Henny Penny

Split Vat & Full Vat
Open Fryers – Gas
Model LVG-102
Model LVG-103
Model LVG-104

OPERATOR'S MANUAL

NOTICE

This manual should be retained in a convenient location for future reference.

A wiring diagram for this appliance is located on the inside of the right side panel.

Post in a prominent location, instructions to be followed in event user smells gas. This information shall be obtained by consulting the local gas supplier.

Do not obstruct the flow of combustion and ventilation air. Adequate clearance must be left all around appliance for sufficient air to the combustion chamber.

The Model LVG-10X open fryer is equipped with a continuous pilot. But the open fryer cannot be operated without electric power, and no attempt should be made to operate the fryer during a power outage. The unit will automatically return to normal operation when power is restored.

CAUTION

To avoid a fire, keep appliance area free and clear from combustibles.

⚠ WARNING

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

⚠ DANGER

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE. FIRE OR EXPLOSION COULD RESULT.

HENNY PENNY®
Global Foodservice Solutions

Technical Data for CE/AGA Marked Products

Nominal Heat Input: Natural (I2H) = 19,8, kW (67,560 Btu/h)
(Net)   Natural (I2E) = 19.8 kW (67,560 Btu/h)
                     Natural (I2E+) = 19.8 kW (67,560 Btu/h)
                     Natural (I2L) = 19.8 kW (67,560 Btu/h)
                     Natural (I2HS) = 19.8 kW (67,560 Btu/h)
                     Liquid Propane (I3P) = 19,8, kW (67,560 Btu/h)

Nominal Heat Input: Natural (I2H) = 21,98 kW (75,000 Btu/h) (79.13 MJ/h)
(Gross)   Natural (I2E) = 21,98 kW (75,000 Btu/h)
                     Natural (I2E+) = 21,98 kW (75,000 Btu/h)
                     Natural (I2L) = 21,98 kW (75,000 Btu/h)
                     Natural (I2HS) = 21,98 kW (75,000 Btu/h)
                     Liquid Propane (I3P) = 21,98 kW (75,000 Btu/h) (79.13 MJ/h)

Supply Pressure: Natural (I2H) = 20 mbar (2.0 kPa)
                     Natural (I2E) = 20 mbar
                     Natural (I2E+) = 20/25 mbar
                     Natural (I2L) = 25 mbar
                     Natural (I2HS) = 25 mbar
                     Liquid Propane (I3P) = 30/37/50 mbar (3.0/3.7/5.0 kPa)

Test Point Pressure: Natural (I2H) = 8.7 mbar (.87 kPa)
                     Natural (I2E) = 8,7 mbar
                     Natural (I2E+) = N/A
                     Natural (I2L) = 8.7 mbar
                     Natural (I2HS) = 8.7 mbar
                     Liquid Propane (I3P) = 25 mbar (2.5 kPa)

Injector Size: Natural (I2H) = 2.08 mm
                     Natural (I2E) = 2.08 mm
                     Natural (I2E+) = 1.70 mm
                     Natural (I2L) = 2.30 mm
                     Natural (I2HS) = 2.30 mm
                     Liquid Propane (I3P) = 1.30 mm

This appliance must be installed in accordance with the manufacturer's instructions and the regulations in force and only used in a suitable ventilated location. Read the instructions fully before installing or using the appliance.

EXCLUSIVE EXTENDED WARRANTY FOR McDONALD'S LOV FRYERS

Henny Penny Corporation makes the following limited warranty to the original McDonald's LOV fryer purchaser of Models LVE 102, 103 and 104 and LVG 102, 103 and 104 only:

PARTS AND LABOR WARRANTY: With the exception of the frypot, O-rings, lamps, and fuses, the standard Henny Penny Limited Warranty for new equipment is extended to cover the repair or replacement of defective parts, and includes labor charges and maximum mileage charges of 200 miles (300 km) round trip for a period of two (2) years from the date of original installation. Overtime or holiday charges to be covered only if entire fryer is inoperable.

EXTENDED FRYPOT WARRANTY: The standard Henny Penny Limited Warranty is also extended on any LOV frypot that fails due to manufacturing, material or workmanship issues, as follows:

> **Years 1-10:**
> If an LOV frypot cracks during this period, excluding from accident, abuse, misuse, or alteration, Henny Penny will replace the fryer under the following terms:
> - Henny Penny will provide a replacement (either new or rebuilt, in Henny Penny's sole discretion) LOV fryer at no cost to Customer. Customer will be advised whether unit is new or rebuilt.
> - Replacement LOV fryer (either new or rebuilt) will carry the balance of the original warranty (on pot and on parts, plus labor) or six months parts and labor, which ever is greater.
> - Henny Penny will pay all reasonable costs related to the delivery and installation of the replacement LOV fryer, including freight and international duties.
> - Original LOV fryer will become the property of Henny Penny, with all costs related to removal to be approved and paid by Henny Penny.

> **Years 11-15:**
> If an LOV frypot cracks during this period, excluding from accident, abuse, misuse, or alteration, Henny Penny will replace the fryer under the following terms:
> - Henny Penny will provide Customer a replacement (either new or rebuilt, in Henny Penny's sole discretion) LOV fryer at 50% of the current McDonald's negotiated price. Customer will be advised whether unit is new or rebuilt.
> - Replacement LOV fryer (either new or rebuilt) will carry a five (5) year pot warranty and one (1) year warranty on parts and labor.
> - Customer will pay all costs related to the delivery and installation of the replacement LOV fryer, including freight and international duties.

The extended warranty does not cover any LOV frypot that is leaking from thread fittings such as probes, sensors, high-limits, drain valves, or return piping, or that fails due to abuse, misuse, alteration, and/or accident including, but not limited to;
- improper or unauthorized repair;
- failure to provide Henny Penny with a proper start-up form;
- failure to follow proper installation instruction and/or scheduled maintenance procedures as prescribed in the installation instructions and the Operator's Manual;
- improper maintenance as described in the Operator's Manual;
- removal, alteration or obliteration of unit data plate or serial number.
- damage occurring during shipment; and/or
- improper use including, but not limited to, operation of the unit without frypot appropriately filled to recommended capacity or with no oil.

All other terms of the Henny Penny Standard Limited Warranty remain unchanged.

LIMITED WARRANTY FOR HENNY PENNY EQUIPMENT

Subject to the following conditions, Henny Penny Corporation makes the following limited warranties to the original purchaser only for Henny Penny appliances and replacement parts:

NEW EQUIPMENT: Any part of a new appliance, except baskets, lamps, and fuses, which proves to be defective in material or workmanship within two (2) years from date of original installation, will be repaired or replaced without charge F.O.B. factory, Eaton, Ohio, or F.O.B. authorized distributor. Baskets will be repaired or replaced for ninety (90) days from date of original installation. Lamps and fuses are not covered under this Limited Warranty. To validate this warranty, the registration card for the appliance must be mailed to Henny Penny within ten (10) days after installation.

FILTER SYSTEM: Failure of any parts within a fryer filter system caused by the use of the non-OEM filters or other unapproved filters is not covered under this Limited Warranty.

REPLACEMENT PARTS: Any appliance replacement part, except lamps and fuses, which proves to be defective in material or workmanship within ninety (90) days from date of original installation will be repaired or replaced without charge F.O.B. factory, Eaton, Ohio, or F.O.B. authorized distributor.

The warranty for new equipment covers the repair or replacement of the defective part and includes labor charges and maximum mileage charges of 200 miles round trip for a period of one (1) year from the date of original installation.

The warranty for replacement parts covers only the repair or replacement of the defective part and does not include any labor charges for the removal and installation of any parts, travel, or other expenses incidental to the repair or replacement of a part.

EXTENDED FRYPOT WARRANTY: Henny Penny will replace any frypot that fails due to manufacturing or workmanship issues for a period of up to seven (7) years from date of manufacture. This warranty shall not cover any frypot that fails due to any misuse or abuse, such as heating of the frypot without shortening.

0 TO 3 YEARS: During this time, any frypot that fails due to manufacturing or workmanship issues will be replaced at no charge for parts, labor, or freight. Henny Penny will either install a new frypot at no cost or provide a new or reconditioned replacement fryer at no cost.

3 TO 7 YEARS: During this time, any frypot that fails due to manufacturing or workmanship issues will be replaced at no charge for the frypot only. Any freight charges and labor costs to install the new frypot as well as the cost of any other parts replaced, such as insulation, thermal sensors, high limits, fittings, and hardware, will be the responsibility of the owner.

Any claim must be presented to either Henny Penny or the distributor from whom the appliance was purchased. No allowance will be granted for repairs made by anyone else without Henny Penny's written consent. If damage occurs during shipping, notify the sender at once so that a claim may be filed.

THE ABOVE LIMITED WARRANTY SETS FORTH THE SOLE REMEDY AGAINST HENNY PENNY FOR ANY BREACH OF WARRANTY OR OTHER TERM. BUYER AGREES THAT NO OTHER REMEDY (INCLUDING CLAIMS FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES) SHALL BE AVAILABLE.

The above limited warranty does not apply (a) to damage resulting from accident, alteration, misuse, or abuse; (b) if the equipment's serial number is removed or defaced; or (c) for lamps and fuses. THE ABOVE LIMITED WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS, AND ALL OTHER WARRANTIES ARE EXCLUDED. HENNY PENNY NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY.

Revised 01/01/07

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SECTION 1.   INTRODUCTION

1-1.   INTRODUCTION

The Henny Penny open fryer is a basic unit of food processing equipment designed to cook foods better and easier. The micro computer-based design helps make this possible. This unit is used only in institutional and commercial food service operations, and operated by qualified personnel.

NOTICE

- As of August 16, 2005, the Waste Electrical and Electronic Equipment directive went into effect for the European Union. Our products have been evaluated to the WEEE directive. We have also reviewed our products to determine if they comply with the Restriction of Hazardous Substances directive (RoHS) and have redesigned our products as needed in order to comply. To continue compliance with these directives, this unit must not be disposed as unsorted municipal waste. For proper disposal, please contact your nearest Henny Penny distributor.

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

1-2. FEATURES

- Easily cleaned
- Uses 40% less oil
- Full vat or split vat
- Computer control
- Stainless steel construction
- Automatic oil top off
- Self-diagnostic system built into controls
- Built in filter with automatic filtration
- Propane or natural gas; 75,000 BTU/vat (21.97 kw)

1-3.   PROPER CARE

As in any unit of food service equipment, the Henny Penny open fryer does require care and maintenance. Requirements or the maintenance and cleaning are contained in this manual and must become a regular part of the operation of the unit at all times.

NOTICE

Contact a qualified service technician in case of major maintenance or repairs to the unit.

1-4.   ASSISTANCE

Should you require outside assistance, call your local independent distributor in your area, or call Henny Penny Corp. at 1-800-417-8405 or 1-937-456-8405.

1-5.   SAFETY

The Henny Penny open fryer has many safety features incorporated. However, the only way to ensure a safe operation is to fully understand the proper installation, operation, and maintenance procedures. The instructions in this manual have been prepared to aid you in learning the proper procedures. Where information is of particular importance or safety related, the words DANGER, WARNING, CAUTION, and NOTICE are used. Their usage is described below.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

SAFETY ALERT SYMBOL is used with DANGER, WARNING, or CAUTION which indicates a personal injury type hazard.

NOTICE is used to highlight especially important information.

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

CAUTION used with the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

DANGER INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

1-5.   SAFETY
   (Continued)

Equipotential Ground Symbol

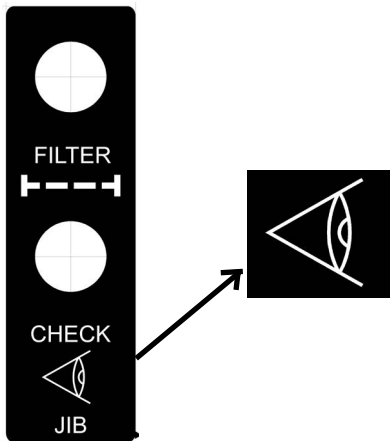Waste Electrical and Electronic Equipment (WEEE) Symbol
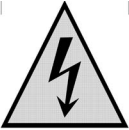
OR   Shock Hazard Symbols

OR   Hot Surface Symbols

To Check or Confirm

SECTION 2.   INSTALLATION

2-1.   INTRODUCTION

This section provides the installation and unpacking instructions for the Henny Penny LVG fryer.

NOTICE

Installation of this unit should be performed only by a qualified service technician.

⚠ WARNING
SHOCK HAZARD

Do not puncture the fryer with any objects such as drills or screws as component damage or electrical shock could result.

2-2.   UNPACKING

NOTICE

Any shipping damage should be noted in the presence of the delivery agent and signed prior to his or her departure.

1.   Cut and remove the metal bands from the carton.

2.   Remove the carton lid and lift the main carton off the fryer.

3.   Remove corner packing supports (4).

4.   Cut the stretch film from around the carrier/rack box and remove it from the top of the fryer lid.

5.   Cut and remove the metal bands holding the fryer to the pallet, and remove fryer from pallet.
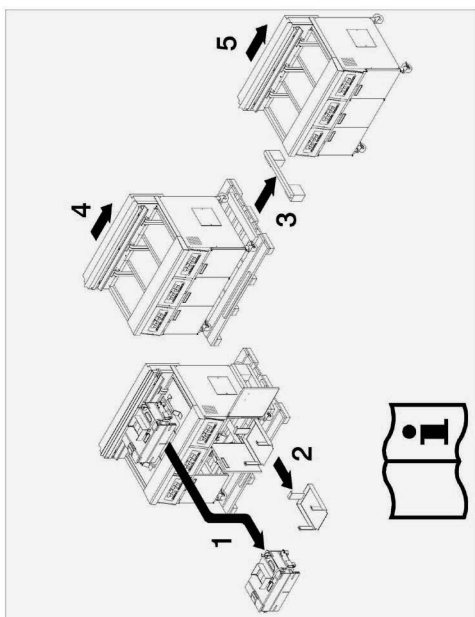
CAUTION

Remove filter drain pan and JIB shelf from fryer before removing fryer from pallet or damage to the unit could result. Figure 1.

⚠ WARNING
HEAVY OBJECT

Take care when moving the fryer to prevent personal injury. The fryer weighs approximately 600 lbs. (272 kg) to 800 lbs. (363 kg).

Figure 1

2-3. SELECTING THE FRYER LOCATION

The proper location of the fryer is very important for operation, speed, and convenience. The location of the open fryer should allow clearances for servicing and proper operation. Choose a location which will provide easy loading and unloading without interfering with the final assembly of food orders. Operators have found that frying from raw to finish, and holding the product in warmers provides fast continuous service. Keep in mind, the best efficiency will be obtained by a straight line operation, i.e. raw in one side and finished out the other side. Order assembly can be moved away with only a slight loss of efficiency.

CAUTION
FIRE HAZARD

To avoid fire, install the open fryer with minimum clearance from all combustible materials, 2 inches (5.08 cm) from the side and 4 inches (10.16 cm) from the back. Minimum clearance from all non-combustible materials, 0 inches (0.00 cm) from the side and 0 inches (0.00 cm) from the back. If installed properly, the open fryer is designed for operation on non-combustible floors only

Do not spray aerosols in the vicinity of this appliance while it is in operation.

⚠ WARNING
BURN RISK

To prevent severe burns from splashing hot oil, position and install fryer to prevent tipping or move ment. Restraining ties may be used for stabilization.

2-4. LEVELING THE FRYER

For proper operation, the open fryer should be level from side-to-side and front to back. Using a level placed on the flat areas around the vat collar, on the middle well, and then adjust the casters until the unit is level. **Casters adjustable up to 1.562 in (40mm).**

2-5. VENTILATION OF FRYER

The fryer should be located with provision for venting into an adequate exhaust hood or ventilation system. This is essential to permit efficient removal of the steam exhaust and frying odors. Special precaution must be taken in designing an exhaust canopy to avoid interference with the operation of the fryer. We recommend you consult a local ventilation or heating company to help in designing an adequate system.

NOTICE

Ventilation must conform to local, state, and national codes. Consult your local fire department or building authorities.

⚠ WARNING

When installing the gas open fryer, do not attach an extension to the gas flue exhaust stack. This may impair proper operation of the burner, causing malfunctions and possible negative back draft.

2-6. GAS SUPPLY

The gas open fryer is factory available for either natural or propane gas. Check the data plate inside the left front door of the cabinet to determine the proper gas supply requirements. The minimum supply for natural gas is 7 inches water column (1.7 kPa) (17.0 mbar), and 10 inches water column (2.49 kPa) (24.9 mbar) for propane.

⚠ WARNING
EXPLOSION RISK

Do not attempt to use any gas other than that specified on the data plate. Incorrect gas supply could cause a fire or explosion resulting in sever injuries and/or propety damage.

Please refer below for the recommended hookup of the fryer to main gas line supply.

⚠ WARNING

To avoid possible serious personal injury:
• **Installation must conform with local, state, and national codes, the American National Standard Z223.1/NFPA 54 -(the latest edition) National Fuel Gas Code, and the local municipal building codes. In Canada, the Natural Gas and Propane Installation Code is CSA B149.1 & Installation Codes - Gas Burning Appliances and local codes. In Australia, in accordance with Australian Gas Authority rules AS5601.1/2-2010.**

2-6. GAS SUPPLY
(Continued)

⚠ WARNING

To ensure proper connection, quick disconnect on gas line must be clean and free of any grease and debris. Failure to have a clean connection can result in gas leaks and pottential fire hazard.

1. **Remove gas line from fryer.**

2. **Clean the disconnect by removing any grease build up. Pull back on the disconnect to ensure it functions properly. If disconnect will not slide of gives resistance, confirm grease/ debris is removed before connecting.**
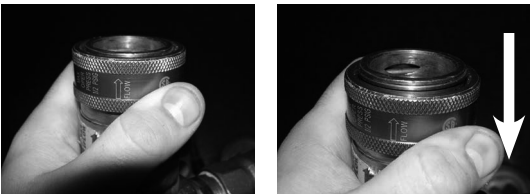
3. **Once line is reconnected, inspect for secure connection.**
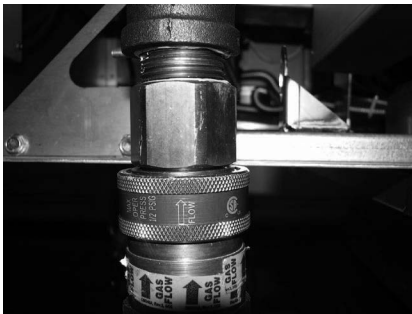
• **The fryer and its manual shutoff vavle must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 PSIG (3.45 kPa) (34.5 mbar).**
• **The fryer must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 PSIG (3.45 kPa) (34.5mbar).**
• **A standard one inch (2.54 cm), black steel pipe and malleable fittings should be used for gas service connections for 3 & 4 well open fryers, and 3/4 inch (1.91 cm) for 2 wells.**
• **Do not use cast iron fittings.**
• **Although one inch (2.54 cm) size pipe is recommended for 3 & 4 wells and 3/4 inch (1.91 cm) for 2 wells, piping should be of adequate size and installed to provide a supply of gas sufficient to meet the maximum demand without undue loss of pressure between the meter and the open fryer. The pressure loss in the piping system should not exceed 0.3 in. water column (0.747 mbar).**

Provisions should be made for moving the open fryer for cleaning and servicing. This may be accomplished by:

1. Installing a manual gas shutoff valve and a disconnect or union, or
2. Installing a heavy-duty design CSA certified connector. In order to be able to service this appliance, which is provided with casters, a connector complying with ANSI Z21.69-CAN 6.16 or CAN 1-6.10m88 and a quick-disconnect device, complying with ANSI Z21.41or CAN 1-6.9m70, must be installed. It must also be installed with restraining means to guard against transmission of strain to the connector as specified in the appliance manufacturer's instructions.
3. See the illustration on the following page for the proper connection of flexible gas line and cable restraint.

NOTICE

The cable restraint limits the distance the open fryer can be pulled from the wall. For cleaning and servicing the unit, the cable must be unsnapped from the open fryer and the flexible gas line disconnected. This allows better access to all sides of the open fryer. The gas line and cable restraint <u>must</u> be reconnected once the cleaning or servicing is complete.

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2-6. GAS SUPPLY
(Continued)

For Australia or New Zealand:
Where a model is supplied with castors and is to be connected to a fixed gas supply via a flexible hose connection, a restraining chain or wire of adequate strength shall be fixed to the appliance and be suitable to be fixed to the wall within 50 mm of each connection point. The length of the chain or wire shall not exceed 80% of the length of the hose assembly.

CAUTION

CAUTION

2-7. GAS LEAK TEST

NOTICE

Prior to turning the gas supply on, be sure the gas valve knob on the gas control valve is in the off position.

Upon initial installation, and after moving the unit, the piping and fittings should be checked for gas leaks. A simple checking method is to turn on the gas and brush all connections with a soap solution. If bubbles occur, it indicates escaping gas. In this event, the piping connection must be redone.

⚠ WARNING
NO OPEN FLAME

To avoid fire or explosion, never use a lighted match or open flame to test for gas leaks. Ignited gas could result in severe personal injury and/or property damage

2-8. GAS PRESSURE REGULATOR SETTING

The gas pressure regulator on the gas control valve is factory set as follows:
• Natural: 3.5 inches water column (0.87 kPa) (8.72 mbar).
• Propane 10.0 inches water column (2.49 kPa) (24.9 mbar).

NOTICE

The gas pressure regulator has been set by Henny Penny and is not to be adjusted by the user.

2-9. ELECTRICAL REQUIREMENTS

• 120 V, 50/60 Hz, 1 PH, 12 A
• 230 V, 50 Hz, 1 PH, 7 A

The 120 volt gas fryer is factory equipped with a grounded (earthed) cord and plug for your protection against shock, and should be plugged into a three-prong grounded (earthed) receptacle. Do not cut or remove grounding (earthing) prong. Any 230 volt plug used on the 230 volt unit must conform to all local, state, and national codes.

⚠ WARNING
SHOCK HAZARD

To avoid electrical shock, this appliance must be equipped with an external circuit breaker which incorporates a 3mm disconnection in all ungrounded (unearthed) conductors. The main power switch on this appliance does not disconnect all line conductors.

2-9. ELECTRICAL REQUIREMENTS (Continued)

WARNING — SHOCK HAZARD

To avoid electrical shock, do not disconnect the ground (earth) plug. This fryer must be adequately and safely grounded (earthed). Refer to local electrical codes for correct grounding (earthing) procedures or in absence of local codes, with The National Electrical Code, ANSI/ NFPA No. 70-(the current edition). In Canada, all electrical connections are to be made in accordance with CSA C22.2, Canadian Electrical Code Part 1, and/or local codes.

NOTICE

Disconnect power supply before a thorough cleaning or servicing the fryer

2-10. MOTOR BEARINGS

The electric motor bearings are permanently lubricated. DO NOT LUBRICATE.

2-11. LIGHTING AND SHUTDOWN OF THE BURNERS

1. Turn the power switch to the OFF position.

2. Wait at least 5 minutes and then turn the power switch to the ON position.

3. Press [⏻] button on the controls (left or right).

4. The burner lights and operates in a Melt Cycle until the shortening reaches a preset temperature.

5. Once the display shows a product selection or a double dashes, press the desired product button.

NOTICE

The fryer is equipped with a ignition spark module which has a set ignition safety time (TSA) of 90 seconds.

To shutdown burner:

1. Press [⏻] button on the controls (left or right).

2. Turn the power switch to the OFF position.
    NOTE: This turns off all vats.

2-12. TESTING THE FRYER

Each Henny Penny pressure fryer was completely checked and tested prior to shipment. However, it is good practice to check the unit for proper operation.

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2-13. DIMENSIONS

Model LVG-102   Model LVG-103   Model LVG-104

31 1/4 in. (794 mm)   46 3/4 in. (1187 mm)   62 1/2 in. (1587 mm)

32.549

36.828

36.530

46.645

28.862
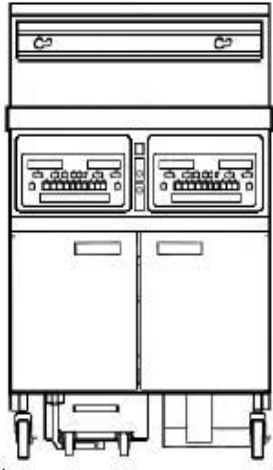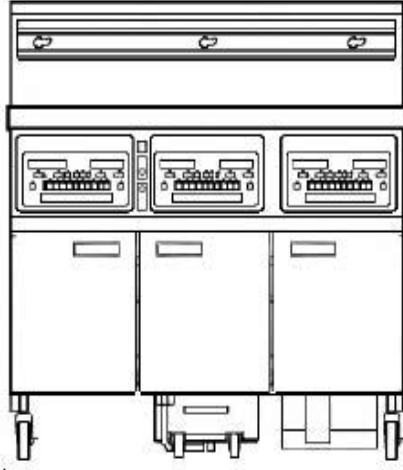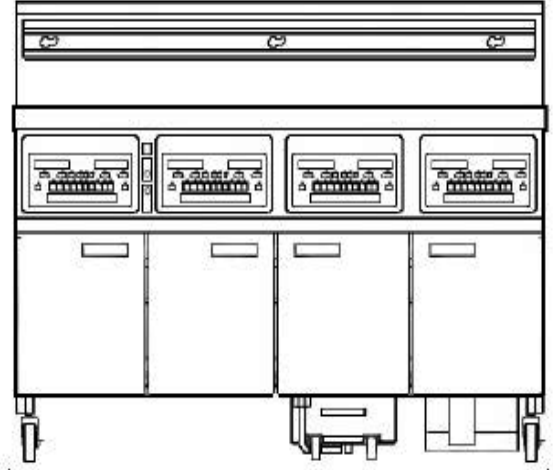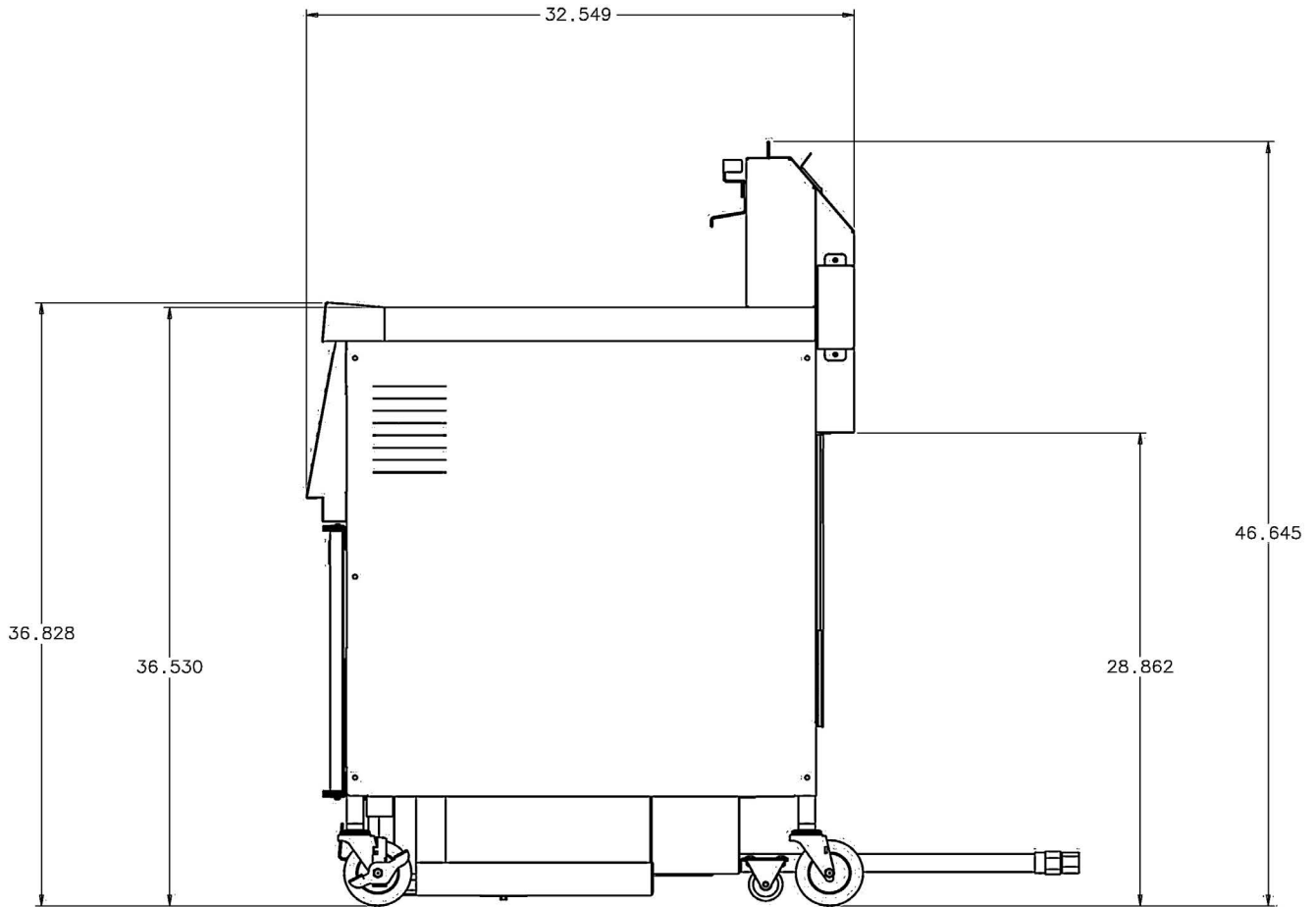
NOTICE   **Casters adjustable up to 1.562 in (40mm)**

2-13. DIMENSIONS (Continued)

LVG-10X Flue & Gas Line Dimensions
(All views from rear of fryers)
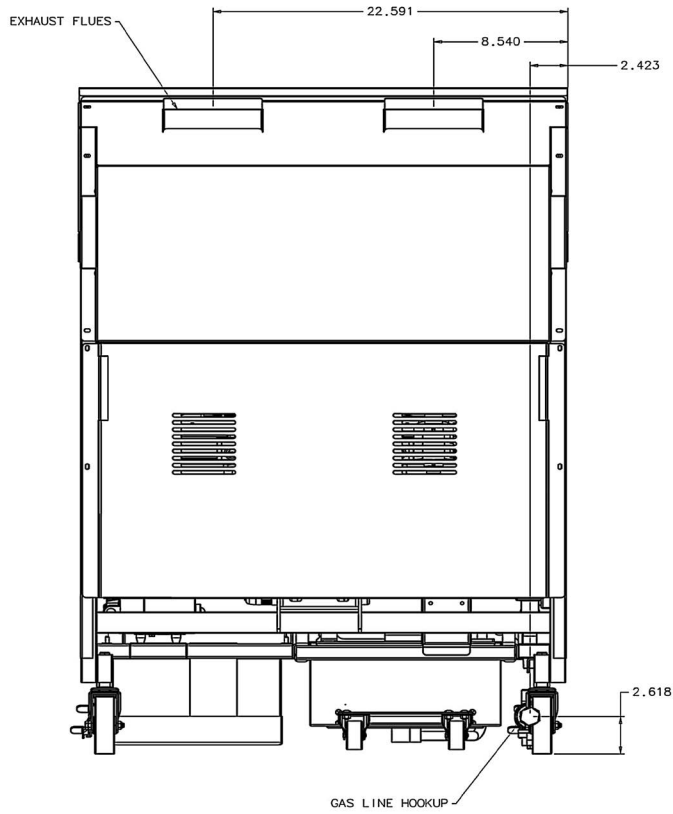
Model LVG-102
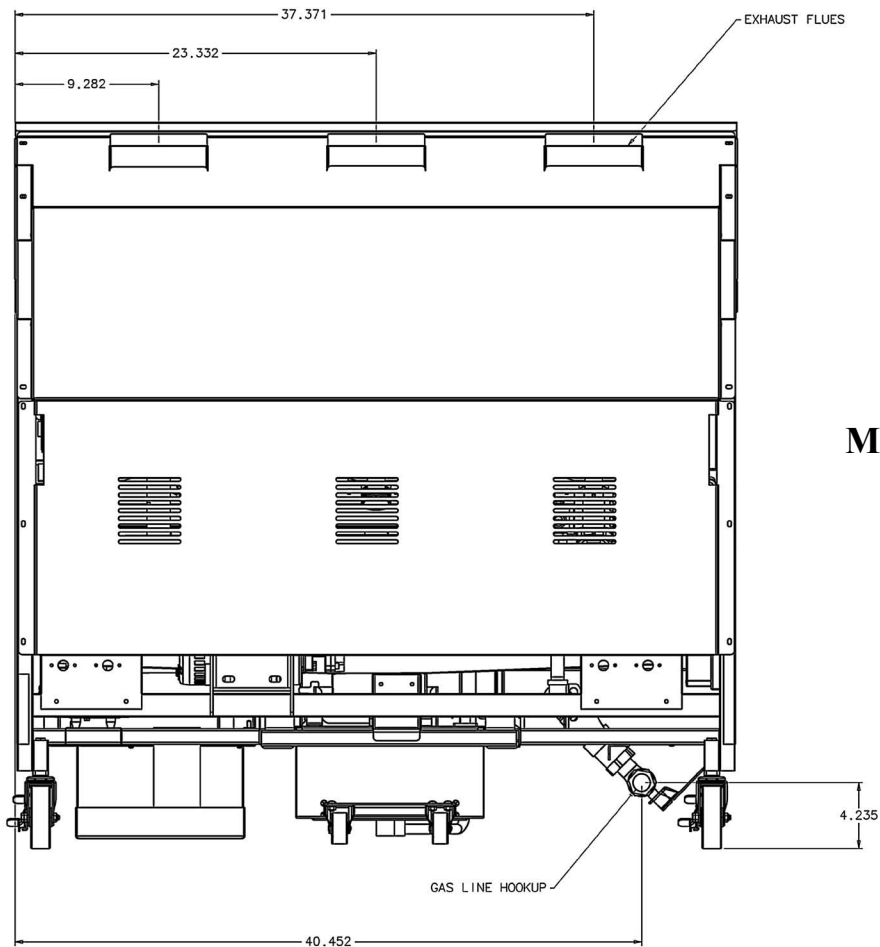
Model LVG-103

2-13. DIMENSIONS (Continued)

Model LVG-104

EXHAUST FLUE

52.232
38.191
24.150
10.128

GAS LINE HOOKUP

4.096

40.418

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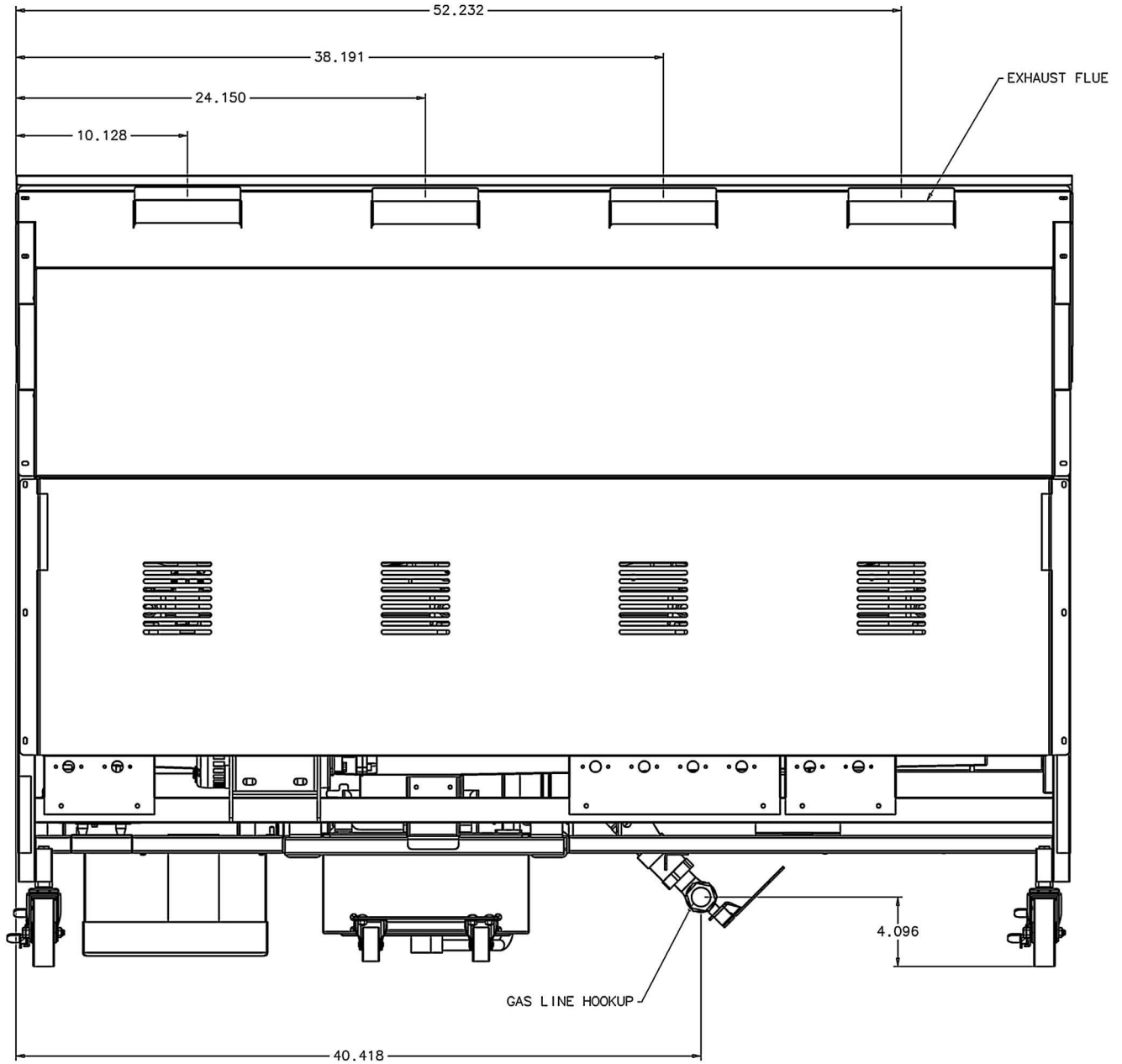
SECTION 3. OPERATION

3-1. OPERATING COMPONENTS   Refer to explanations on the next pages.
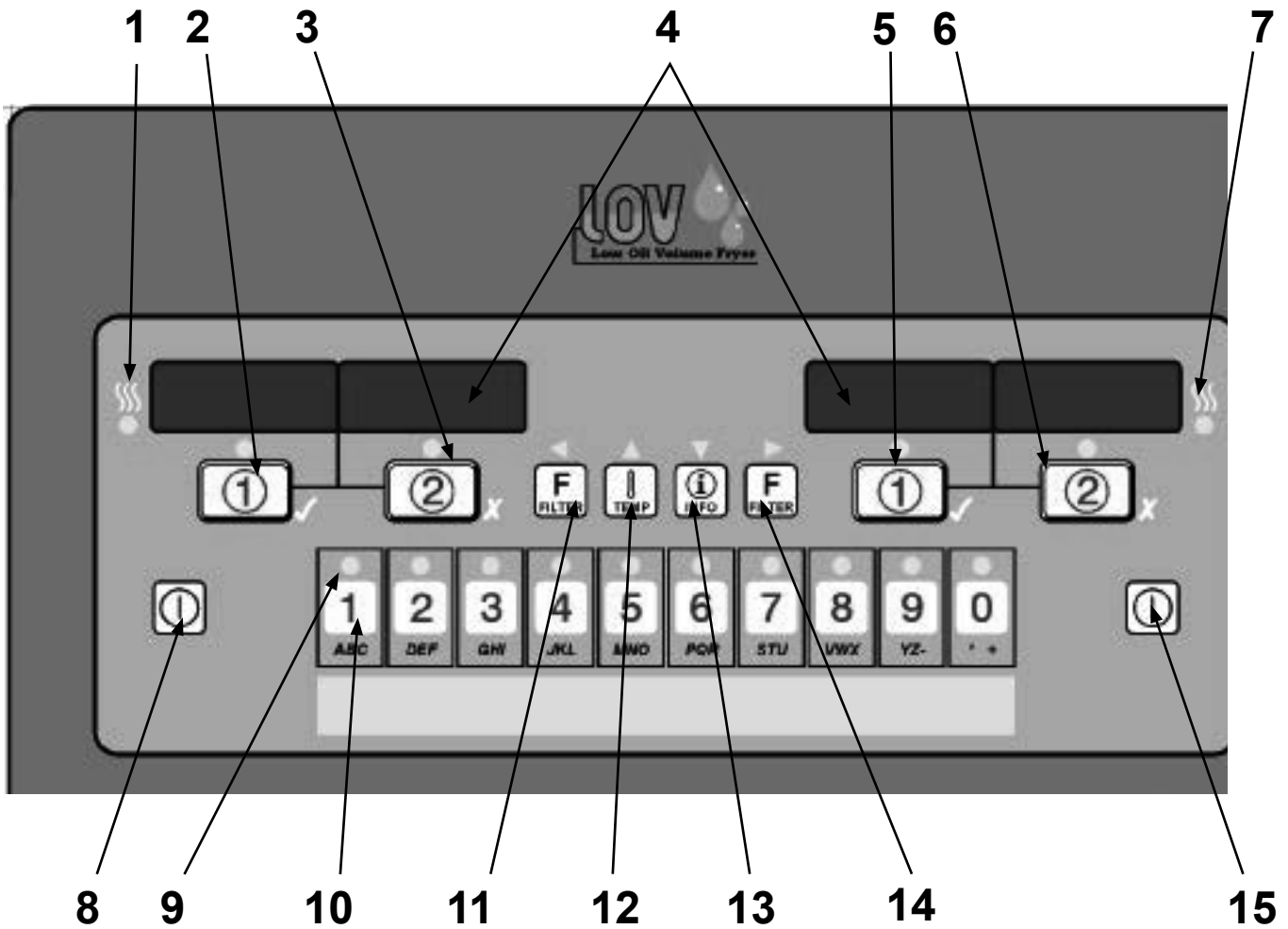
Figure 3-1
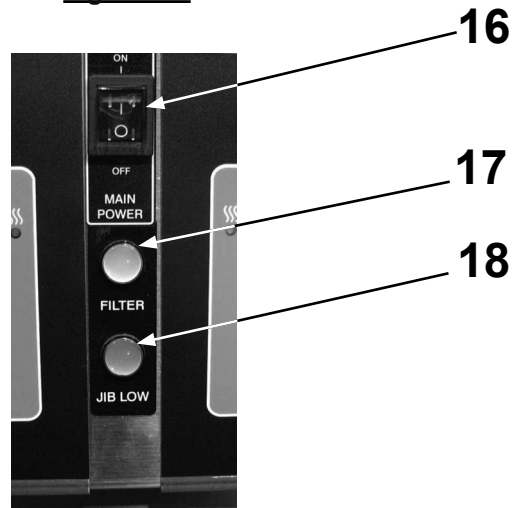
Figure 3-2

3-1. OPERATING COMPONENTS
(Continued)

Refer to Figures 3-1 & 3-2 in conjunction with the description of the functions below.

Fig. No.	Item No.	Description	Function
3-1	1		This LED lights when the control calls for heat for the left vat(s), and the burners come on and heat the oil
3-1	2	①	During normal operation, press this button to start and stop cook cycles for the left basket; press to change displayed product; also used for ✔ to indicate YES or to confirm
3-1	3	②	During normal operation, press this button to start and stop cook cycles for the left basket; press to change displayed product; also used for **X** to indicate NO or cancel
3-1	4	Digital Display	Shows the product codes; shows the timer countdown during cook cycles; shows the prompts during the filter modes; shows the selections in the Program Mode; shows the temperature of the oil by pressing [TEMP] ; shows error codes (also displays in several languages)
3-1	5	①	During normal operation, press this button to start and stop cook cycles for the right basket; press to change displayed product; press to confirm prompts in the filter modes; also used for ✔ to indicate YES or confirmation
3-1	6	②	During normal operation, press this button to start and stop cook cycles for the right basket; press to change displayed product; press to deny prompts in the filter modes; also used for **X** to indicate NO or cancel
3-1	7		This LED lights when the control calls for heat for the right vat(s), and the burners come on and heat the oil
3-1	8		Press to turn on and off the heat system for the left vat(s)
3-1	9		Each product button LED lights when that particular product has been selected
3-1	10	1 ABC	Press to select the desired product; press, during naming a product, to place the letters under the button, in the name

3-1. OPERATING COMPONENTS
(Continued)

Fig. No.	Item No.	Description	Function
3-1	11 & 14		Used in the Programming and Filtering Modes; also used for ◄ or ► buttons ; press to view the following filtering stats: a. the number of cook cycles before next filter b. time and date of the last filter c. the number of hours the existing filter has been used
3-1	12		Used in the Programming Modes; used in the Filtering Modes; used in filling and emptying the vats; also used for ▲ button; press to view the following temperature stats: a. actual oil temperature in each vat b. setpoint temperature for each vat
3-1	13	INFO	Used in the Programming Modes; also used for ▼ button; press to display the following fryer information and status: a. recovery information for each vat b. primary and secondary languages selected for display
3-1	15		Press to turn on and off the heat system for the right vat(s)
3-2	16		When turned to the ON position, power is supplied to the controls and filter pumps
3-2	17		When lit blue , indicates an Automatic Intermittent Filtration should be done at this time
3-2	18		When lit amber, indicates the JIB needs filled or replaced
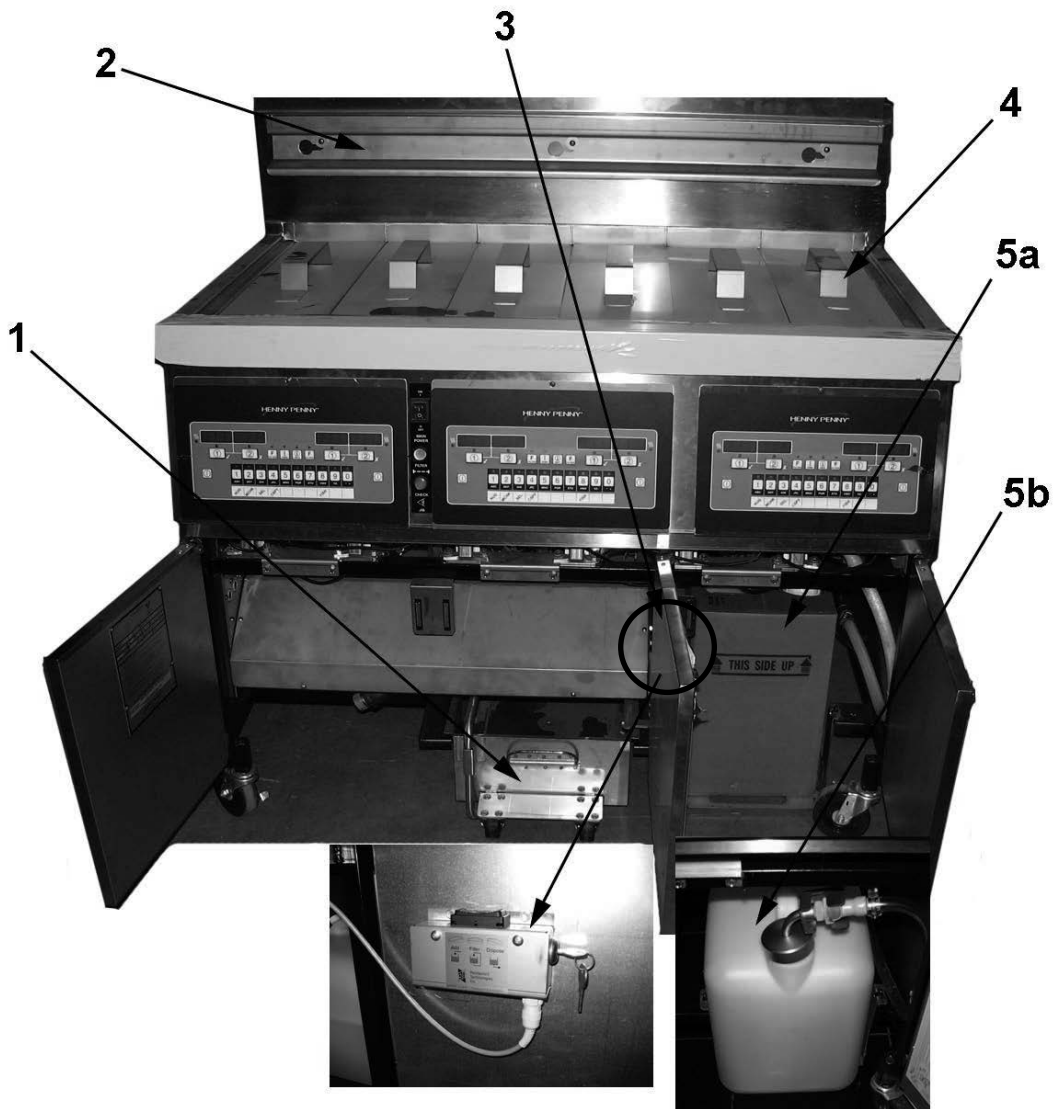
Figure 3-3

Fig. No.	Item No.	Description	Function
3-3	1	Filter Drain Pan Assy.	Oil is drained into this pan and then is pumped through filters to help prolong the use of the oil
3-3	2	Basket Rest	The baskets hang on this when not in use, or to drain the product after a cook cycle
3-3	3	RTI Switch	Only on fryers that have the RTI System at the location
3-3	4	Vat Covers	Covers the vat when not in use
3-3	5a	JIB	Jug-in-a-Box for locations without RTI systems; holds oil
3-3	5b	JIB	Jug for locations with RTI systems; holds oil

3-2. SET-UP MODE

Upon initial start-up, the controls will ask to confirm the settings for the fryer.

When the main power switch is turned on, "OFF" shows in both displays. Press [①] on either side and *SETUP* *MODE* shows in the displays, followed by, "LANGUAGE" on the left display, "ENGLISH" on the right display.

Use ◀ or ▶ buttons to change the operation display to, "FRAN-CAIS", "CAN FREN", "ESPANOL", "PORTUG", "DEUTSCHE", "SVENSKA", "РУССКИИ".

Press ▼ to continue with the other set-up items which include:
* ZONE - USA or NON-USA
* TEMP FORMAT - ºF or ºC
* TIME FORMAT - 12-HR OR 24-HR
* ENTER TIME - Time of day (use product buttons to change)
* ENTER TIME - AM OR PM
* DATE FORMAT - US OR INTERNATIONAL
* ENTER DATE - Today's date (use product buttons to change)
* FRYER TYPE - GAS or ELEC
* VAT TYPE - FULL OR SPLIT
* OIL SYSTEM - JIB (no RTI system)/BULK (has RTI system)
* DAYLIGHT SAVING TIME - 1.OFF; 2.US (2007 & after); 3.EURO; 4.FSA (US before 2007)
* SETUP COMPLETE

Unless otherwise indicated, use ◀ or ▶ to change settings.

NOTICE

The Setup Mode can also be accessed from Level 1 programming. See Section 4-4.

3-3. FILLING OR ADDING OIL

Figure 1

CAUTION

The oil level must always be above the burner tubes when the fryer is heating and at the oil level indicators on the rear of the vat. Failure to follow these instructions could result in a fire and/or damage to the fryer.

When using solid oil, it is recommended to melt the oil on an outside heating source before placing it in the vats. The burner tubes must be completely submerged in oil. Fire or damage to the vat could result.

1. It is recommended that a high quality frying oil be used in the open fryer. Some low grade oils have a high moisture content and causes foaming and boiling over.

⚠ WARNING
BURN RISK

Wear gloves to avoid severe burns when pouring hot oil into vat. Oil and all metal parts that are in contact with the oil are extremely hot, and take care to avoid splashing.

2. The oil capacity for the full-size vats is 30 quarts (28.4 liters) and for the split-vats is 15 quarts (14.2 liters). All vats have 2 level indicator lines inscribed on the rear wall of the vat, in which, the upper-most line shows the oil at the proper level when heated. Figure 1.

3. Cold oil should be filled to the lower indicator.

Filling vat using the RTI system
1. Turn the main power switch to the ON position.

2. Place basket support inside of vat. Figure 2.

3. Press and hold [F FILTER] (on either side) until display shows *FILTER MENU*, along with 1.AUTO FILTER?

4. Press and release ▼ 5 times until display shows "6.FILL POT FROM BULK?" (Must be set to "BULK" in Set-Up Mode)

5. Press ✔ button; display shows "FILL POT FROM BULK" "YES NO". Press and hold ✔ button again to fill vat and display shows "FILLING".

Figure 2

6. Once vat is full, release ✔ button and press X button twice to exit and return to normal operation.

3-4. MORNING START-UP PROCEDURES

1. Make sure vat is filled with oil to the proper level.

2. Move power switch to the ON position and then press [⓪] to turn on heat for the desired vat. If display shows "IS POT FILLED?" make sure oil is at the proper level (see Section 3-2) and then press ✓ button for "YES".

   Unit automatically goes into the Melt Cycle until the oil temperature reaches 180°F (82°C) and then control automatically exits the Melt Cycle.

   NOTICE

   The Melt Cycle may be bypassed, if desired, by pressing ✓ button or **X** button and holding it for 5 seconds.

   The control then shows "EXIT MELT" and "YES NO". Press ✓ button for "YES" and vat heats continuously until the set-point temperature is reached.

   CAUTION

   Do not leave fryer unattended and do not bypass the Melt Cycle unless enough oil has melted to completely cover all of the burner tubes. If the Melt Cycle is bypassed before the burner tubes are covered, excessive smoking of oil, or a fire will result.

   ⚠ DANGER
   OVERFLOW RISK

   DO NOT OVERLOAD, OR PLACE PRODUCT WITH EXTREME MOISTURE CONTENT INTO THE BASKETS. 3 LBS. (1.4 KG.) IS THE MAXIMUM AMOUNT OF PRODUCT PER FULL VAT AND 1-1/2 LBS. (.68 KG.) FOR THE SPLIT VATS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN OIL OVERFLOWING THE VAT WHICH COULD CAUSE SERIOUS BURNS, PERSONAL INJURY, FIRE AND/OR PROPERTY DAMAGE.

   IF THE SHORTENING TEMPERATURE EXCEEDS 420°F (216°C), IMMEDIATELY SHUT OFF THE POWER AT THE MAIN CIRCUIT BREAKER AND HAVE THE FRYER REPAIRED. IF OIL TEMPERATURE EXCEEDS ITS FLASHPOINT, FIRE WILL OCCUR, RESULTING IN SEVERE BURNSAND/OR PROPERTY DAMAGE.

3-5. COOKING WITH DEDICATED DISPLAY

A dedicated display means, one product always shows in the display of a particular vat.

1. Once out of the Melt Cycle, LOW TEMP flashes until the set-point temperature has been reached. No cook cycles can be started while "LOW TEMP" shows in the display. Once the set-point temperature has been reached, the product name now shows in the display, ex: NUGGETS, and product now can be placed in the oil.

2. Press a timer button ① or ② .

3. Display shows the name of the product cooking (ex: "NUG") and the timer counting down.

4. When cook cycle is complete, an alarm sounds and display shows "PULL".

5. Press the timer button under PULL to stop the alarm, and lift basket from vat.

6. If a Quality Timer (hold timer) has been programmed, the hold time starts automatically when the user presses the timer button to end the cook cycle. While the quality timer counts down, the display shows the three-digit product abbreviation followed by "Qn", where "n" is the number of minutes remaining.
   ex: "FRY" / "Q5" / "FRY" / "Q5" / "FRY" / "Q4", etc.

   At the end of the timer countdown, the control beeps and the display shows "QUAL" followed by the three-digit product name: "QUAL" / "FRY" / "QUAL"/ "FRY". Press the timer button to cancel the timer.

   NOTICE

   To change the dedicated product, press the desired product button, ex: ③ GHI / HBRN and "<<<< >>>>" shows in the display.

   Then press and hold (for 5 seconds) timer button ① or ② for the vat to be used. The product name now shows in the display, ex "HASH BRN".

3-6. COOKING WITH MULTI-PRODUCT DISPLAY

A multi-product display means, a product must be selected before starting a cook cycle in a particular vat.

1. Once out of the Melt Cycle, LOW TEMP flashes until the set-point temperature has been reached. Then the display shows "---- ----".

2. Press a product button, for ex: [1 ABC FFRY] .

3. Display shows "FR FRIES". If display shows "<<<< >>>>", oil temperature is not correct for that product. Either select another   product, or press and hold [①] or [②] for 5 seconds.

4. Press a timer button [①] or [②] .

5. When cook cycle is complete, the alarm sounds and display shows "PULL".

6. Press the timer button under "PULL", to stop alarm. Display then shows "---- ----", or if a quality timer (hold time) has been programmed, display shows the timer counting down (see step 6, Section 3-5).

3-7.   CHANGE FROM BREAKFAST TO LUNCH or LUNCH TO BREAKFAST

This procedure is basically changing the product being cooked in a vat with a dedicated display.

Breakfast to Lunch
1. Press product button, for ex: [1 ABC FFRY] .

2. Display shows "<<<< >>>>".

3. Press and hold a timer button [①] or [②] for 5 seconds and then "FR FRIES" shows in display.

Lunch to Breakfast
1. Press product button, for ex: [3 GHI HBRN] .

2. Display shows "<<<< >>>>".

3. Press and hold a timer button [①] or [②] for 5 seconds and then "HASH BRN" shows in display.

NOTICE

During a cooking cycle, if an attempt is made and fails to change a product in a dedicated display or multi-product display, the set-point temperatures of the products are not the same. Wait until the cook cycle is complete, and then perform the change procedure.

3-8. CHANGE FROM MULTI-PRODUCT DISPLAY TO A DEDICATED DISPLAY

The display shows "---- ----" if in the Multi-Product Display Mode and can be changed to a dedicated display.

1. Press a product button, for ex: ⌷ .

2. The display shows "FR FRIES" if the set-point of the vat matches the product, or the display shows "<<<< >>>>" if it doesn't.

3. Press and hold a timer button ① or ② for 5 seconds until control beeps.

4. Release the timer button and display shows "FR FRIES", indicating the change has been made to the Dedicated Display Mode.

3-9. CHANGE FROM DEDICATED DISPLAY TO A MULTI-PRODUCT DISPLAY

This procedure is simple, and always works (will not be rejected) because it never tries to change the set-point temperature.

1. Press and hold a timer button ① or ② for 5 seconds until control beeps.

2. Release the timer button and display shows "---- ----", indicating the change has been made to the Multi-product Display Mode.

NOTICE

Only products programmed for this set-point temperature will be able to be selected for cooking.

3-10. CHANGE FROM MULTI-PRODUCT DISPLAY TO A MULTI-PRODUCT DISPLAY WITH DIFFERENT SET-POINT TEMPERATURES

1. Press a product button, for ex: ⌷

2. The display shows "FR FRIES" if the set-point of the vat matches the product, or the display shows "<<<< >>>>" if it doesn't.

3. Press and hold a timer button ① or ② for 5 seconds until control beeps.

4. Release the timer button and display shows "FR FRIES", indicating the change has been made to the Dedicated Display Mode.

5 Press and hold a timer button ① or ② for 5 seconds until control beeps.

6. Release the timer button and display shows "---- ----", indicating the change was made to the Multi-Product Display Mode, using the set-point of french fries, in this example.

3-11. AUTO TOP-OFF

During normal operation, the control automatically monitors the oil level in the vat. If the control senses the oil level too low, the unit pumps oil from the JIB into the vat to keep the oil at the proper level.

Filling the JIB using the RTI system

1. Control displays "*CHECK* *JIB*" and amber light is lit on the front of the fryer. Figure 1.
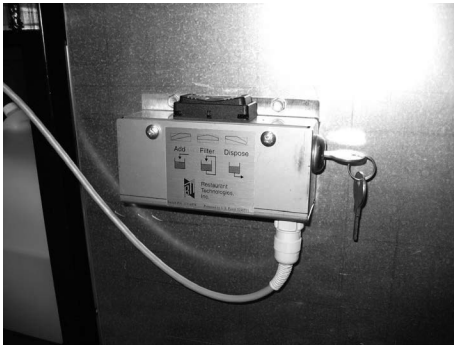
Figure 1

2. Open the door, that has the RTI switch (Figure 2). Press & hold the ADD side of the RTI switch to add oil to the JIB.

Figure 2

Replacing the JIB (locations without RTI)

1. Control displays "*CHECK* *JIB*" and amber light is lit on the front of the fryer. Figure 1.

2. Open right door and pull JIB from unit. Pull the cap from top of JIB and discard empty JIB and replace with full one. Figure 3.

Figure 3

3-12. AUTOMATIC INTERMITTENT FILTRATION (AIF)

Figure 1

NOTICE

● AIF is NOT available on fish vats (deep split-vats). Fish vats are to be filtered only once, at the end of the day.

● Change filter pad before performing an AIF filter.

1. During normal operation and after a certain number of cook cycles, the blue light illuminates on the front of the fryer (Figure 1), and the control periodically shows "FLTR NOW?" "YES NO".

2. If filtering is desired, press ✓ button for YES and display shows "SKIM VAT", followed by "CONFIRM" "YES NO".

3. Once the crumbs are skimmed off the top of the oil, press ✓ button for YES and display shows shows "DRAIN-ING" drain opens and the oil drains from the vat. (If control suspects oil in drain pan "CAUTION IS THERE OIL IN PAN? YES NO" may show in display. Make sure drain pan is empty before proceeding.)

NOTICE

If filtering is NOT desired, press **X** button and the AIF (Automatic Intermittent Filter) is cancelled. The blue light goes out and the controls return to normal operation. The controls will suggest filtering after several more cook cycles.

CAUTION

If drain is clogged, see Section 3-22 to prevent damage to the fryer.

4. Display shows "VAT EMTY", followed by, "YES NO". Check that drain is clear and vat is empty. Press ✓ button and display shows WASHING, followed by "FILLING".

5. If the display shows "IS POT FILLED?" "YES NO", make sure vat is full and then press ✓ button for YES and control returns to normal operation.

3-12. AUTOMATIC INTERMITTENT FILTRATION (AIF) (Continued)

Filter Error

6. If the oil has not pumped back to the proper level in the vat during the AIF process, press **X** button for NO and display shows "0:30" and counts down to "0:00".

7. Display shows "IS POT FILLED?" "YES NO". Press ✔ button and control returns to normal operation. Press **X** button and pump runs for another 30 seconds. You can try to fill the vat 3 times.

8. After trying to fill the vat 3 times without success, the controls then shows "CHANGE FILTER PAD?" "YES NO". If changing the filter pad at this time, press ✔ and change filter pad following the procedures in the Changing the Filter Pad or Paper Section. Controls return to normal operation.

   If filter pad is to be changed at a later time, press **X** button and "CHANGE FILTER PAD?" reminder shows 15 minutes later.

9. During the next AIF with a new filter pad, if the vat is not filled after 3 tries, the display shows "FILTER SERVICE REQUIRED-SEE TROUBLESHOOTING GUIDE".

   If the "Service Required" message appears, then every 15 minutes the display shows "FILTER PROBLEM FIXED? YES NO". If the problem has not been fixed, press **X** button. Once the problem has been resolved, press ✔ and controls return to normal operation.

   NOTICE

   To help ensure the vat fills completely, make sure filter pan is cleaned at least daily, filter pad is changed, make sure JIB is full and that "O" rings on the filter pan are in good condition.

3-13.   MAINTENANCE FILTER

⚠ WARNING

BURN RISK

Put on protective gear: Be sure to use all McDonald's approved safety equipment including, apron, face shield and gloves. Never begin filtering until you're wearing all safety gear. Hot oil can cause severe burns.

Moving the fryer or filter drain pan while containing hot oil is not recommended. Hot oil can splash out and severe burns could result.

1. **Check Filter Pan:** Use a new filter pad on the first filter of each day, but the same filter pad can be used the rest of the day, except for fish vats. **Change the filter pad after filtering a fish vat**.

   If the display shows "CHK PAN" make sure that the filter pipe is tight, the filter drain pan is as far back under fryer as it will go and the filter pan cover is in place.
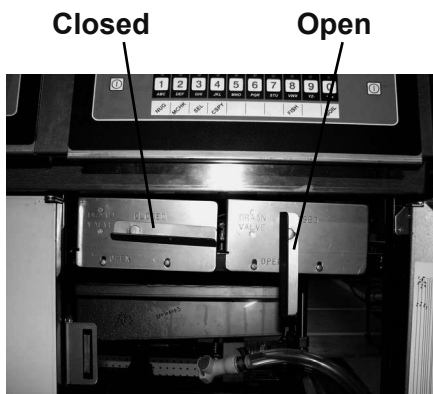
Closed   Open

Figure 1 (Fish Vats)

2. **Make sure oil is hot:** The best results are obtained when the frying oil is filtered at the normal frying temperature.

3. Press and hold [**F FILTER**] until display shows "1.AUTO FILTER?".

4. Press and release ▼ button and display shows 2.MAINT FILTER?

5. Press ✓ button for YES and display shows "MAN FILTER" YES NO.

6. Press ✓button for YES and display shows "DRAINING" and the oil drains from the vat, **or** press **X** button for NO and controls return to normal operation. (If control suspects oil in drain pan "CAUTION IS THERE OIL IN PAN? YES NO" shows in display. Make sure drain pan is empty before proceeding)

NOTICE

Fish vat drain valves must be manually opened. Open the door and turn the drain handle from the horizontal position to the vertical position and the oil drains from the vat. Figure 1

CAUTION

If drain is clogged, see Section 3-22 to prevent damage to the fryer.

Figure 2

7. Once oil has drained from vat, remove the basket support from the vat. Figure 2

⚠ WARNING

BURN RISK

Use protective cloth or gloves when lifting the basket support. The support may be hot and burns could result.

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3-13. MAINTENANCE FILTER
(Continued)

8. Use the scouring tool, a nylon scouring pad, and a small amount of McD Fryer Cleanser to scrub the inside of the vat. Be careful not to damage the sensing probes.

CAUTION

Do not use steel wool, other abrasive cleaners or cleaners/ sanitizers containing chlorine, bromine, iodine or ammonia chemicals, as these will deteriorate the stainless steel material and shorten the life of the unit.

Do not use a water jet (pressure sprayer) to clean the unit, or component damage could result.

9. Once the vat is clean and the display shows "SCRUB VAT COMPLETE?" "YES NO". Press ✓button for YES and the display shows "WASH VAT" "YES NO".

10. Press ✓button and display shows "WASHING". The oil circulates through the vat for several minutes. Once the wash cycle is complete, display shows "WASH AGAIN?" "YES NO".

11. Press ✓button for YES if another wash is needed, otherwise press **X** button for NO and the display shows RINSING and fryer automatically rinses the vat. When rinsing is complete, display shows "RINSE AGAIN?" "YES NO".

12. Press ✓button for YES if another rinse is needed, otherwise press **X** button for NO. The display shows "POLISH?" "YES".

13. Press ✓button for YES, the oil is "polished" by circulating it through the filtering system and the display shows "5:00 STOP". If desired, press ✓ button for STOP to stop the polishing, otherwise the oil is polished for 5 minutes.

14. Once oil is polished, display shows "FILL VAT?", along with "YES". Press ✓button; the display shows "FILLING" and vat fills with oil.

NOTICE

Fish vat drain valves must be manually operated. Open door and turn the drain handle from the vertical position to the horizontal position to close the vat drain valve. Figure 3.
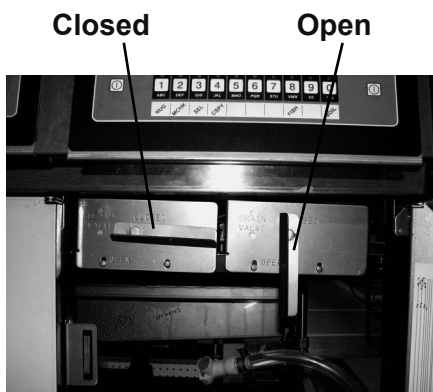
Closed   **Open**

Figure 3 (Fish Vats)

15. Once full, the display shows "IS POT FILLED?" "YES NO". Press ✓button for YES and fryer returns to normal operation.

If **X** button is pressed, the display shows "FILLING" and pump runs for 30 seconds and stops, display shows "IS POT FILLED?" "YES NO". After 3 tries, display shows "ADD QUIT". Press and hold ✓ button to fill pot and release. Press X button and display shows "IS POT FILLED?" "YES NO". Press ✓ button and controls return to normal operation.

3-14. DISCARDING OIL
FROM VAT USING RTI

⚠ DANGER
FIRE HAZARD

WITH PROLONGED USE, THE FLASHPOINT OF SHORTENING IS REDUCED. DISCARD SHORTENING IF IT SHOWS SIGNS OF EXCESSIVE SMOKING OR FOAMING. SERIOUS BURNS, PERSONAL INJURY, FIRE, AND/OR PROPERTY DAMAGE COULD RESULT.
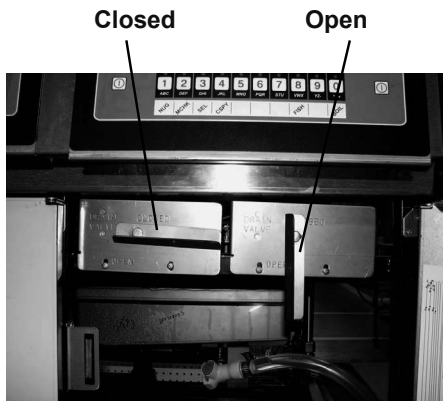
Closed   **Open**

Figure 1

1. Press and hold [F FILTER] (on either side) until display shows "*FILTER MENU*", along with "1.AUTO FILTER?".

2. Press and release ▼ twice until display shows 3.DISPOSE.

3. Press ✓button and display shows DISPOSE? "YES NO".

4. Press ✓button and display shows "DRAINING"and oil drains into the filter drain pan. (If control suspects oil in drain pan, "CAUTION IS THERE OIL IN PAN? YES NO" may show in the display. Make sure drain pan is empty before proceeding.)

CAUTION

If drain is clogged, see Sect. 3-22 to prevent damage to fryer.

NOTICE

Fish vat drain valves must be operated manually. Open door, turn handle from horizonatl to vertical position and oil drains from vat. Figure 1.

5. Display then shows "VAT EMPTY" "YES NO".

6. Press ✓ button and display shows "CLEAR OLD OIL FROM OIL LINES" "✓=PUMP" "X=DONE". To make sure no old oil is still in oil lines, press and hold ✓ button for a few seconds. Once lines are clear, press X button and display shows "CLN VAT COMPLETE" "YES NO".

7. Once vat is clean, press ✓button; drain closes and display shows "FILL POT FROM BULK", along with "YES NO". Open door that has RTI switch (Figure 2); press and hold "DISPOSE" button on RTI switch until filter pan is empty.

8. To refill the vat, press and hold ✓button until cold oil is up to the lower oil indicator in vat, per Section 3-3.

9. Press **X** button and display shows "IS POT FILLED?" "YES NO". If vat is full, press ✓button and controls return to normal operation. If vat is not full, press **X** button, and controls return to previous step.
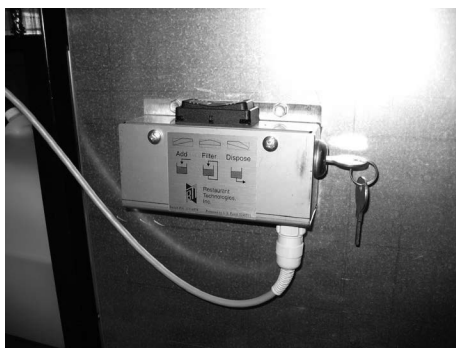

Figure 2

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**3-15. DISCARDING OIL
FROM VAT USING OIL
DISCARD SHUTTLE**

Figure 1

Figure 2

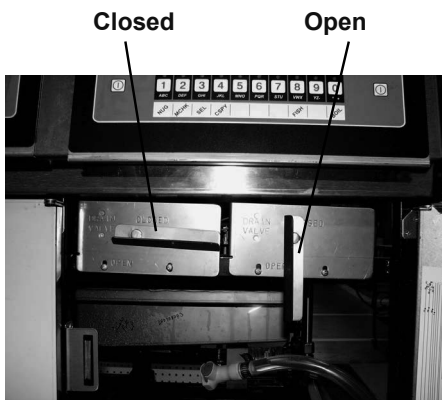Closed   Open

Figure 3

1. Open center door, pull the drain pan assembly from under fryer and replace with oil discard shuttle. Figures 1 & 2.

2. Press and hold [**F FILTER**]   (on either side) until display shows "*FILTER MENU*", along with "1.AUTO FILTER?".

3. Press and release ▼ button twice until display shows "3.DISPOSE". Press ✔ button and display shows "DISPOSE?" "YES NO". (If control suspects oil in drain pan "CAUTION IS THERE OIL IN PAN? YES NO" may show in display. Make sure drain pan is empty before proceeding)

4. Press ✔ button and display shows "IS DISPOSAL UNIT IN PLACE? "YES NO".

5. With discard shuttle rolled into place, press ✔ button and display shows "DRAINING". Oil now drains from the vat into the shuttle. **NOTICE**

    Fish vat drain valves must be manually opened. Open door, turn handle from horizontal to vertical position and oil drains from vat. Figure 3. **CAUTION**

    If drain is clogged, see Section 3-22 to prevent damage to the fryer.

6. Display shows "VAT EMPTY, along with "YES NO". Verify that vat is empty, and press ✔ button. Display shows "CLEAR OLD OIL FROM OIL LINES" "✔=PUMP" "X=DONE". To make sure no old oil remains in the oil lines, press and hold ✔ button for a few seconds. Once lines are clear, press **X** button.

7. Display shows "CLN VAT COMPLETE" "YES NO". Once vat is clean, press ✔ button.

8. Display shows "MANUAL FILL POT", followed by "IS POT FILLED?" "YES NO". Fill the vat to the lower indicator line on the rear of the vat (See **Filling or Adding Oil (locations without RTI)** instructions from Section 3-2). Press ✔ button and controls return to normal operation.

9. Remove the discard shuttle from under fryer and replace with the filter pan assembly.

3-16. CHANGING THE FILTER PAD
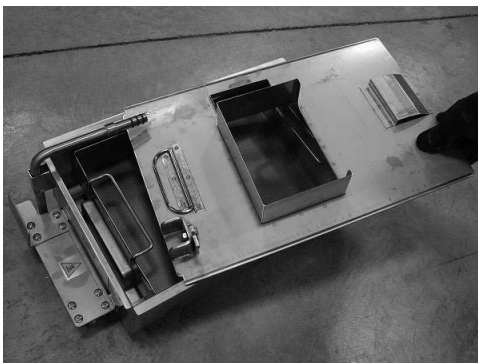

Figure 1

Figure 2

Figure 3

Figure 4

In order to assure good oil pumping performance, the filter pad (or paper) should be changed at least once per day. However, in stores open 24 hours a day, the pad should be changed twice a day.

NOTICE

If the filter pad has not been changed, a reminder shows on the display, "CHANGE PAD". Press ✔ button to cancel the message, but it reappears every 4 minutes until the filter pad has been changed.

1. Make sure the main power switch is in the ON position.

2. Open the door, lift-up on the drain pan stop and pull-out the drain pan assembly, using the handle on the drain pan. Figures 1 & 2.

⚠ WARNING

BURN RISK

This pan could be hot! Use protective cloth or glove, or severe burns could result.

If the filter pan is moved while full of oil, use care to prevent splashing, or burns could result.

3. Lift the pan cover from the drain pan. Figure 3.

4. Lift the crumb basket from the drain pan. Wipe the oil and crumbs from the crumb basket. Clean the crumb basket with soap and water, then thoroughly rinse with hot water. Figure 4.
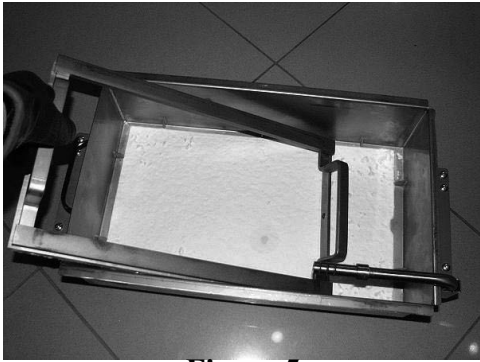
3-16. CHANGING THE FILTER PAD (Continued)

Figure 5

5. Remove the filter pad retaining ring and clean thoroughly with soap and water. Rinse thoroughly with hot water. Figure 5.
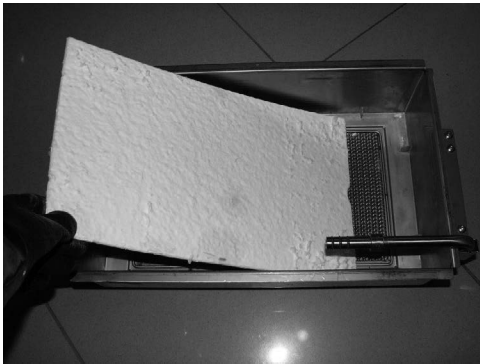

Figure 6

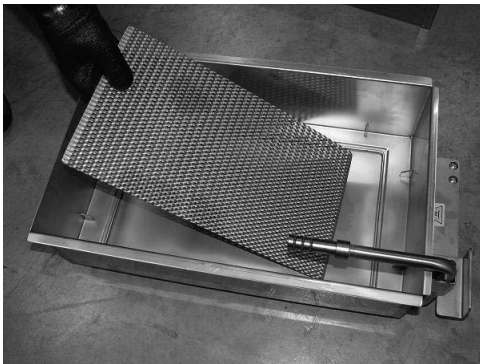6. Pull the filter pad from the pan and discard pad. Figure 6.

Figure 7

7. Remove the bottom screen from pan and clean thoroughly with soap and water. Rinse thoroughly with hot water. Figure 7.

Figure 8

8. Wipe the oil and crumbs from the drain pan. Clean the drain pan with soap and water, then thoroughly rinse with hot water. Figure 8.

3-16.   CHANGING THE FILTER PAD (Continued)

Figure 9

Figure 10

3-17.   REMOVING AND CLEANING BASKET REST

NOTICE

Be sure that the drain pan, bottom screen, crumb catcher, and the retaining ring are thoroughly dry before placing filter pad into pan as water will dissolve the filter pad.

9. Reassemble in reverse order, placing the bottom screen into the filter pan first, followed by the filter pad, retaining ring and the crumb catcher.

NOTICE

Before pushing filter drain pan back into position, lubricate o-rings (Figure 9) on filter tube with cold oil.

10. Push the filter pan assembly back underneath the fryer, making sure the filter tube on the pan makes a good connection with the fitting underneath the fryer. Figure 9.

11. Make sure the drain pan stop is engaged and the fryer is now ready for normal operation. Figure 10.

The basket rest, on the rear shroud of the fryer, should be removed and cleaned periodically.

⚠ WARNING
BURN RISK

Use protective gloves when removing the basket rest. The basket rest may be hot and burns could result.

Grasp the basket rest with 2 hands and pull it off the "keyways".

Take it to a sink and clean it with soap and water. Dry thoroughly.

Clean the area behind the basket rest and then reinstall the basket rest.

3-18. INFO BUTTON STATS

Recovery Information for each Vat

1. Press and release ⓘ and REC shows in the left display and the recovery time that oil temperature went from 250°F (121°C) to 300°F (149°C) shows in the right display. For example, | REC | 5:30 | means it took 5 minutes and

30 seconds for the oil temperature to recover to 300°F (149°C) from 250°F (121°C).

Selected Languages

2. Press ⓘ twice and the primary language shows in the left display and the secondary language shows in right display.

NOTICE

If no buttons are pressed within 5 seconds in any of stats modes, the controls revert back to normal operation.

3-19. FILTER BUTTON STATS

Cook Cycles Remaining before Filtering

1. Press and release either ◄F or ►F and the left display shows "COOKS REMAIN" and the right display shows the number of cook cycles before the next auto filter. For example, | REMA | IN | | 3 | 6 |

means after 3 more cook cycles on the left vat, the controls asks the operator if they are ready to filter or not. But, 6 more cook cycles remain on the right vat.

Time and Date

2. Press either ◄F or ►F twice and the time-of-day and date shows in the displays.

Filter Pad Usage

3. Press either ◄F or ►F three times and number of hours that existing filter pad has been used is displayed.

3-20. TEMP BUTTON STATS

Actual Oil Temperature

1. Press 🌡TEMP and the actual oil temperature shows in the display, for each vat.

Set-point Temperature

2. Press 🌡TEMP twice and SP shows in the display, along with the set-point (preset) temperature of each vat.

3-21. INFORMATION MODE

This mode gathers and stores historic information on the fryer and operator's performance. Press and hold 〔ⓘ INFO〕 for 3 seconds, until *INFO* *MODE*" shows on the displays.

Press ▲ or ▼ buttons to access the steps and press ✓ button to view the statistics within each step.

This mode includes the following information:

1. **FILTER STATS** - filtering information for the last 7 days

2. **REVIEW USAGE**- information accumulated since the last time this data was manually reset

3. **LAST LOAD** - information about the most recent Cook Cycle, or the cycle presently in progress

NOTICE

Press X button to exit from the Information Mode.

1.   FILTER STATS

Press ✓ button to select Filter Stats and then press ◀ and ▶ to select the day you want to view the stats. Then press ▲ or ▼ buttons to view the following stats:

• "FILTERED" = Number of times filtered

• "FLT BPSD" = Number of times filtering was skipped

• "FLT AVG" = Average number of cook cycles between filters

2.   REVIEW USAGE

Press ✓ button to select Review Usage and press ▲ or ▼ buttons to view the following:

FUNCTION   **DISPLAY EX:**

Day usage data was previously reset	SINCE 9:14 AM 07-19-10
Total number of cook cycles	TOTAL COOKS 462
Cook Cycles stopped before "PULL"	QUIT COOK 4
Number of hours fryer was on (left)	L ON HRS 165
Number of hours fryer was on (right)	R ON HRS 160
Reset Usage Data	RESET - YES NO

3-21. INFORMATION MODE (Continued)

3.   LAST LOAD
Press ✔ button to select Last Load (ex: -P1- = Product 1; "L1" = left, 1st product) and press ▲ or ▼ buttons to view the following:

FUNCTION	DISPLAY EX:
Product (Last product cooked)	PRODUCT P1- L1
Time of day last Cook Cycle was started	STARTED 10.25A SEP-12
Actual Elapsed cook Time (Real seconds)	ACTUAL TIME 7:38
Programmed cook Time	PROG TIME 3:00
Max Temp during Cook Cycle	MAX TEMP 327°F
Min Temp during Cook Cycle	MIN TEMP 313°F
Avg Temp during Cook Cycle	AVG TEMP 322°F
Heat On (percentage) during Cook Cycle	HEAT ON 73%
Ready? (Was fryer Ready before start?)	READY? YES

3-22. CLOGGED DRAIN PROCEDURE

1.   If clog occurs during a filter mode, press X button to cancel filtering process.

2.   Press and hold [**F** FILTER] (on either side) until display shows

"*FILTER MENU*", along with "1.AUTO FILTER?".

3.   Press and release [**F** FILTER] button until display shows

"4.DRAIN TO PAN". Press ✔ button and display shows "DRAINING" and drain opens. (If the control suspects drain pan may be filled with oil, display will show "CAUTION IS THERE OIL IN PAN?" "YES NO". Empty pan and press X button to proceed.

4.   Force cleaning brush through drain to clear clog.

CAUTION

To prevent damage to the fryer, cancel any cleaning or filtering modes before using brush.

5.   Once drain is cleared and vat empty, press ✔ button. Display shows "DRAIN CLOSING" and then back to "4.DRAIN TO PAN"

6. Press **X** button to return to normal operation.

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SECTION 4. LEVEL 1 PROGRAMMING

Level 1 contains the following:
- Modify product settings
- Set the AIF clock for products
- Perform the Deep Clean procedure
- Fryer Setup Mode

1. Press and hold [TEMP] and (i) INFO buttons until LEVEL - 1 shows in the display, followed by ENTER CODE.

2. Enter code 1, 2, 3, 4 (first 4 product buttons). "PRODUCT" and "SELECTN" show in the displays.

3. Press right ✓ button and 'SELECT PRODUCT' and "-P 1-" (ex: NUGGETS) show in the displays.

Change Product Names

4-1. MODIFYING PRODUCT SETTINGS

4. Use the ◀ and ▶ buttons to scroll through the 40 products, or press the desired product button
1 2 3 4 5 6 7 8 9 0
ABC DEF GHI JKL MNO PQR STU VWX YZ- * +

5. Press right ✓ button and the product (ex: NUGGETS) shows in the left display and "MODIFY", and "YES NO" shows in the right display. Press the ✓ button to change this product, or press the **X** button to choose another product.

6. If ✓ button was pressed, press and release a product button and the flashing letter changes to the first letter under the product button that was pressed. For example, if [1 ABC] is pressed, the flashing letter changes to an "A".

Press the same button again and the flashing letter changes to a "B". Press it again and the flashing letter changes to a "C". Once the desired letter shows in the display, press button ▶ to continue to the next letter and repeat the procedure.

Press and hold the right **X** button to exit Program Mode, or press ▼ button to continue on to "1. COOK TIME".

To Change Times and Temperatures

7. Press ▼ button until "COOK TIME" shows in the display, and then use the product buttons 1 2 3 4 5 6 7 8 9 0 ABC DEF GHI JKL MNO PQR STU VWX YZ- * + to change the time in minutes and seconds, to a maximum of 59:59.

4-1. MODIFYING PRODUCT SETTINGS (Continued)

8. Press and release ▼ button and "TEMP" shows in the display, along with the preset temperature on the right side of the display.

    Press the product buttons [1 2 3 4 5 6 7 8 9 0] to change the temperature. The temperature range is 190°F (88°C) to 380°F (193°C).

Cook ID Change
9. Press ▼ button until "COOK ID" shows in the display along with the product ID. For example, NUG would be the ID for nuggets. Use the product buttons to change the ID, following the same procedure as Step 6 above.

Alarms (Duty 1 & 2)
10. Press ▼ button until "DUTY 1" shows in the left display, and an alarm time in the right display. Press the product buttons [1 2 3 4 5 6 7 8 9 0] to set an alarm.

    Ex., If a Cook Cycle was set at 3 minutes, and an alarm was to go off after 30 seconds into the Cook Cycle, "0:30" would be set in the display at this time. When the timer counts down to 2:30 the alarm sounds.

    After the alarm time is set, press ▼ button and "DUTY 2" shows in the display, and a second alarm can be programmed.

Quality Timer
11. Press ▼ button until QUAL TMR shows in the display along with the preset holding time. Press the product buttons [1 2 3 4 5 6 7 8 9 0] to adjust holding time, up to 2 hours:59 minutes.

AIF Disable
12. Press ▼ button until "AIF DISABLE" shows in the display along with "YES" or "NO". Using ◀ and ▶ buttons change the display to "YES" if that product is to not be included in the automatic intermittent filtration operation, or "NO" if it is to be included.

Assign Button
13. Press ▼ button until "ASSIGN BTN" shows in the display, along with the product (ex: NUGGETS). If this product already has a product button assigned to it, that LED will be lit. To assign other product buttons to that product, press and hold the product button for 3 seconds and that LED stays lit. To remove a product from a button, press and hold the product button with a lit LED and the LED goes out.

4-2.   AIF CLOCK

This feature allows the controls to be set for periods of the day that block the automatic "Filter Now" prompts. For example, the controls could be set to not interrupt with "Filter Now" prompts during the lunch rush, and during the supper rush. But, if filtering is desired during this time, press and hold a button to access the filter menu.

Each AIF Blocking period is defined by a start time (a time of day, XX:XX A, etc) and a duration in minutes.

Weekdays M-F are all grouped together. Up to four different AIF blocking periods may be programmed throughout the day for Monday - Friday. (All days share the same settings.)

A separate set of four blocking periods may be programmed for Saturdays, and a final set of four blocking periods may be programmed for Sundays.

1. Press and hold [TEMP] and [INFO] buttons until LEVEL - 1 shows in the display, followed by ENTER CODE.

2. Enter code 1, 2, 3, 4 (first 4 product buttons). "PRODUCT" and "SELECTN" show in the displays.

3. Press ▼ button once and "AIF CLOCK" show in the displays.

4. Press ✓ button and use ◀ and ▶ buttons to scroll through "ENABLE" and "DISABLE" and then press ✓ button again to select one.

5. If "ENABLE" is chosen, then ▲ and ▼ buttons can be use to scroll through the following list of blocking periods:

Left Display	Right Display
M-F 1	XX:XX A XX
M-F 2	XX:XX A XX
M-F 3	XX:XX A XX
M-F 4	XX:XX A XX
SAT 1	XX:XX A XX
SAT 2	XX:XX A XX
SAT 3	XX:XX A XX
SAT 4	XX:XX A XX
SUN 1	XX:XX A XX
SUN 2	XX:XX A XX
SUN 3	XX:XX A XX
SUN 4	XX:XX A XX

4-2. AIF CLOCK (Continued)

In 12-hour clock mode, there are three items on each line: the start time "XX:XX", the A or P (am/pm) setting, and the "XX" duration. Use the ◀ and ▶ buttons to set these items, which flashes when the item is selected.

To set a new start time setting, use the product buttons, 1 2 3 4 5 6 7 8 9 0 to enter the new value.

Press the ▶ button to step over to the AM/PM setting. The A or P can be toggled by pressing the '0' product button.

Press the ▶ button again to step over to the duration value (in minutes). Enter a new value using the product buttons, 1 2 3 4 5 6 7 8 9 0

NOTICE

In 24-hour clock mode, there are only two items on each line: the time (XX:XX) and the duration (XX). Again, the ◀ and ▶ buttons step you between these items.

Press the right-side **X** button to exit out of AIF Clock programming mode.

4-3. DEEP CLEAN MODE

⚠ WARNING
BURN RISK

Put on protective gear: Be sure to use all McDonald's approved safety equipment including, apron, face shield and gloves. Never begin Deep Clean process until you're wearing all safety gear. Hot oil or water can cause severe burns.

1. Cover adjoining vats to avoid accidentally contaminating oil with fryer Deep Clean solution.

NOTICE

Do not cook product in an adjoining vat when the Deep Clean process is in progress to avoid contaminating the oil and product.

2. Press and hold [TEMP] and [INFO] buttons until LEVEL - 1 shows in the display, followed by ENTER CODE.

3. Enter code 1, 2, 3, 4 (first 4 product buttons). "PRODUCT" and "SELECTN" show in the displays.

4. Press ▼ button twice and "DEEP CLEAN" shows in the displays. Press ✓ button and display shows "DEEP CLN?", along with "YES NO". Press ✓ button. **Full vat fryers continue onto step 6.**

4-3. DEEP CLEAN MODE (Continued)

5. **Split vat fryers only!** Display shows "LEFT RGHT", asking you to select which vat will be cleaned. Press ✔ button to select left vat, or **X** button for the right vat.

6. Display shows "OIL RMVD" "YES NO".

7. If oil has already been removed, press ✔ button and control skips down to "Solution Added?" step.

    If vat still has oil, press **X** button and display shows "DISPOSE" "YES NO". Press ✔ button to dispose of the oil, or press **X** button to exit Deep Clean Mode. (If control suspects oil in drain pan "CAUTION IS THERE OIL IN PAN? YES NO" may show in display. Make sure drain pan is empty before proceeding)

    JIB systems only! Display shows "IS DISPOSAL UNIT IN PLACE?" "YES NO". If "NO" is selected, display shows "INSERT DISPOSAL UNIT". Once disposal unit is in place press ✔ button for YES and display shows "DRAINING" and oil drains from vat.

    Bulk systems only! Display shows "CHK PAN" if the filter drain pan is missing. Once pan is in place press ✔ button for YES, display shows "DRAINING" and oil drains from vat. Once frypot is empty, open the door that has the RTI switch (at left) and press the "DISPOSE" button on the RTI switch until drain pan is empty.

    Display then shows "VAT EMTY", "YES NO". Press ✔ button when ready.

8. Display shows "SOLUTION ADDED?" "YES NO". Mix McD Heavy-Duty Degreaser Solution in the vat to be cleaned and fill vat to 1 in. (25 mm) above the top fill line. Then press ✔ button and display shows "START CLEAN" "YES NO".

9. Press ✔ button display shows "CLEANING", and a countdown timer. Heat regulates to 195°F (91°C) for this step for one hour.

    NOTICE

    Add water as needed during cleaning process to keep solution 1 in. (25 mm) above the top fill line.

    To stop the cleaning cycle early, press **X** button. The display shows "QUIT DEEP CLN?" "YES NO". Press the ✔ button to cancel the rest of the countdown time and proceed to the rinse steps.
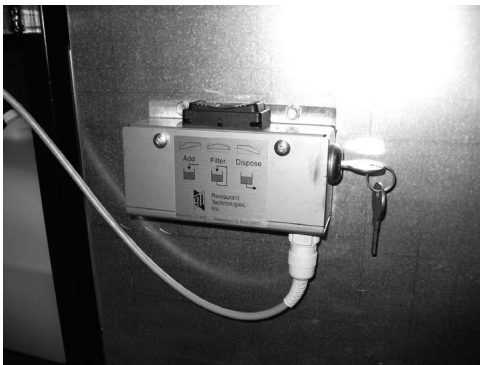
4-3.   DEEP CLEAN MODE
(Continued)

10. Follow McDonald's vat cleaning procedure and at the end of the one hour, display shows "CLN DONE" and beeps. Press ✔ button and display then shows "REMOVE SOLUTION FROM VAT".

11. Empty filter drain pan of internal filtering components and take the components to a sink to be cleaned. Return the empty filter drain pan and cover to the fryer.

12. Using a 1/2 gal. (2 liter) pitcher, remove the solution from the vat, pouring it into a heat-resistant bucket for disposal.   Any remaining solution can be drained into the drain pan for disposal, in step 14 below. Press ✔ button and display shows "VAT EMTY" "YES NO".

⚠ **WARNING**
BURN RISK

• **To avoid burns when pouring hot solution, wear gloves and protective gear and take care to avoid splashing.**

• **To avoid burns during operation, do not pump cleaning solution or water from drain pan into vat or oil lines**

13. Once vat is empty, press ✔ button and display shows "SCRUB VAT COMPLETE" "YES NO". Use brush to clean element and scour pad to clean vat, if needed.

CAUTION

Do not scrape the burner tubes, or use the scouring pad on the burner tubes. This produces scratches on the surface of the tubes causing breading to stick and burn.

Do not use steel wool, other abrasive cleaners, or cleaners/ sanitizers containing chlorine, bromine, iodine, or ammonia chemicals as these will deteriorate the stainless steel material and shorten the life of the unit.

Do not use a water jet (pressure sprayer) to clean unit or component damage could result. Make sure the inside of the vat, the drain valve opening, and all the parts that will come in contact with the new oil are as dry as possible.

14. Once vat is clean, press the ✔ button and display shows "RINSE VAT" and the drain opens.

4-3.   DEEP CLEAN MODE
   (Continued)

15. Pour clean water into vat to rinse vat and allow rinse water to drain into drain pan. Rinse at least 3 times, but be careful not to overfill the drain pan. Display now shows "RINSE COMPLETE" "YES NO"

16. Once vat is completely rinsed, press the ✔ button and display shows "CLEAR SOLUTION FROM OIL LINES" "✔ =PUMP" "X =DONE"

    To make sure no cleaning solution remains in the oil lines, press and hold ✔ button for a few seconds. Once lines are clear, press X button and display shows VAT DRY?" "YES NO".

    ⚠ **WARNING**
    BURN RISK

    To avoid burns, make sure all water and cleaning solution has been removed from the vat(s) and oil line(s).

17. Pull drain pan from under fryer and empty, using the 1/2 gal. (2 liter) pitcher and pouring it into a heat-resistant bucket for disposal.

18. Thoroughly dry the vat with a towel, and then press the ✔ button.

Refill Manually
19. The drain closes and display shows "MANUAL FILL POT", followed by "VAT FULL" "YES NO". Fill the vat to the lower indicator line on the rear of the vat and then press ✔ button. (See **Filling or Adding Oil (locations without RTI)** instructions from Section 3-2.

    Controls return to normal operation.

Refill vat from bulk
19. The drain closes and display shows "FILL POT FROM BULK", "YES NO".

20. To refill the vat, press and hold ✔ button until cold oil is up to the lower oil indicator in vat, per Section 3-3.

21. Press **X** button and display shows "VAT FULL" "YES NO". If vat is full, press ✔ button and controls return to normal operation. If vat is not full, press **X** button, and controls return to previous step.

4-4.   FRYER SETUP

This mode has the same settings as seen upon initial start-up of the fryer. See Setup Mode, Section 3-3.

1.   Press and hold [TEMP] and [INFO] buttons until LEVEL - 1 shows in the display, followed by ENTER CODE.

2.   Enter code 1, 2, 3, 4 (first 4 product buttons). "PRODUCT" and "SELECTN" show in the displays.

3.   Press ▼ button 3 times and "FRYER SETUP" show in the displays.

4.   Press ✓ button and *SETUP* *MODE* shows in the displays, followed by, "LANGUAGE" on the left display, "ENGLISH" on the right display.

Use ◀ or ▶ buttons to change the operation display to, "FRANCAIS", "CAN FREN", "ESPANOL", "PORTUG", "DEUTSCHE", "SVENSKA", "РУССКИИ".

Press ▼ to continue with the other set-up items which include:

• ZONE - USA or NON-USA
• TEMP FORMAT - ºF or ºC
• TIME FORMAT - 12-HR OR 24-HR
• ENTER TIME - Time of day (use product buttons to change)
• ENTER TIME - AM OR PM
• DATE FORMAT - US OR INTERNATIONAL
• ENTER DATE - Today's date (use product buttons to change)
• FRYER TYPE - GAS or ELEC
• VAT TYPE - FULL OR SPLIT
• OIL SYSTEM - JIB (no RTI system)/BULK(has RTI system)
• DAYLIGHT SAVING TIME - 1.OFF; 2.US (2007 & after); 3.EURO; 4.FSA (US before 2007)

Unless otherwise indicated, use ◀ or ▶ to change settings.

SECTION 5.   LEVEL 2 PROGRAMMING

Used to access the following:
• Advanced changes to product settings
• Error code log
• Password programming
• Alert Tone/Volume
• No. of cook cycles before filter is suggested
• Automatic filter time

**5-1. ADVANCED PRODUCT
   SETTINGS**

1. Press and hold 🌡️ and ℹ️ buttons until LEVEL - 2 shows in the display, followed by ENTER CODE.

2. Enter code 1, 2, 3, 4 (first 4 product buttons). "PROD" and "COMP" show in the displays.

3. Press right ✔ button and 'SELECT PRODUCT' and "-P 1-" show in the displays.

4. Use the ◀ and ▶ buttons to scroll through the 40 products, or press the desired product button

5. Press right ✔ button and the product (ex: NUGGETS) shows in the left display and "MODIFY" "YES NO" shows in the right display. Press the ✔ button to change this product, or press the **X** button to choose another product.

>*Load Compensation, Load Compensation Reference, Full Heat, PC Factor*<

6. If ✔ button was pressed, "LD COMP" shows in the display along with the load compensation value. This automatically adjusts the time to account for the size and temperature of the cooking load.
Press the product buttons [1][2][3][4][5][6][7][8][9][0] to change this value of 0 to 20.

7. Press ▼ button until "LCMP REF" shows in the display along with the load compensation average temperature. (if load compensation is set to "OFF", then "_ _ _" shows in display and setting cannot be programmed) This is the average cooking temperature for each product. The timer speeds up at temperatures above this setting and slows down at temperatures below this setting. Press the product buttons [1][2][3][4][5][6][7][8][9][0] to change this value.

5-1. ADVANCED PRODUCT SETTINGS (Continued)

8. Press ▼ button until "FULL HT" shows in display along with full heat value in seconds, which means heat is on as soon as a timer button is pressed, for programmed length of time. Press product buttons ①②③④⑤⑥⑦⑧⑨⑩ to change this value of 0 to 90 seconds.

9. Press ▼ button until "PC FACTOR" shows in the display along with the proportional temperature, which helps to keep the oil from over-shooting the setpoint temperature. Press the product buttons ①②③④⑤⑥⑦⑧⑨⑩ to change this value of 0 to 50 degrees.

NOTICE

- Use ▲ button to go back to previous menu items.
- Press X button when finished with the current product, to return to the PRODUCT SELECTN step.
- Press X button a second time to exit PROD COMP mode.

5-2. E-LOG (error code log)

1. Press and hold [TEMP] and [INFO] buttons until LEVEL - 2 shows in the display, followed by ENTER CODE.

2. Enter code 1, 2, 3, 4 (first 4 product buttons). "PROD" and "COMP" show in the displays.

3. Press ▼ button and "E-LOG" shows in the display.

4. Press right ✓ button and "A" plus the present date & time flashes on the display, along with *NOW*".

5. Press ▼ and if an error was recorded, "B" and the date, time, and error code information shows in display. This is the latest error code that the controls recorded.

6. Press ▼ and the next latest error code information can be seen. Up to 10 error codes (B to K) can be stored in the E-Log Section.

NOTICE

Press and hold the right ✓ button to view a brief description of the error.

5-3.   PASSWORD

The 4-digit passwords can be changed for access to Set-Up, Usage, Level 1, Level 2, & Get Mgr.)

1. Press and hold [TEMP] and [INFO] buttons until LEVEL - 2 shows in the display, followed by ENTER CODE.

2. Enter code 1, 2, 3, 4 (first 4 product buttons). "PROD" and "COMP" show in the displays.

3. Press ▼ button twice and "PASSWORD" shows in display.

4. Press right ✔ button and "SET UP" shows in display. The Set-up password can be changed at this time, or press ▼ once to change the USAGE password, twice for LEVEL 1 password, 3 times for LEVEL 2 password, or 4 times for GET MGR password. And then, follow instructions below.

5. If the password for the Set Up Mode (for example) is to be changed, press right ✔ button and "MODIFY? "YES NO" shows in the display, along with   Press right ✔ button to change the 4-digit password for the Set Up Mode, using the product buttons [1][2][3][4][5][6][7][8][9][0]

6. Once new password is entered, "CONFIRM PASSWORD" shows in the display. Press ✔ button to confirm, or press **X** to choose another password.

5-4.   ALERT TONE (and volume)

1. Press and hold [TEMP] and [INFO] buttons until "LEVEL - 2" shows in the display, followed by "ENTER CODE".

2. Enter code 1, 2, 3, 4 (first 4 product buttons). "PROD" and "COMP" show in the displays.

3. Press ▼ button 3 times and "ALERT TONE" shows in the display.

4. Press right ✔ button and "VOLUME" shows in the display, along with the volume value. Use the product buttons [1][2][3][4][5][6][7][8][9][0] to set the volume from 1 (softest) to 10 (loudest).

5. Once volume is set, press ✔ button and "TONE" shows in display, along with the tone value. Use the product buttons [1][2][3][4][5][6][7][8][9][0] to set the tone from 50 to 2000 Hz.

6. Press **X** to exit Alert Tone Mode.

5-5.   FILTER AFTER

This is the number of cook cycles between filters.

1.   Press and hold [TEMP] and (i) INFO buttons until LEVEL - 2 shows in the display, followed by ENTER CODE.

2.   Enter code 1, 2, 3, 4 (first 4 product buttons). "PROD" and "COMP" show in the displays.

3.   Press ▼ button 4 times and "FLTR AFTR" shows in the display, along with the filter after value. Use the product buttons [1 2 3 4 5 6 7 8 9 0] to set the number of cook cycles before the controls suggest filtering, 0 to 99.

4.   Once set, press ✔ button to confirm.
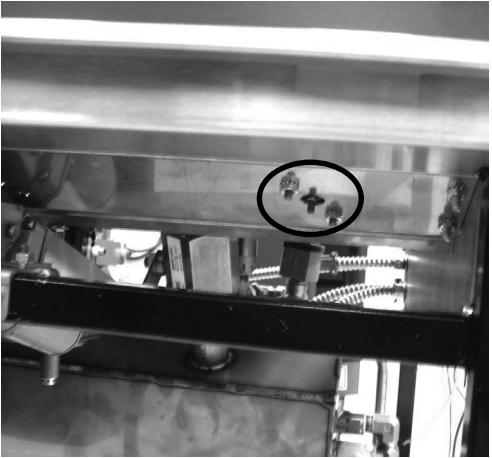
5-6.   FILTER TIME

This is the amount of time fryer sits idle until filter is suggested.

1.   Press and hold [TEMP] and (i) INFO buttons until LEVEL - 2 shows in the display, followed by ENTER CODE.

2.   Enter code 1, 2, 3, 4 (first 4 product buttons). "PROD" and "COMP" show in the displays.

3.   Press ▼ button 5 times and "FLTR TIME" shows in the display, along with the idle time (hours:minutes). Use the product buttons [1 2 3 4 5 6 7 8 9 0] to set the time the fryer sits idle before the controls suggest filtering, 0 to 18:00 (18 hours).

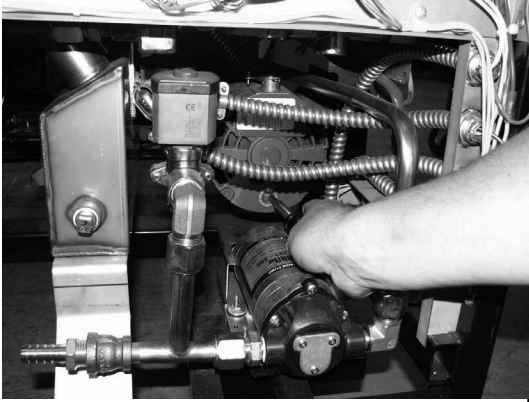4.   Once set, press ✔ button to confirm.

SECTION 6. TROUBLESHOOTING

6-1. TROUBLE SHOOTING GUIDE

Problem	Cause	Correction
POWER switch ON but fryer completely inoperative	• Open circuit	• Plug fryer in • Check breaker or fuse at supply box
Oil will not heat but lights are on No Heat error "E-22"	• Burners not igniting	• Have gas valve and heat circuit checked
Control error code "E-10"	• Oil temperature too high	• Let unit cool down (15-20 minutes), press red reset button under the right side of the controls; if high limit does not reset, high limit must be replaced
Vat is under-filled	• JIB is low or empty • JIB oil line is clogged or collapsed • Filter pan needs cleaned	• Fill the JIB • Check JIB line • Clean filter pan and change paper or pad

6-1. TROUBLE SHOOTING GUIDE
(Continued)

Problem	Cause	Correction
Oil foaming or boiling over top of vat	• Water in oil • Improper or bad oil • Improper filtering • Improper rinsing after cleaning the vat	• Drain and clean oil • Use recommended oil • Refer to filtering procedures • Clean and rinse vat and then dry thoroughly
Oil will not drain from vat	• Drain valve clogged with crumbs • Drain trough clogged	• Open valve using "DRAIN TO PAN" Mode in the filter menu; force crumbs through drain using cleaning brush **CAUTION** *To prevent damage to the fryer, cancel any filtering modes before using brush.* • Remove right side panel and remove plug from end of trough and clean trough
Filter motor runs but pumps oil slowly	• Filter line connections loose • Filter paper or pad clogged	• Tighten all filter line connections • Change filter paper or pad
Bubbles in oil during entire filtering process	• Filter pan not completely engaged • Filter pan clogged • Damaged O-ring on filter line receiver on fryer	• Make sure filter pan return line is pushed completely into the receiver on the fryer • Clean pan and change paper or pad • Change O-ring
Filter motor will not run	• the thermal reset button on the rear of the pump motor is tripped **TURN OFF POWER** **To prevent burns caused by splashing shortening, turn the unit's POWER switch to the OFF position before resetting the filter pump motor's manual reset protection device.**	• Remove the right side panel and allow time for the motor to cool and then, using a screwdriver, press hard against the button until it clicks

6-2. ERROR CODES

In the event of a control system failure, the digital display shows an error message. The message codes are shown in the DISPLAY column below. A constant tone is heard when an error code is displayed, and to silence this tone, press any button.

DISPLAY	CAUSE	CORRECTION
"E-4"	Control board overheating	Turn switch to OFF position, then turn switch back to ON; if display shows "E-4", the control board is getting too hot; check the louvers on each side of the unit for obstructions
"E-5"	Oil overheating	Turn switch to OFF position, then turn switch back to ON; if display shows "E-5", the heating circuits and temperature probe should be checked
"E-6A"	Temperature probe open	Turn switch to OFF position, then turn switch back to ON; if display shows "E-6A", the temperature probe should be checked
"E-6B"	Temperature probe shorted	Turn switch to OFF position, then turn switch back to ON; if display shows "E-6B", the temperature probe should be checked
"E-10"	High limit	Let unit cool down (15-20 minutes), press red reset button under the right side of the controls; if high limit does not reset, high limit must be replaced
"E-15"	Drain valve open	Clean and/or close fish vat drain valve; if clean and closed, have drain switch continuity checked
"E-18-A" "E-18-B" "E-18-C"	Left level sensor open Right level sensor open Both sensors open	Turn switch to OFF position, then turn switch back to ON; if display still indicates failed sensor, have connectors checked at control board; have sensor checked & replace if needed
"E-20-A" "FAN SENSOR STUCK CLOSED"	Pressure Switch failure Wiring problem	If fan is not running, have pressure switch checked; should be open circuit if no air pressure If fan is running, wiring error

6-2.   ERROR CODES (Continued)

DISPLAY	CAUSE	CORRECTION
"E-20-B" "NO DRAFT" "CHECK FAN"	Pressure Switch failure/hose loose Draft Fan failure/ low voltage Flue or hood obstructions	Press power button to vat off and back on again, if E-20-B persists, have pressure switch checked; should be open circuit if no air pressure; make sure hose is connected to fan and pressure switch Have draft fan checked; low voltage going to fan check the fryer flue and hood system for obstructions
"E-20-D" "IGNITION" "FAILURE"	Failure to ignite/ no flame sense	Press power button to vat off and back on again, if E-20-D persists, check gas line connections; check gas shut-off valve; have ignition module checked; gas valve checked; flame sensor gap checked; gas valve and ignition module wiring checked
"E-21"	Slow heat recovery	Have a certified service technician check the fryer for correct gas supply and pressure to the unit; have the gas valves checked; have unit checked for loose or burnt wires
"E-22" "NO HEAT"	Burner not igniting	Have gas valve and heat circuit checked
"E-41", "E-46"	Programming failure	Press power button to vat off and back on again, if any of the error codes, have the controls re-initialized; if error code persists, have the control board replaced
"E-47"	Analog converter chip or 12 volt supply failure	Press power button to vat off and back on again, if "E-47" persists, have the PC board replaced
"E-48"	Input system error	Have PC board replaced
"E-54C"	Temperature input	Turn switch to OFF, then back to ON; have control PC board error replaced if "E-54C" persists
"E-60"	AIF PC board not communicating with control PC board	Press power button to vat off and back on again if "E-60 persists, have the connector between the PC boards checked; replace AIF PC board or control PC board if necessary
"E-70C"	Drain valve switch jumper wire missing or disconnected	Have the jumper wire checked on the PC board at drain switch interlock position

6-2.   ERROR CODES (Continued)

DISPLAY	CAUSE	CORRECTION
"E-83" "PRESSURE " "TOO HIGH"	Pressure Transducer senses too high pressure in AIF system	Have AIF system checked or the RTI quick-disconnect; See details below;
"E-83-A"	Pressure too high	Have AIF system checked in Vat #1
"E-83-B"	Pressure too high	Have AIF system checked in Vat #2
"E-83-C"	Pressure too high	Have AIF system checked in Vat #3
"E-83-D"	Pressure too high	Have AIF system checked in Vat #4
"E-83-E"	Pressure too high	Have AIF system checked in Vat #5
"E-83-J"	RTI "JIB FILL" switch ON and pressure too high	Have JIB fill valves checked
"E-83-R"	RTI "DISPOSE" switch ON when pressure too high	Check RTI quick-disconnect behind fryer; RTI phone no. if needed: 888-796-4997
"E-93-A"	24VDC tripped	Have drain actuator checked

FMO5-O5O-G Henny Penny Corp., Eaton, Ohio 45320, Revised 05-09-11 **www.hennypenny.com**