JUSTA

SERVICE MANUAL

Gas Fryer Series

F3 Series

F4 Series

F5 Series

- NOTICE -

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

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

This manual has been provided to you by ITW Food Equipment Group LLC ("ITW FEG") without charge and remains the property of ITW FEG, and by accepting this manual you agree that you will return it to ITW FEG promptly upon its request for such return at any time in the future.

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SERVICE UPDATES – F Fryer

May 2024

- New compile

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SERVICE TAB (Multimedia)	
Document Title	**Document Type**
F Fryer Operation & Installation Manual	Operator

PARTS TAB	
Document Title	**Document Type**
F Fryer Parts Catalog	Parts Catalog

GENERAL

INTRODUCTION

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

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

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

OPERATION

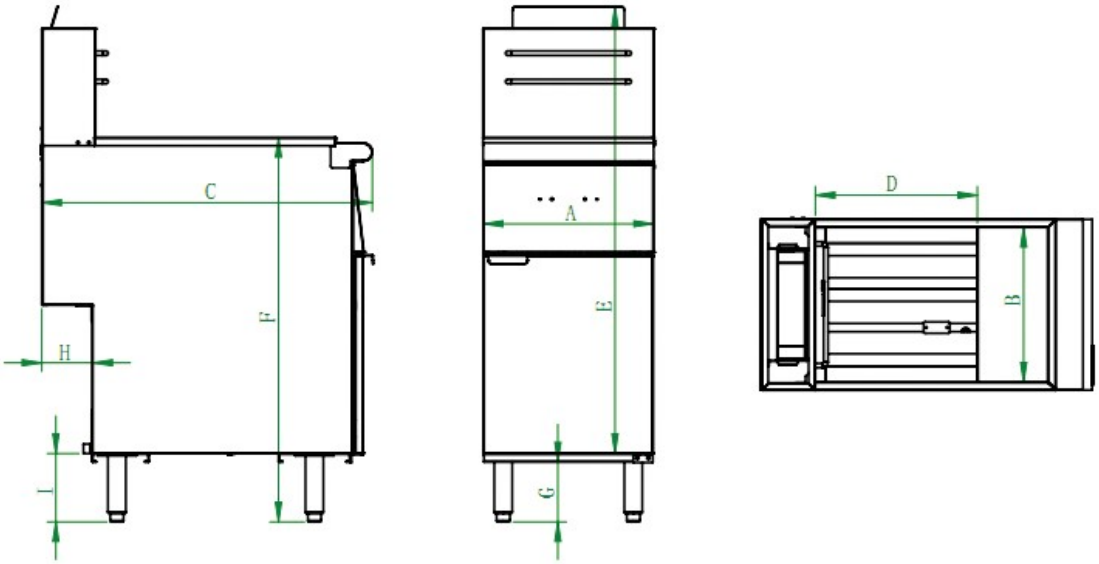
*Refer to the **F Series User Manual** for specific operating instructions.*

TOOLS

- Standard set of hand tools
- Metric set of hand tools
- Manometer
- Thread Sealant
- HA40 Food grade rust proof oil
- Handheld leak detector

SPECIFICATIONS

Model	Gas Type	Manifold Pressure	Number of heat tubes	BTU Rate per Burner	Total BTU Rating	Orifice Size
F3-N	NATURAL	4” W.C.	3	30,000	90,000	#39
F3-P	PROPANE	10” W.C.	3	30,000	90,000	#52
F4-N	NATURAL	4” W.C.	4	30,000	120,000	#39
F4-P	PROPANE	10” W.C.	4	30,000	120,000	#52
F5-N	NATURAL	4” W.C.	5	30,000	150,000	#39
F5-P	PROPANE	10” W.C.	5	30,000	150,000	#52
The gas pressure for all models should be set at 4” WC (Water Column) or 0.8 kPa for Natural Gas and 10” WC or 2.75 kPa for propane gas. Maximum supply pressure is 7" W.C. for natural gas and 13" W.C. for propane.						



Model	Width (in)		Depth (in)		Height (in)			Gas Connection (in)		Total BTU/Hr	Crated Weight (lbs.)
	A	B	C	D	E	F	G	H	I		
F3	15.5	14.0	30.3	14.0	47.2	34.7	6.0	4.2	7.0	90,000	169
F4	15.5	14.0	30.3	14.0	47.2	34.7	6.0	4.2	7.0	120,000	183
F5	21.0	18.0	34.3	18.0	47.2	34.7	6.0	4.2	7.0	150,000	209

SERVICE NOTICES

FOR AUTHORIZED SERVICE TECHNICIANS ONLY!

NOTICE

If the following situations occur, the warranty will be invalid and the manufacturer will be exempt from all responsibility:;

(A) The maintenance work is carried out by unqualified technicians.

(B) In addition to the approved Justa equipment, replacement parts have also been installed.

WARNING

Adjustment and maintenance work can only be carried out by qualified technicians with experience and knowledge in operating commercial gas cooking equipment. However, to ensure your confidence, please contact your Justa equipment service representative for reliable service, reliable advice, or other assistance, as well as original factory parts.

All devices have been adjusted at the factory. If there are any operational issues during initial installation, please check the gas type and manifold pressure, and compare them with the information listed on the serial board. The factory voltage circuit diagram is located inside the front door of the fryer, refer to page 19.

REMOVAL AND REPLACMENT OF PARTS

WARNING

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

Adjustable Foot

Adjustable foot disassembly

1) Fig 1: Put down the fryer body to a flat table;
2) Fig 2: Unscrew the screw at the red circle with a sleeve;

Picture is an example of the adjustable foot in the upper right corner, and the adjustable foot in the rest of the position is the same.

Fig 1

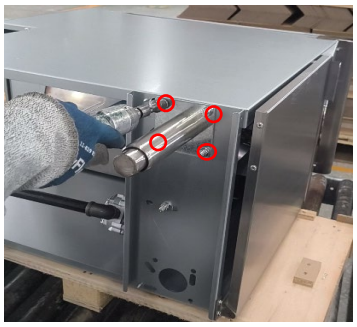


Fig 2

Adjustable foot assembly

In reverse order when dismantling

Back Apron

Back apron disassembly

1) Fig. 3: Unscrew the screw at the red circle with the sleeve.
2) Fig. 4: Pull up the back apron and get it out.

Fig 3

Fig 4

Back apron assembly

In reverse order when dismantling

Oil Drain Valve

Drain valve disassembled

1) Fig. 5: Unscrew the oil release valve in a clockwise direction with a wrench.

Fig 5

Drain valve assembly

1) Fig. 6: Wrap Teflon tape around the thread of drain valve.

- Note: The Teflon tape should be wound in the direction of the thread; Slightly apply force when wrapping.

2) Fig. 7: Tighten the drain valve counterclockwise with a wrench.
3) Fig. 8: The orientation of the oil drain valve after tightening is shown in the figure.

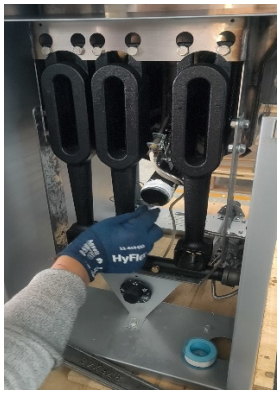


Fig 6

Fig 7

Fig 8

Pilot

Pilot disassembly

1) Fig. 9: Use a screwdriver to unscrew the screws in the red circle and remove the components;
2) Fig. 10: As shown in the figure, use a wrench to unscrew the nut that holds the pilot bracket, and separate the bellows from pilot by hand;

- Note: Keep an eye on the components on the bellows to prevent them from falling off or missing.

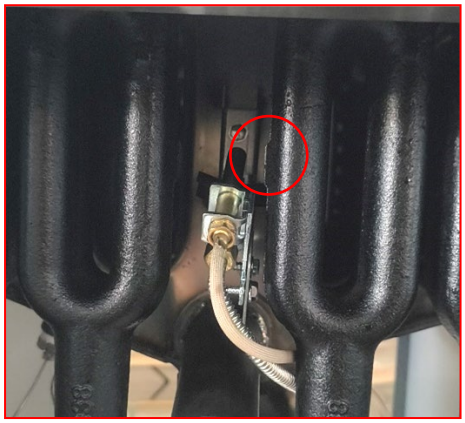


Fig 9

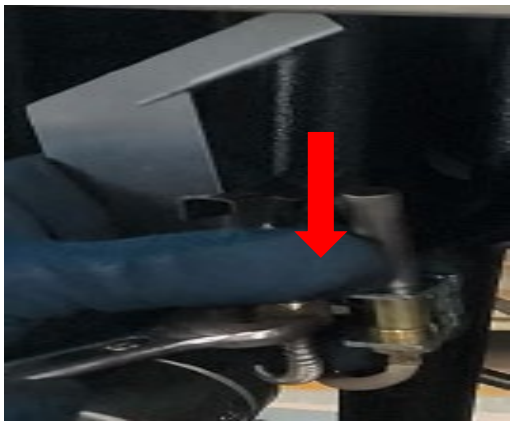


Fig 10

Pilot assembly

In reverse order when dismantling

Note: After installation, need use a leak detector to test if any gas leak.

Thermopile

Thermopile disassembly

1) Disassemble the components according to the steps for disassembling the pilot;
2) Fig. 11: Unscrew the nut of the fixed thermopile with a wrench as shown and separate the bellows from pilot by hand;
3) Fig. 12: Use a screwdriver to loosen the screws at the red circle and remove the wiring of the thermopile;

Fig 11

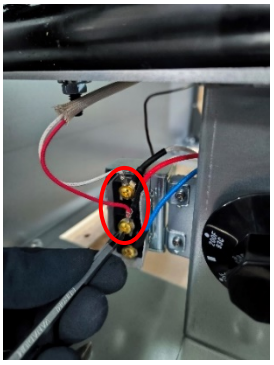


Fig 12

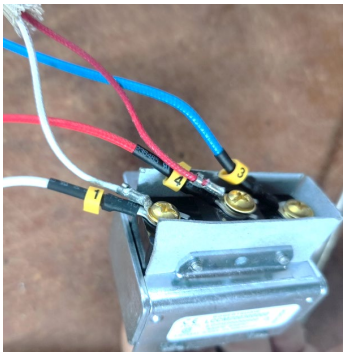


Fig 13

Thermopile assembly

In reverse order when dismantling

Note:

- After installation, need use a leak detector to test if any gas leak.
- The new thermopile is connected to the thermostat port as shown in Figure 13

Door Fittings

Door fitting disassembly

1) Fig. 14: The sleeve unscrews the bolt at the red circle;
2) Fig. 15: Pull the door fitting out of the hole position in the direction shown in the diagram;
3) Fig. 16: Pull the door shaft out of the hole in the direction shown;

Fig 14

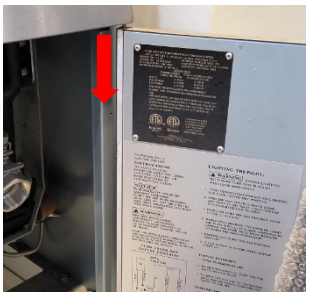


Fig 15

Fig 16

Door fitting assembly

In reverse order when dismantling

Magnet

Square magnet disassembly

1) Fig. 17: Use tools (eg: hammer) strikes the side of the square magnet until it falls off;

Fig 17

Square magnet assembly

1) Fig. 18: Place the square magnet in the position shown, align the holes. Notice the orientation of the square magnet;
2) Fig. 19: As shown in the figure, insert the thick end of the nail into the hole position of the square magnet and the fryer frame in turn;

Fig 18

Fig 19

3) Fig. 20: Fix the square magnet with a nail gun;
4) Fig. 21: Drop 502 glue into the gap at the red circle of the square magnet.

Fig 20

Fig 21

Thermostat Knob

Thermostat knob disassembly

1) Fig. 22: Pull out the thermostat knob with both hands as shown;

Fig 22

Fig 23

Thermostat knob assembly

In reverse order when dismantling

NOTE: Fig. 23 aligns the "OFF" of the thermostat knob to the triangular arrow on holder after assembly.

Hi-limiter

Hi-limiter disassembly

1) Fig. 24: Fix the back nut as shown in the upper right figure by hand, and use a screwdriver to unscrew out the screw rod in red circle as shown in the figure;
2) Fig. 25: Loosen the bolts with a screwdriver and pull out all the wires;

Fig 24

Fig 25

3) Fig. 26: Use the sleeve to unscrew the screw of probe fixing plate inside the tank, see the red circle;
4) Fig. 27: Take out the hi-limiter probe, and then take out the probe fixing plate;

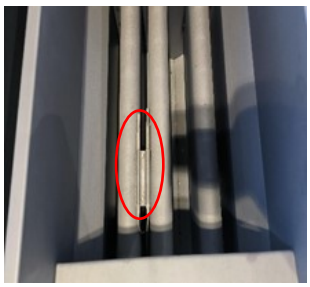


Fig 26

Fig 27

5) Fig. 28: Loosen the probe lock nut with a wrench;
6) Fig. 29: Unscrew the probe fixing nut with a wrench;
7) Remove the hi-limiter probe.

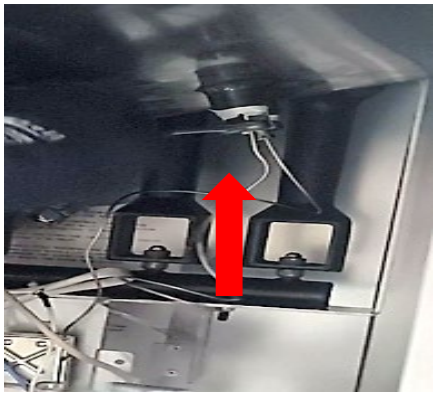


Fig 28

Fig 29

Hi-limiter assembly

1) Fig. 30: Wrap hi-limiter probe fixing nut with Teflon tape;
- Note: The Teflon belt should be wound along the direction of the thread, and don't be reversed; Slightly apply force when wrapping;
2) The wiring of the new thermostat port is shown in Fig. 31
3) In reverse order when dismantling
- Note: After installation, need use a leak detector to test if any gas leak.

Fig 30

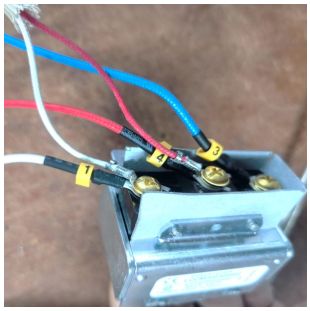


Fig 31

Thermostat

Thermostat disassembly

1) Fig. 32: Use the sleeve to unscrew the screw of probe fixing plate inside the tank;
2) Fig. 33: Take out the thermostat probe, and then take out the probe fixing plate;

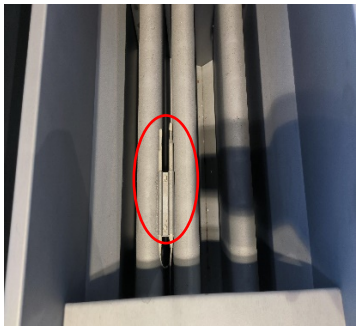


Fig 32

Fig 33

3) Perform the "Hi-limiter disassembly" operation.
4) Fig. 34: Use a screwdriver to unscrew the screws in the red circle and remove the thermostat;
5) Fig. 35: Use a screwdriver to loosen the left and right screws and pull out the wires;

Fig 34

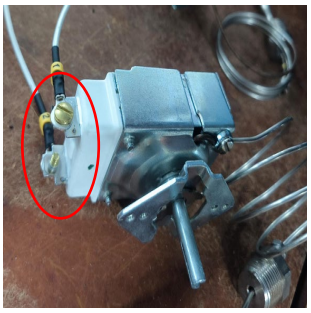


Fig 35

6) Fig. 36: The fixed position of the thermostat probe is shown in Fig.;

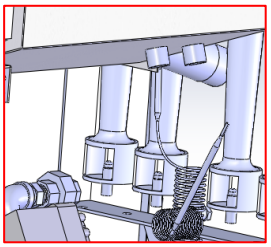


Fig 36

Thermostat assembly

1) Fig. 37: Wrap with Teflon tape on thermostat probe fixing nut;

- Note: The Teflon tape should be wrapped along the direction of the thread, and the direction should not be reversed; Slightly apply force when wrapping.

2) Refer to "Thermostat disassembly" and complete it in reverse order.

Note: After installation, need use a leak detector to test if any gas leak.

Fig 37

Burner

Burner disassembly

1) Fig. 38: Unscrew the screw with the sleeve and remove the front upper cross beam in the red circle;
2) Fig. 39: Use the sleeve to loosen the screw from burner head.

Fig 38

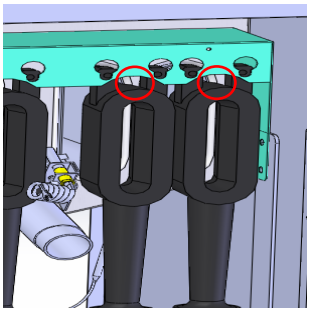


Fig 39

3) Lift the burner up and push it back to remove it

Burner assembly

1) Fig. 40: Applied thread fastening glue to the thread of the burner bolt;

- NOTE: The dosage must be strictly controlled, only need to apply the thread for a round, not too much;

2) The burner head is assembled in reverse order when dismantling.

Note: After installation, need use a leak detector to test if any gas leak.

Fig 40

Safety Valve

Safety Valve Disassembly

1) Disassemble the front upper beam in order;
2) Fig. 41: Hold the nut by hand, and then use a wrench to unscrew the bolt at the red circle;
3) Fig. 42: Unscrew the screw at the red ring with a sleeve;

Fig 41

Fig 42

4) Fig. 43: Pull out the tank in the direction shown in the figure;
5) Fig. 44: Use a wrench to unscrew the bellows fixing nut and separate it from the safety valve; Loosen the bolts with a Phillips screwdriver and pull out all the wires;
6) Fig. 45: Use a wrench to unscrew the safety valve union nut.

Fig 43

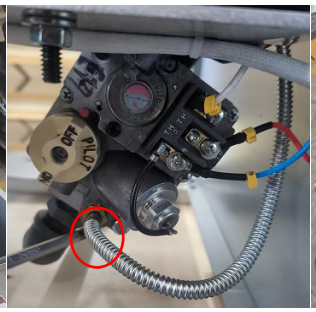


Fig 44

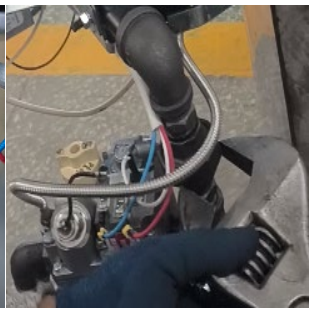


Fig 45

Safety Valve Assembly

1) Refer to "Safety Valve Disassembly" and complete it in reverse order.

- Note: As shown in Fig. 46, the safety valve needs to be assembled into sub-assembly in advance at a workplace with a vice.

2) After installation, need use a leak detector to test if any gas leak.

Fig 46

Nozzle

Nozzle disassembly

1) Refer to "Burner disassembly" to disassemble the burner. Replace the nozzle, and keep the burner for later use;
2) Fig. 47: Unscrew the nozzle with a wrench;

Fig 47

Nozzle assembly

1) Refer to "Nozzle disassembly", and complete it in reverse order.

Note: After installation, need use a leak detector to test if any gas leak.

2) After all steps that affect the air tightness, air leaking test on the joints should be checked. Refer to Fig. 48

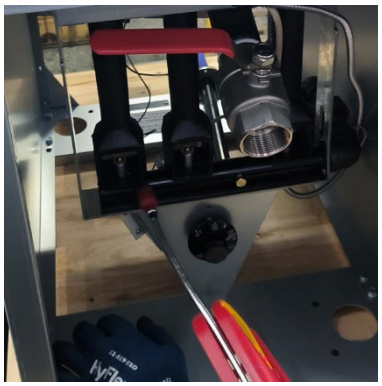


Fig 48

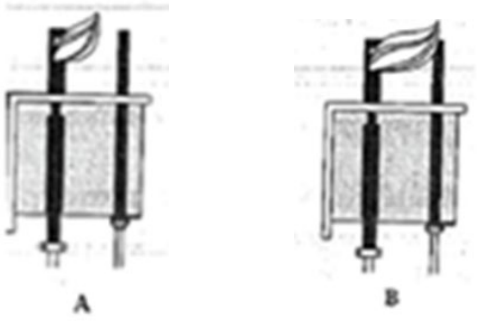
CHECKING AND ADJUSTING PILOT

The pilot flame should surround the thermopile by ½". It must be large and sharp enough to make the thermopile emit a dark red color or to keep the safety valve open.

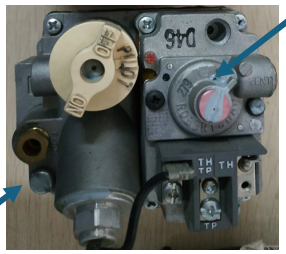
1. Remove pilot adjustment cap.

2. Adjust pilot key to provide flames of appropriate size as shown in Figure B. Figure A shows improper adjustment by the pilot.

3. Release pilot adjustment cap.

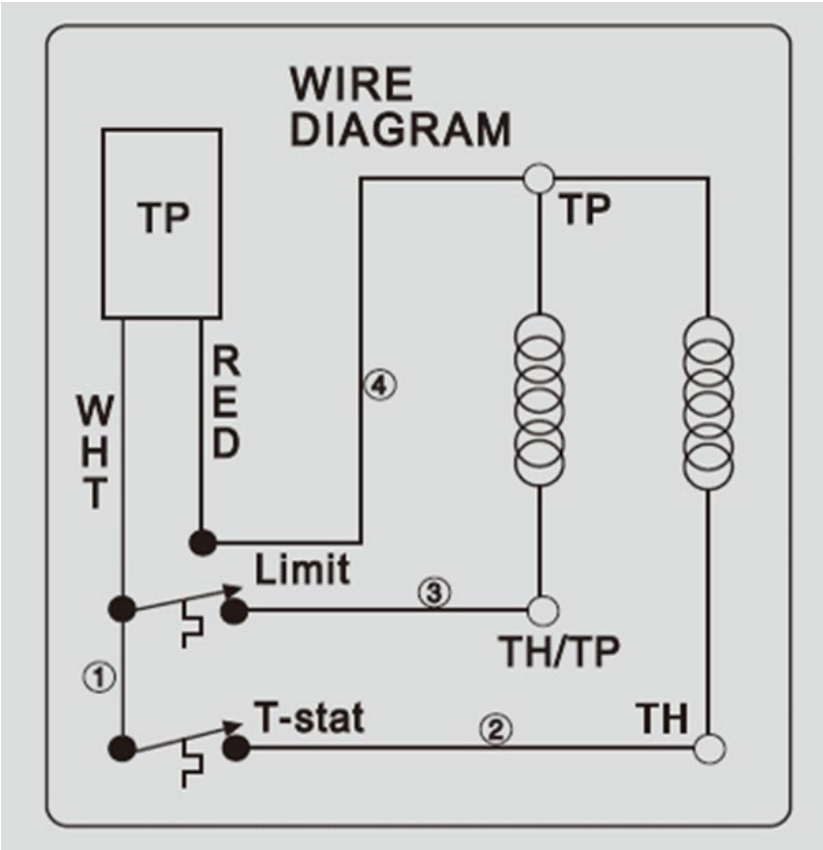


Pressure Adjustment under this Cop

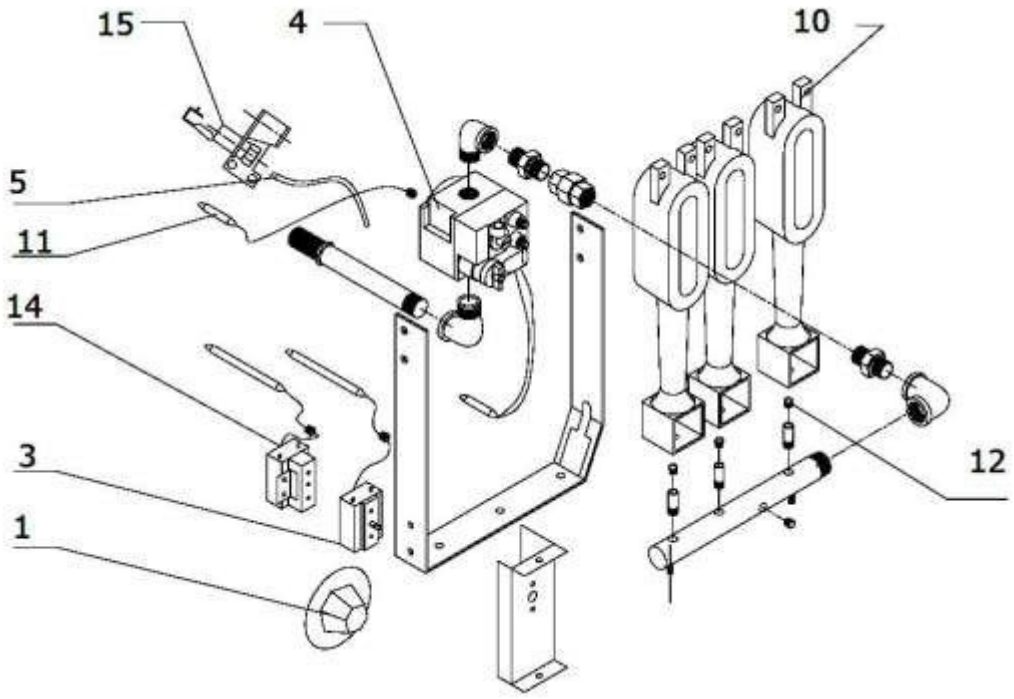


Pilot Adjustment Under this Screw

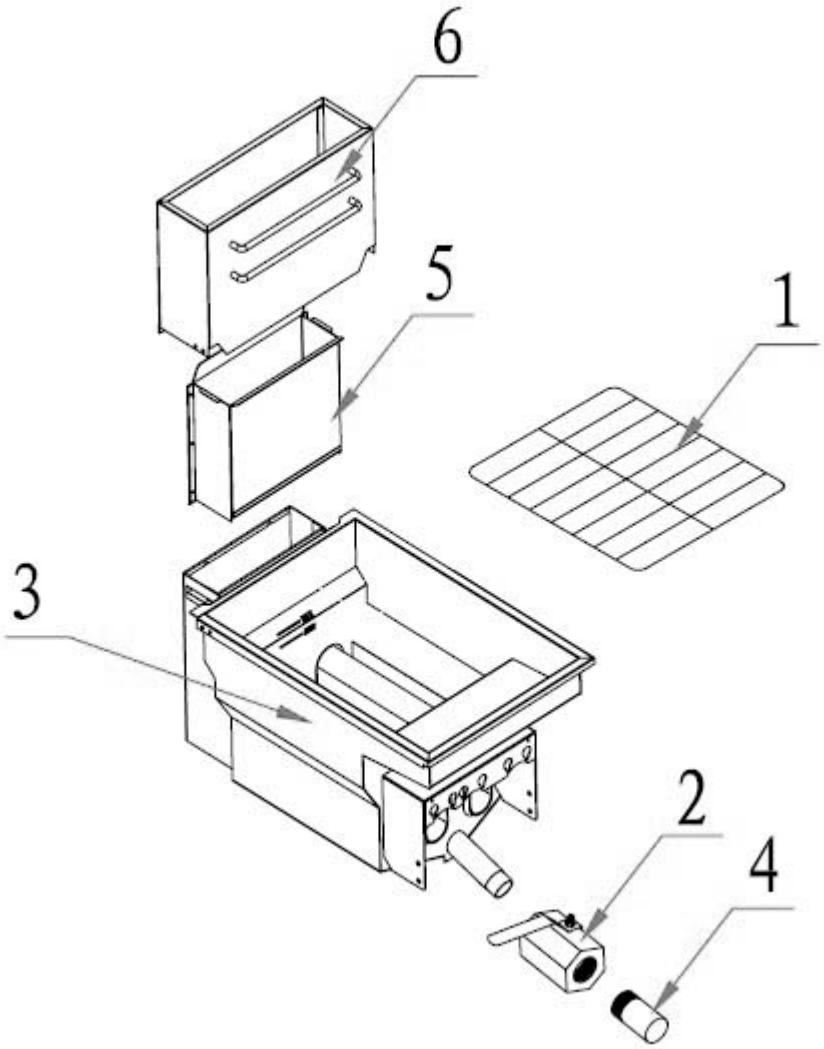
Wiring Diagram



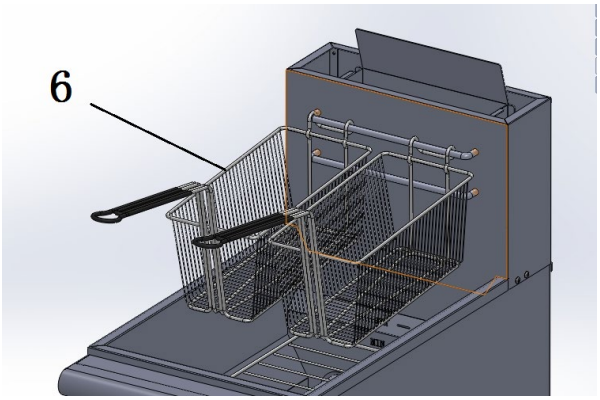
CATALOG OF REPLACEMENT PARTS

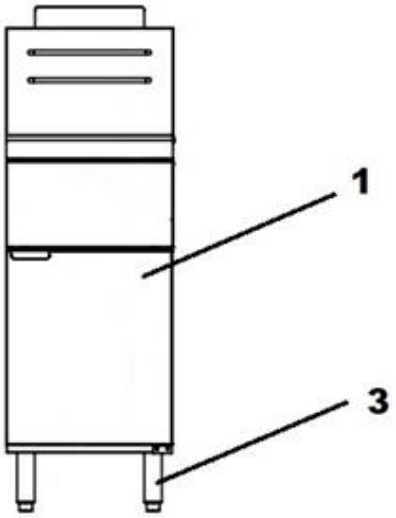


No.	Part #	Description	F3	F4	F5
1	301110362+ 314450004	Thermostat Knob	1	1	1
3	302220072B	Regulating Thermostat, 200°F to 400°F	1	1	1
4	302050077B	Combination Gas Valve (Natural)	1	1	1
	302050078B	Combination Gas Valve (Propane	*	*	*
5	302190071	Flexible Pilot Tubing, ¼”	1	1	1
10	302130094	Right Fryer Burner	1	1	1
	302130103	Center Fryer Burner	1	2	3
	302130104	Left Fryer Burner	1	1	1
11	302170023B	Thermopile	1	1	1
12	302150057	Main Burner Orifice #39 (Natural)	3	4	5
	302150058	Main Burner Orifice #52 (Propane)	*	*	*
	302201337	Orifice Extension	3	4	5
14	302220073B	Safety High Limit (450°F)	1	1	1
15	302130202B	Pilot 3-Way (Natural)	1	1	1
	302130201B	Pilot 3-Way (Propane)	*	*	*



No.	Part #	Description	F3	F4	F5
1	302110224	Basket Support	1	1	
	302110486	Basket Support			1
2	302050075	Drain Valve, (Ball Style)	1	1	1
3	20137056001	Fry Tank Only	1		
	20137057001	Fry Tank Only		1	
	20137058001	Fry Tank Only			1
4	302200627	Drain Extension	1	1	1
5	20237107071+20237035085	Flue Top	1		
	20237028020+20237044023	Flue Top		1	
	20237031038+20237034030	Flue Top			1
6	20137035013	Flue Wrap	1	1	
	20137058004	Flue Warp			1





No.	Part #	Description	F3	F4	F5
1	20137056003	Door Assembly Complete	1	1	
	20137058003	Door Assembly Complete			1
	302190245	Door Magnet	1	1	1
3	302090001	6” Adjustable Leg	4	4	4
	302090081+ 302090082	Caster Kit, (2 Front Swivel w/Brake, 2 Rear Fixed)	OPT	OPT	OPT
6	302110471	Fry Basket (13.25” L x 6.5” W x 6” D)	2	2	
	302110484	Fry Basket (17.5” L x 9.25” W x 6” D)			2

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES (checking according to the electric drawing)
1. The pilot can't be ignited.	1.1 check the gas connections. 1.2 see if you follow the instructions by manual 1.3 the valve lose efficacy
2. the burners are not ignited	2.1 the thermostat is invalid 2.2 gas valve is breakdown. 2.3 the limit is in protesting (reset the limit, if happening again in short time) 2.4 The thermopile is invalid
3. the limit is in protesting frequently	3.1 one time by chance (reset the limit if happening again in short time) 3.2 the probe of the limit isn't mounted very well. 3.3 the limit is breakdown
4.the temperature of the oil is uncontrollable by the thermostat	4.1 the sensor of the temperature isn't lay out very well. (instruction: loose the sensor and remount it) 4.2 the thermostat lose efficacy.