    The filter pan engages into the filter pump suction piping here.

12. **High Limit Reset Button**
    A. Full Vat
    B. Split Vat Left Hand
    C. Split Vat Right Hand
    If the high limit trips, it can be reset by pressing this button, after the oil cools.

13. **Drain Line Downspout (3")** (if equipped with a filter)
    Draining oil is discharged from the 3' drain line into the filter pan via the downspout.
    Downspout can be swiveled up to permit draining oil for discard.

WARNING
Oil/shortening must completely cover the burner heat tubes at all times while appliance is on.

2.2. FILLING THE FRYER TANK

Both liquid and solid shortening can be used in this appliance, but liquid is preferred. If solid shortening is used it is recommended that you melt the shortening before adding it to the appliance. You can melt solid shortening in the appliance, but you must be very careful not to scorch the shortening.

Tank Capacity

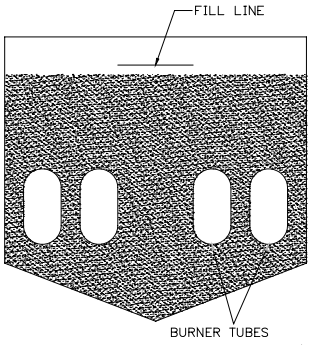
Model	Capacity
MGII	50 lb. (22.7 kg)
MG2T	25 lb. (x 2) (11.3 kg (x2))

CAUTION
This appliance is not designed for cooking with water. Fill with oil or shortening only, (unless cleaning the fry tank).

2.2.1. FILLING THE TANK WITH LIQUID SHORTENING

To fill the tank with liquid shortening refer to the following procedure.

1. Ensure that the drain valve is completely closed and that there is no residual moisture in the tank.
2. Fill the tank with oil. You may fill the tank to the “MIN LEVEL” mark or slightly below the nominal “OIL LEVEL” mark: the oil will expand slightly when it heats up, raising the level slightly.



2.2.2. FILLING THE TANK WITH SOLID SHORTENING

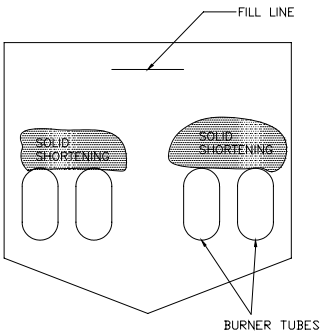
WARNING
NEVER melt blocks of solid shortening on top of the burner heat tubes. This will cause a fire and could result in personal injury.

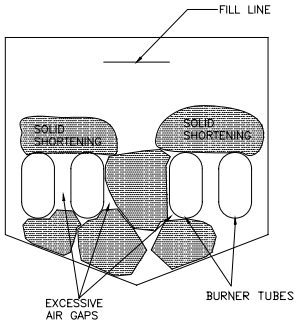
To fill the tank with solid shortening refer to the following procedure.

1. Remove the screen covering the tubes (tube screen).

2. Cut the solid shortening into cubes no larger than one inch. ALWAYS pack the shortening below, between, and on top of the burner tubes. Do NOT leave any large air gaps. Use care when packing the solid shortening into the tank. Do NOT bend or break the temperature or high limit sensor probes. If these are damaged the appliance will not function properly.

3. Once the tank is firmly packed with shortening, the shortening must be melted. The controller is equipped with an automatic Melt Cycle. It will cycle the burners on and off to slowly heat and melt the shortening.





2.3. APPLIANCE START UP

Refer to the following procedure to start the appliance prior to operation.

1. Ensure that the drain valve is closed.
2. Fill the fry tank with oil/shortening. (See section 2.1 “Filling the Fryer Tank”)

WARNING
NEVER operate the appliance with an empty fry tank. It will void the warranty.

3. Open the gas supply valves to the appliance.
4. Turn the gas valve knob to the ON position. (See section 1.8.2 “Lighting Instructions”.)
5. Press the  button to turn the controller on.
6. The fryer is now on and heating the oil/shortening in the fry tank.

WARNING
Oil/shortening level should NOT be allowed to fall below the minimum indicated level line at any time. Dry firing of the fry tank will shorten tank service life and will void your warranty.

2.4. COOKING

To ensure the quality of the food you cook in this appliance, follow McDonald’s Operating Procedures. When the appliance is not in use, the oil/shortening should be cooled and covered to prevent contamination. Do not exceed maximum load sizes specified in the Operating Procedures and Food Quality Guides. Exceeding these recommendations may affect food quality and could cause surge boiling due to excess moisture in food product.

2.4.1. McDONALD’s COMPUTER CONTROLLER

Operating Instructions for the McDonald’s Computer Controller are included with this manual. Refer to these separate Controller Operating Instructions for instructions on programming and cooking with this controller.

2.5. APPLIANCE SHUTDOWN

There are two shutdown modes of appliance operation: STANDBY and COMPLETE. The standby mode removes the ability of the appliance’s main burners to operate. Complete shutdown turns off the gas supply to the appliance. Refer to the following procedures to enter the appropriate shutdown mode.

2.5.1. STANDBY MODE

1. Press the  button to turn the controller off.

WARNING
NEVER leave the appliance in standby mode for prolonged periods or overnight.

2.5.2. COMPLETE SHUTDOWN

1. Press the  button to turn the controller off.
2. Turn the ON/OFF knob on the gas valve clockwise to the OFF position.
3. The appliance is now completely shut down and can be cleaned if desired.

3. PREVENTATIVE MAINTENANCE

3.1. DAILY PREVENTATIVE MAINTENANCE

Performing the preventative maintenance steps below on a daily basis will keep your equipment safe and at peak performance. During the cooking process, particles, crumbs and crackling collect inside the cooker tank reducing product quality and decreasing oil/shortening life. If you are producing high quantities of fried food and/or frying heavily battered food, it may be necessary to perform these steps more then once a day.

WARNING

Filtering may require contact with hot surfaces. ALWAYS wear a face shield, and oil-proof insulated gloves, sleeves and apron while performing any filtering operation. Serious injury could result from direct contact with hot surfaces and/or oil.

3.1.1. FILTERING WITH A FILTER DRAWER

Refer to the following procedure to filter when the appliance is equipped with a filter drawer.

NEVER

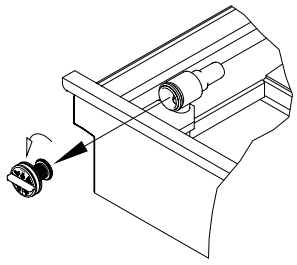
Run the filter system without filter media (a pad or paper). This will clog the pickup tube screen and cause operational difficulties.

NEVER

Store the filter pan anywhere other than in the fryer filter cavity. The pan is designed to be stored in the fryer filter cavity. Storing it here will ensure that it's there when you're ready to filter.

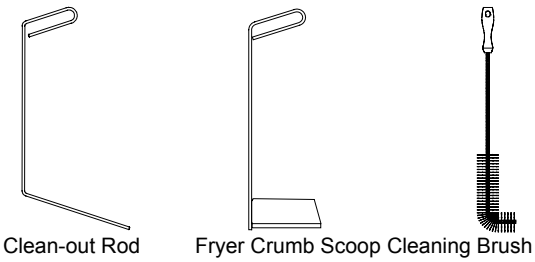
1. Slide the filter pan out. Carefully remove filtered residue off the filter media. Examine the filter media for clogged or torn areas. If filter media is clogged or torn, replace it. Refer to the filter media replacement instructions following this section. Reinstall the pan.

2. Check the pickup tube screen by unscrewing the cap counterclockwise. Crumbs in the pickup tube screen indicate that debris has migrated to the clean side of the filter media. The filter pan should be cleaned and the filter media replaced if debris is found in the pickup tube screen. Clean the screen prior to reinstalling it. Reinstall the cap containing the pickup tube screen by screwing it clockwise into the pickup tube until it is snug.



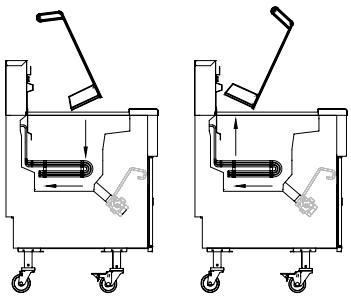
Removing the Pickup Tube Screen

3. Remove the baskets from the fryer tank. Use the clean-out rod to lift out the tube rack. Use the fryer crumb scoop to remove excess crumbs from the bottom of the tank. Allow oil to drain completely from crumb scoop before removing it from tank to discard crumbs.



Clean-out Rod Fryer Crumb Scoop Cleaning Brush

Filtering Tools



Using the Crumb Scoop

4. Slowly open the blue drain valve handle for the tank being filtered. The computer will display “DRAINING”, and the heat demand to the fryer being filtered will be turned off. Use the cleaning brush to clean the sides of the tank as the oil drains. If the drain is clogged, use the clean out rod to open the drain.

5. Pull the red return valve handle toward you. This will open the return valve and start the pump to return the oil to the fry tank. Use the cleaning brush to rinse the crumbs down the fryer drain.

6. Press the key on the computer. This will start a 5-minute polish timer. The computer display will show “FILTRXXX” where “XXX” is the time counting down. Clean the crumbs from the fry tank using the cleaning brush and the crumb scoop, as necessary. When the filter timer reaches 000, an audible alarm will sound, and the computer display will alternate between “FILTER” and “DONE”. Press either of the left-hand side Start keys, or , to cancel the alarm. The computer display will show “TURN OFF”. Press the key to turn the computer off.

7. Once the fry tank is clean, close the blue drain valve handle. The tank will fill with oil. Allow all of the oil to return to the fry tank. Air bubbles will be seen in the oil when all the oil has been returned. Once bubbles are seen, wait 15 seconds, then close the red return valve handle.

8. If necessary, add oil to bring the oil level to the “OIL LEVEL” line. The fryer is now prepared for use. Follow fryer start-up procedures to reheat fryer to operating temperature.

9. Allow the drain and return lines to drain for at least 5 minutes before removing filter pan, to reduce dripping oil.

3.1.2. REPLACING THE FILTER MEDIA

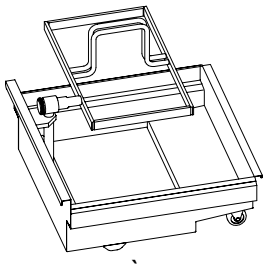
Refer to the following procedure to replace the filter media when the appliance is equipped with a filter drawer.

WARNING

After filtering, parts of the filter system will be extremely hot. Allow filter parts to cool to room temperature before handling.

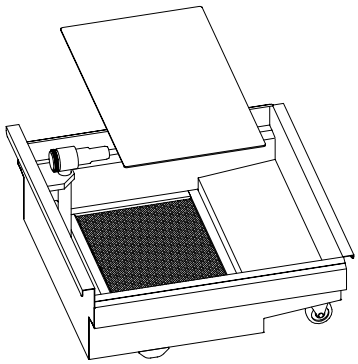
1. Slide the Filter Pan out

2. Lift the Paper Retaining Frame out of the filter pan



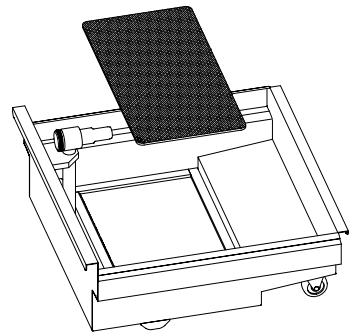
Removing Paper Retaining Frame

3. Remove the Filter Paper or Pad by folding the edges inward to collect the debris.



Filter Media Removal

4. Lift the Paper Support Screen out of the pan.



Paper Support Screen Removal

5. The Pan, Paper Support Screen, and Paper Retaining Frame can now be cleaned.

6. Cleaning notes:
   - Be sure that the filter pan is free of any debris that could cause the Filter Paper or Pad and Paper Retaining Frame not to seat properly.
   - Check the Pickup Tube Screen for debris. Clean as needed.
   - Thoroughly dry Filter Pan, Paper Support Screen, and Paper Retaining Frame prior to re-assembly.

7. Place the Paper Support Screen in the bottom center of the filter pan.

8. Place a new Filter Paper or Pad over the Support Screen making sure that it is centered on the screen.

9. Place the Paper Retaining Frame on the paper or pad, making sure that all edges are being pressed down evenly.

10. Slide the Filter Drawer into the fryer making sure that the Pickup Tube locates into its mating connection.

11. The filter drawer is now ready for use.

WARNING
The power supply must be disconnected before cleaning and servicing this appliance!

3.1.3. APPLIANCE INSPECTION

- ✓ Check that the high temperature limit and temperature probe are in the correct position and secured in place.
- ✓ Check that wires and cords are not frayed or loose in and out of the cabinet.
- ✓ Check around the appliance for loose parts or accessories that need to be secured or other foreign items (ex: Aerosol cans) that should be removed from the area.
- ✓ Check for oil/shortening leaks around the in and out of the cabinet and around the appliance.

3.2. WEEKLY PREVENTATIVE MAINTENANCE (Refer also to McDonald's PM Card FR014A.)

3.2.1. DRAINING THE TANK

The filter drain line is also used when draining the fryers. To drain the fryer, you will need a container capable of holding hot (400 °F) oil.

WARNING
Hot oil can cause severe injury. Take care when filtering or disposing of hot oil. When working with hot oil ALWAYS wear protective gear such as a face shield and oil proof, insulated gloves, sleeves, and apron.

1. Slide the filter pan out until the drainspout can be rotated up. Rotate the drainspout up. Slide filter pan back into fryer cabinet.
2. Place suitable container under the drainspout. Rotate the drainspout so that it extends into the container into which you want to drain the oil.
3. Open the blue drain valve handle for the tank being drained. Allow the oil to drain into the container. Use care not to overfill the container.
4. Close the blue drain valve handle.
5. After removing oil, be sure to slide the filter pan out, rotate the drainspout back into the filter drawer, and slide the filter drawer back into the cabinet.
6. Once the tank is completely empty, add new oil and follow fryer start-up procedures.

3.2.2. CLEANING THE FRYER TANK

1. Turn the fryer off, by pressing the  button to turn the controller off.
2. Drain the tank.

WARNING
Read the operation section of this manual prior to filling or operating the appliance.

3. Scrub the tank, basket hanger, baskets, and temperature probe using a Scotchbrite™ or other abrasive pad with a commercial type cleaner specifically designed for cleaning and sanitizing food contact surfaces. Follow the directions and familiarize yourself with the safe use of this cleaner prior to using it to clean the appliance. Care must be taken to remove all the foreign material on the tank and on components in the tank.

WARNING
DO NOT leave the appliance unattended during cleaning.

4. When cleaning is complete, rinse the inside of the tank and its components thoroughly with cool water. Continue to rinse at least twice or until the cleaner has been completely and thoroughly rinsed from the tank.

3.2.3. CLEANING THE CABINET

1. The inside of the cabinet should be cleaned with a clean dry cloth removing oil, dust, dirt and cooking debris on all accessible surfaces and components.

2. The outside of the cabinet should be cleaned with a wetted cloth and mild detergent to remove oil, dust, dirt and debris. Be careful not to introduce the detergent into the tank and food zone regions of the appliance.

3.3. MONTHLY and QUARTERLY PREVENTATIVE MAINTENANCE (Refer to McDonald's PM Cards FR014A and FR015.)

Food debris and oil/shortening can buildup inside the tank. Performing the monthly and quarterly preventative maintenance steps will keep your equipment safe and at peak performance. If you are producing high quantities of fried food and/or frying heavily battered food, it may be necessary to perform these activities more frequently.

3.4. ANNUAL/PERIODIC PREVENTATIVE MAINTENANCE AND INSPECTION

This section should ONLY be performed by a qualified service technician as part of a regular kitchen maintenance program. This inspection should take place a minimum of once a year by an Authorized Service Technician recommended by Pitco.

WARNING

The power supply must be disconnected before cleaning and servicing this appliance!

3.4.1. TEMPERATURE PROBE & HIGH LIMIT PROBE

- ✓ Verify probes are in good working condition. Check for damage and that the fasteners are tightly secured to the tank.
- ✓ Verify compression fittings are leak free.
- ✓ Check wiring for loose electrical connections.

3.4.2. CONTROLLER

Perform the following inspection if the appliance is equipped with a temperature controller.

- ✓ Verify that the controller is in good mechanical condition. Check all lights, displays and switches to assure that they are working properly. Examine overlay for damage that could allow moisture to enter.
- ✓ Check for loose electrical connections.
- ✓ Verify cooking temperatures. Check temperature 1" above controller probe, if necessary check probe resistance.

3.4.3. CONTROL BOX & ELECTRICAL COMPONENTS

- ✓ Verify that all components (transformer, terminal block, relays, drain switches, etc…) are in good condition. Verify that wires are tight and in good condition.
- ✓ Verify enclosures are free of leaks. Check for oil or water stains and damp or wet surfaces.
- ✓ Verify that the covers and panels are in tact and provide a safe condition. Check for loose parts.
- ✓ Verify power cord is in good condition. Check for frayed or exposed wires. Verify that the insulation is in good condition and the attachment to the appliance is tight.

3.4.4. TANK

- ✓ Verify that the tank is in good condition. Check for grease build up and inspect for signs of corrosion. Verify that tank is leak free.

3.4.5. DRAIN SYSTEM & FILTER SYSTEM (IF EQUIPPED)

- ✓ Verify that drain valve is in good condition. Check for leaks in the seal area and fitting region.
- ✓ Verify that drain and return lines are leak free, kink free and in good condition. Check for grease build up and debris blockage. Verify that the clamps and connections are securely tightened.

3.5. VENTILATION HOOD

Proper ventilation hood operation is very important for the correct operation of this appliance and the safety of personnel. The ventilation hood should be inspected at the time of installation of this appliance to insure that it will operate properly in conjunction with the appliance. A regular schedule of examination, in accordance with ANSI/NFPA 96 latest edition and/or local codes must be followed.

4. TROUBLESHOOTING

4.1. POWER FAILURE

If electric power is removed for any reason, the appliance will shut down. Wait five minutes after the power is restored before attempting to restart the appliance. This will allow time for any gas that may have accumulated in the burner or tubes to dissipate. To restart the appliance, follow the appliance start up procedure in section 2.2.

CAUTION
DO NOT attempt to operate this appliance during a power outage.

4.2. HIGH TEMPERATURE LIMIT

This appliance is equipped with a high temperature limit switch. The high temperature limit switch will stop the appliance from functioning if the internal cook tank reaches an unsafe temperature. In the event that the high temperature limit has tripped, please refer to the following procedure to reset the switch.

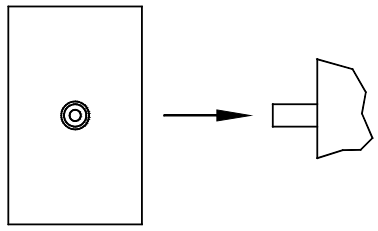
a. Turn the appliance off, by pressing the button to turn the controller off.

b. Allow the appliance ample time to cool below 400ºF (204ºC).

c. Add oil/shortening to the cook tank, if needed.

d. Press the red high temperature reset button.

e. The high limit switch is now reset and the appliance is ready for start up.



High Temperature Reset Button
(Not on all models)

WARNING
DO NOT add oil/shortening to the tank until it has been given ample time to cool down. Failure to do so may result in damage to the appliance and/or injury to the operator.

4.3. TROUBLESHOOTING CHART

Fryer Troubleshooting

Problem	Probable Causes	Corrective Actions
Computer Controller display does not light.	No power to appliance.	Check main building power supply.
	Circuit Breaker tripped.	Reset circuit breaker.
	Power Cord loose or not connected.	Connect power cord. Check power cord where it enters the rear of the fryer's entrance box. Verify that it is plugged all the way into the receptacle.
	Fuse blown.	Contact a qualified service technician.
	Transformer Defective.	Contact a qualified service technician.
	Defective Controller	Contact a qualified service technician.
Computer Controller shows "MELT" and heats slowly, or not at all.	Computer is in Melt Cycle.	Allow time for unit to heat up.
	Main gas supply is off.	Verify main gas supply is turned on.
	Gas shut off valve (yellow handle) is closed.	Verify gas shut-off valve is open, (yellow handle is in line with the gas line).
	Gas valve is not turned on.	Turn manual gas valve to "ON".
	Quick disconnect not properly connected.	Verify quick disconnect is properly seated.
	High temperature limit has tripped.	Reset high temperature limit.
	Ignition Module has locked out.	Turn Fryer off and back on again to reset ignition module.
	Low gas pressure	Contact a qualified service technician.
Computer Controller shows "IGNITION FAILURE" and alarms.	Main gas supply is off.	Verify main gas supply is turned on.
	Gas shut off valve (yellow handle) is closed.	Verify gas shut-off valve is open, (yellow handle is in line with the gas line).
	Gas valve is not turned on.	Turn manual gas valve to "ON".
	Quick disconnect not properly connected.	Verify quick disconnect is properly seated.
	High temperature limit has tripped.	Allow appliance to cool and reset high temperature limit.
	Ignition Module has locked out.	Turn fryer off and back on again to reset ignition module.
	Low gas pressure	Contact a qualified service technician.
	Improper Flue Baffle Setting	Contact a qualified service technician.

Fryer Troubleshooting (cont.)

Excessive Recovery Time; (Recovery Time exceeds 2:25 Standard)	Excessive Oil Level	Oil level should never exceed “MAX” line. Drain extra oil from tank.
	Oil added during Recovery Test.	Repeat heat up without adding oil during test and compare results.
	Quick disconnect not properly connected.	Verify quick disconnect is properly seated.
	Low gas pressure	Contact a qualified service technician.
	Improper Flue Baffle Setting	Contact a qualified service technician.
	Burners require cleaning.	Contact a qualified service technician.
Oil Temperature is hotter, or colder than shown by Computer Controller	Temperature Calibration	Refer to McDonald’s PM Card FR014.
	Defective Temperature Probe	Contact a qualified service technician.
Computer Controller displays “DRAINING” or “TURN OFF”	Blue drain valve is not completely closed.	Close blue drain valve handle.
	Improperly adjusted or defective drain switch	Contact a qualified service technician.
Computer Controller displays “PROBE FAILURE”	Open or shorted temperature probe	Contact a qualified service technician.

Filter Troubleshooting

Drain Valve is open; the oil is draining slowly or not at all	Drain valve is not fully open	Press down on the drain valve handle and verify that it is fully open
	Drain is plugged with debris.	Use the clean out rod to clear the drain valve opening. If this does not clear the blockage, close the drain valve and contact a qualified service technician.
Pump return handle is pulled out, but no pumping sound can be heard.	Red return valve handle is not completely open.	Pull on the red return valve handle to make sure it is completely open.
	Filter circuit breaker is tripped or in the off position.	Reset the circuit breaker or press it to the on position.
	Filter motor thermal overload is tripped.	Push the red reset button on the end of the filter pump motor.
	Filter power cord is unplugged or loose.	Check the power cord at the rear of the fryer entrance box, and at the rear of the pump box and verify that the power cords are pushed all the way into their receptacles.
	Loose or defective sensor switch	Contact a qualified service technician.
Oil is returning to the tank slowly or not at all.	Dirty filter media	Change filter paper/pad.
	Pickup tube screen clogged	Remove and clean pickup tube screen cap.
	Filter pan not pushed in completely	Push filter pan in to complete connection.
	O-rings not sealing on pickup tube.	Check and replace o-rings as needed.
Excessive air bubbles are in the oil being returned to the tank.	Pickup tube screen not tight.	Tighten pickup tube screen cap.
	Pickup tube screen cap missing	Locate and install pickup tube screen cap.
	Filter pan not pushed in completely	Push filter pan in to complete connection.
	O-rings not sealing on pickup tube.	Check and replace o-rings as needed.
Drain valve is closed, but the computer controller still displays “DRAINING”	Blue drain valve handle not completely closed	Verify that drain valve handle is completely closed.
	Improperly adjusted or defective drain switch.	Contact a qualified service technician.

4.4. CONTROLLER WARNING DISPLAYS

If your appliance is equipped with a temperature controller it may display the following warnings on its display.

Display	Problem	Action
MELT	Oil/shortening temperature is low.	Wait for appliance to heat up.
WAIT	Oil/shortening temperature is low.	Wait for appliance to heat up.
BOIL OUT YES NO	Computer Controller believes there is water, (not oil) in the tank.	If water is in tank, press zone button next to "YES". If oil is in tank, press zone button next to "NO"
DRAINING TURN_OFF	Drain valve is open while controller is on.	Turn off appliance. Close drain valve before turning appliance back on.
SEL SIDE	A product button, (1–8), has been pressed without pressing a zone key for where to cook it.	Press a zone key for where to cook the product. If the product key was pressed in error, press the product key again to cancel.
PRODUCT	A zone key was pressed without selecting a product first.	Press a product key, 1-8, prior to pressing a zone key. To cancel the alarm press a product key twice.
PROBE FAILURE	Incorrect probe reading.	Contact Authorized Service Company.
IGNITION FAILURE	Ignition system has locked out	Refer to Fryer Troubleshooting section
TEMP	Oil/shortening has reached an unsafe temperature.	Turn off appliance. Allow ample time for appliance to cool before turning on.
HOT HI 1	Incorrect probe reading.	Contact Authorized Service Company.

This page intentionally left blank

In the event of problems with or questions about your order, please contact the Pitco Frialator factory at: (800) 258-3708 US and Canada only or (603) 225-6684 World Wide Website Address: www.pitco.com	In the event of problems with or questions about your equipment, please contact the Pitco Frialator Authorized Service and Parts representative (ASAP) covering your area, or contact Pitco at the numbers listed to the left.
MAILING ADDRESS – P.O. BOX 501, CONCORD, NH 03302-0501 SHIPPING ADDRESS – 10 FERRY ST., CONCORD, NH 03301	