



INSTRUCTIONS

HP15E SERIES ELECTRIC PRESSURE FRYERS

MODELS

HP15E	ML-43838
HP15EH	ML-43839
HP15EF	ML-43863
HP15EHF	ML-43864
HP15EF	ML-43851 (Programmable)
HP15EHF	ML-43852 (Programmable)



EXECUTIVE OFFICES
701 RIDGE AVENUE
TROY, OHIO 45374-0001

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Installation, Operation and Care of HP15E SERIES ELECTRIC PRESSURE FRYERS

SAVE THESE INSTRUCTIONS

GENERAL

The HP15E Series Electric Pressure Fryers produce uniform, high quality product and operate at a low temperature (325°F) and pressure (14 psig). Fast, pressure frying increases production, improves energy efficiency, preserves food flavor and reduces shrinkage. Up to 15 pounds of product can be cooked in each batch.

HP15E SERIES PRESSURE FRYER — FEATURES

MODEL	HOOD	FILTER
HP15E	Not Available	Not Available
HP15EH	Standard *	Not Available
HP15EF	Not Available	Standard
HP15EHF	Standard *	Standard

* Pressure Fryers with Hood include the ANSUL Fire Suppression System.

The Hood (Models HP15EH and HP15EHF) includes a non-vented exhaust fan with three-stage air filtration system. Models with Hood also include an ANSUL Fire Suppression System.

The Filter (Models HP15EF and HP15EHF) includes a tank for draining the cooking oil and a filter, wand and pump. The oil filter cleans the cooking oil as it is being pumped back into the fry kettle. No remote filter device is required.

Model HP15EHF includes both the Filter and Hood.

Model HOF40 is a portable filter, available from Hobart, which may be used with HP15E series models not having the filter. Use of the HOF40 is covered in a separate manual shipped with the unit.

A drain pipe extension, 1 1/4" diameter exhaust pipe (for Models HP15E and HP15EF only), an open-end wrench (to be used for tear-down during cleaning), insulated mitts, flexible cleaning rod, and four casters are included as standard equipment. Extra O-ring seals for the lid, the kettle pressure regulator assembly and the cleaning port plug screw are also included.

All models may be ordered with either single or 3-phase electrical connection.

Programmable controls are available optionally on Models HP15EF and HP15EHF with 208 or 240 volt, 1- or 3-phase electrical supply.

INSTALLATION

UNPACKING

Immediately after unpacking the pressure fryer, check for possible shipping damage. If the fryer is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

Prior to installation, test the electrical service to be sure that it agrees with the specifications on the fryer data plate located on the door.

Do not use the door to lift or move the fryer.

LOCATION

Do not install the pressure fryer closer than 1" from a side wall and 1" from the back wall.

The installation location must allow adequate clearances for servicing and proper operation. Units with integral hood (Models HP15EH and HP15EHF) must allow suitable space on the left side to permit operation of the manual actuator of the Fire Suppression System (Fig. 1).

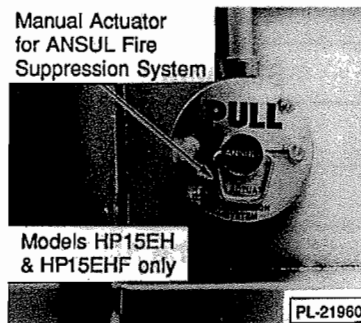


Fig. 1

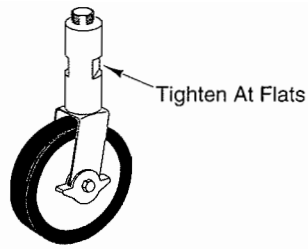
INSTALLATION CODES AND STANDARDS

The fryer should be installed in accordance with the National Electrical Code or applicable local code, and with NFPA Standard #96, *Vapor Removal from Cooking Equipment*, available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269. Models HP15EH and HP15EHF include a ventless Hood and Fire Suppression System which meets NFPA Standard #96 without requiring a separate exhaust hood.

ASSEMBLY

Casters (Fig. 2)

Place the fryer on its side, being careful to avoid scratching the surface. Use only the casters supplied with the fryer. Thread the four casters to the flanges on the bottom corners of the fryer. Use the open-ended wrench supplied to tighten (apply wrench at the flat surfaces on leg extensions). The two locking casters mount at the front; the non-locking casters at the rear.



PL-51559

Fig. 2

Exhaust Pipe (Fig. 3)

Models without the Hood: Thread the 1 1/4" diameter exhaust pipe (supplied) to the top of the exhaust tank at the rear of the fryer. Models with Hood have a factory installed exhaust tube which allows steam to rise from the exhaust tank and condense in the hood while capturing grease laden vapors.

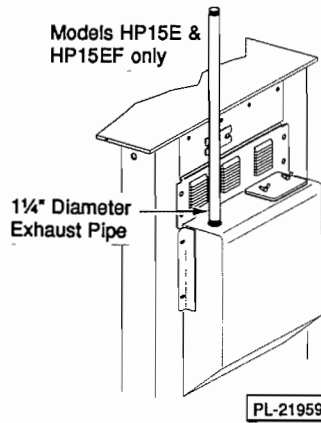


Fig. 3

Filter Tank (Fig. 4)

Screw the wand/hold down plug assembly into the bottom of the filter tank. Place tank lid on top of filter tank. Slide the tank into the cabinet and over the locking pin. The locking pin is for positioning the tank. Pull tank forward until it rests against the locking pin. The opening will be centered under the fryer drain. Connect the quick-connect from the hose to the wand assembly.

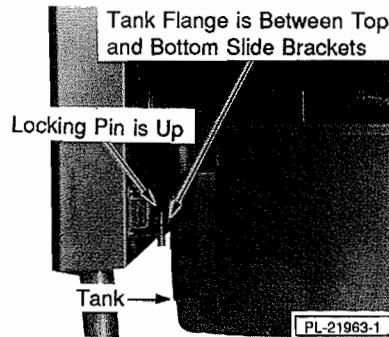


Fig. 4

ELECTRICAL CONNECTIONS

WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE THAT YOU ARE WORKING ON THE CIRCUIT.

The wiring compartment is located inside the door on the left side wall. Remove the wiring compartment cover and make electrical connections per the wiring diagram located on the inside of the door. Feed cord through conduit; exit at the rear of the fryer.

Replace wiring compartment cover.

ELECTRICAL DATA* ALL MODELS

VOLTS	HERTZ	PHASE	CIRCUIT SIZE** (Amps)
120/208-220	60	1	60
120/240	60	1	60
208	60	3	50
240	60	3	50

* Three wire system requires three copper wires insulated to 90°C.

** Maximum Circuit Breaker Size / Minimum Circuit Amperage compiled in accordance with the National Electrical Code, latest edition.

FIRE SUPPRESSION SYSTEM (Models HP15EH and HP15EHF Only)

Models with the integral ventless hood include a fire suppression system manufactured by ANSUL Fire Protection, 1 Stanton Street, Marinette, Wisconsin 54143. The ANSUL Fire Suppression System must be charged and certified by an authorized ANSUL Dealer. Hobart Service is not permitted to service the fire suppression system; only an ANSUL Dealer may properly maintain the fire suppression system. The ANSUL system must be fully charged and operational for the fryer to be operational.

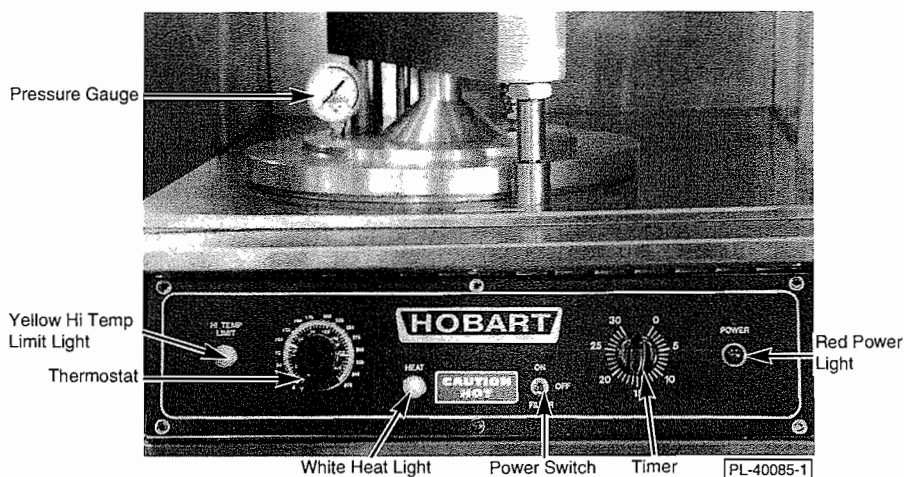
OPERATION

WARNING: HOT OIL AND PARTS CAN CAUSE BURNS. USE CARE WHEN OPERATING, CLEANING AND SERVICING THE FRYER.

BEFORE FIRST USE

Clean the fryer (and filter tank on Models HP15EF and HP15EHF) with warm soapy water. Rinse thoroughly and drain into drainage receptacle. Wipe completely dry with a soft clean cloth. Clean all fryer and filter tank (if applicable) accessories. Rinse thoroughly after cleaning and wipe dry.

STANDARD CONTROLS (Fig. 5)



Model HP15EHF Shown

Fig. 5

- Power Switch** — Models HP15EF & HP15EHF have a 3-position toggle switch: the upper position turns electric power on, the center position turns power off, and the lower position provides power for the filtering operation. Models HP15E & HP15EH have a 2-position toggle switch: the upper position turns electric power on, and the lower position turns power off.
- Thermostat** — Maintains frying temperature. (Temperature ranges from 0 to 375°F.)
- Red Power Light** — ON indicates power is supplied to the unit.
- White Heat Light** — Cycles on and off. ON indicates oil is below the set temperature and heating elements are providing heat to the fryer.
- Yellow Hi Temp Limit Light** — Illuminates if the high limit thermostat is tripped.
- Timer (0-30 minutes)** — Buzzes at the end of the cooking cycle until you turn the timer OFF.
- Pressure Gauge** — Indicates internal kettle pressure in pounds per square inch, gauge (psig).

PROGRAMMABLE CONTROLS (Optional - Models HP15EF and HP15EHF Only) (Fig. 6)

Programmable controls are available as an option on Models HP15EF and HP15EHF with 208 or 240 volt, 1- or 3-phase electrical supply.

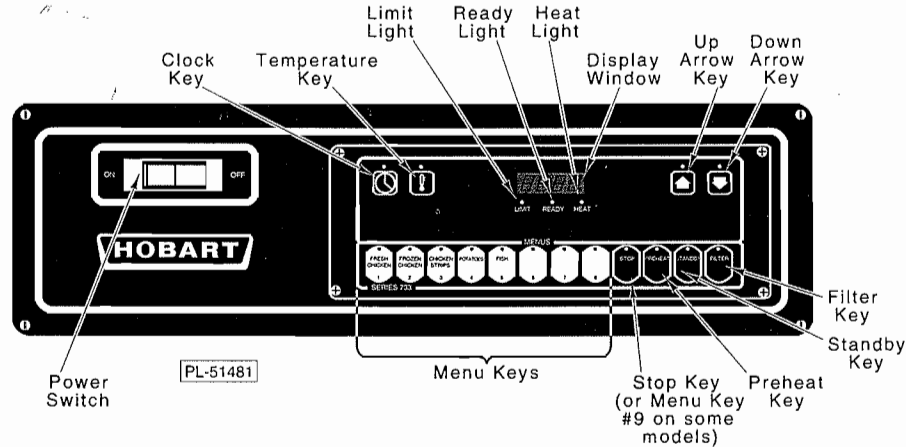


Fig. 6

- Power Switch** — Turns power to the pressure fryer on and off.
- Menu Keys** — Keys 1-8 (or 9 on some models) may be individually programmed for the desired cooking cycle time. None of the keys are preset at the factory for cooking cycle times; each key must be programmed by the customer. The oil temperature may be programmed also; however, the selected temperature will be the same for all Menu Keys. You cannot set independent temperatures.
- Stop Key** — Press to cancel a cooking cycle in progress. Pressure will be released from the kettle, allowing the kettle lid to be opened.
- Preheat Key** — Lit while oil is being heated to the desired temperature. Display shows "PRHT" and Preheat Key is lit. The Heat Light will come on and go off, cycling with the heaters. The Preheat Key must be pressed before cooking to allow the fryer to heat to the desired temperature. Once temperature is reached, the display shows "REDY" and the Ready Light is lit. The display must say "REDY" to cook.
- Standby Key** — Press to raise or lower oil temperature to 275°F during periods when fryer is idle. Display will show "STBY" and Standby Key's light will be lit when oil temperature is lower than programmed temperature. To remove fryer from Standby mode, press Preheat or Filter Key (whichever is desired).
- Filter Key** — Used to filter the oil. When pressed, the light above the Filter Key will illuminate and all power to the heaters will be turned off.
- Clock Symbol** — Used to set programmed cooking cycle time and to display programmed time for selected menu key.
- Temperature Symbol** — Used to program desired oil temperature and to display programmed temperature for selected menu key.
- Display Window** — During cooking, counts down remaining time in cooking cycle. When programming, displays functions and program settings for selected menu key.

- Limit Light** — Will flash when oil temperature is higher than normal. (See HIGH LIMIT SWITCH in this manual.)
- Ready Light** — Lit when oil temperature is at programmed temperature and ready for cooking to begin. Display will show "REDY."
- Heat Light** — Lit when heating elements are providing heat to increase oil temperature. Display will show "REDY."
- Up & Down Arrows** — Press both up and down arrow simultaneously and hold for 5 seconds to enter programming mode. Use to increase or decrease programmed settings while in programming mode. Lights above both arrows are lit while in the programming mode.

Programming the Control

When programming the Menu Keys, the temperature must be programmed first. Otherwise, the display will show "LOC," which indicates that the program is "locked in," even though no program selections were made. If you accidentally program time first, press the Clock Key twice to exit the program mode, then try again. The Clock Key acts as the "lock program" key and the "exit program" key. By setting time first, you are "locking" and "exiting" before a program is truly set. This is why time is programmed last. You may press the Clock Key twice at any time during program mode to exit. **NOTE:** You may not have "locked in" your program if you exit prematurely from program mode. You should enter program mode again to view, verify and/or correct your selections.

DO THIS	RESULT
Press and hold (5 seconds) Up and Down Arrow Keys simultaneously to enter programming mode.	Both Arrow Keys lit in programming mode.
Press the Temperature Key to access temperature program.	Light above the Temperature Key lights. "PRHT" and previously selected temperature will alternate in display (initial selected temperature will be one programmed for testing by the factory).
Use Up or Down Arrow Key to reach the desired temperature. Maximum temperature is 365°F; minimum is 325°F.	Display shows selected temperature.
Press desired Menu Key.	Lights over Clock Key and selected Menu Key will illuminate; Temperature Key light will go out.
Use Up or Down Arrow Key to increase or decrease time.	If no previous time is in memory, "00:00" and "t1" will alternate in display. Otherwise, display will alternate between the previously selected time and "t1." Maximum time setting is 59:59.
If desired, select another Menu Key and set its time in the same manner. You may program any number of keys that you wish.	Previous Menu Key's light will go out; new Menu Key's light will illuminate.
Once desired menus are set, push Clock Key. Lights above clock and last programmed menu will go out.	Display alternates between "LOC" and "0." This "locks in" the programmed time(s) and temperature.
Press Clock Key again to exit programming mode.	Fryer will be in the last mode ("PRHT" or "STBY") prior to programming.

POSITIONING HOOD FILTERS

The three hood filters must be in their proper positions or the fryer will not function. Fig. 7 shows the long, welded pins (3 on the right and 3 on the left) against which the filters rest. Directly behind the pins on the left side are three shorter filter actuator switch pins which push in and out. Each filter must be placed so that it pushes its filter actuator switch pin in or the fryer will not operate.

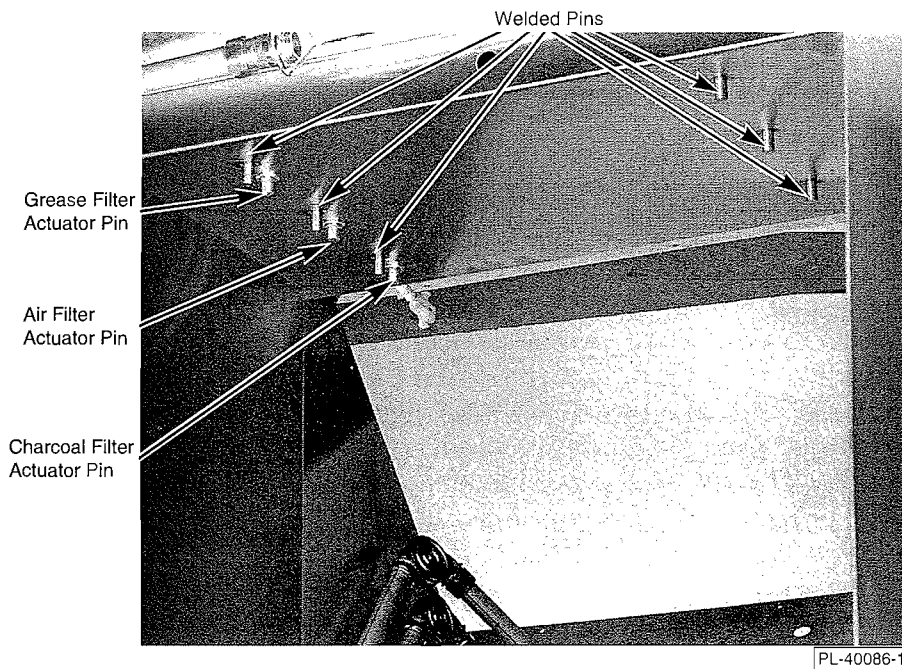


Fig. 7

The Charcoal Filter goes to the rear of the hood. Notice (Fig. 8) that the actuator pin is pushed in and the filter is resting against the last set of welded pins. The Air Filter is installed next (Fig. 9), and the Grease Filter is installed last at the front of the hood (Fig. 10). Insertion and removal of the filters is described in the **CLEANING — AIR FILTERS AND HOOD** section of this manual.

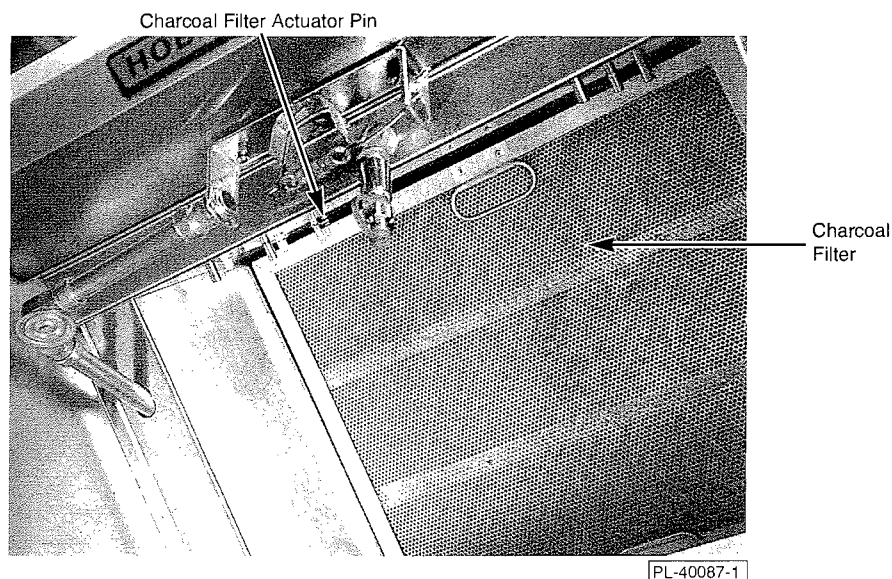


Fig. 8

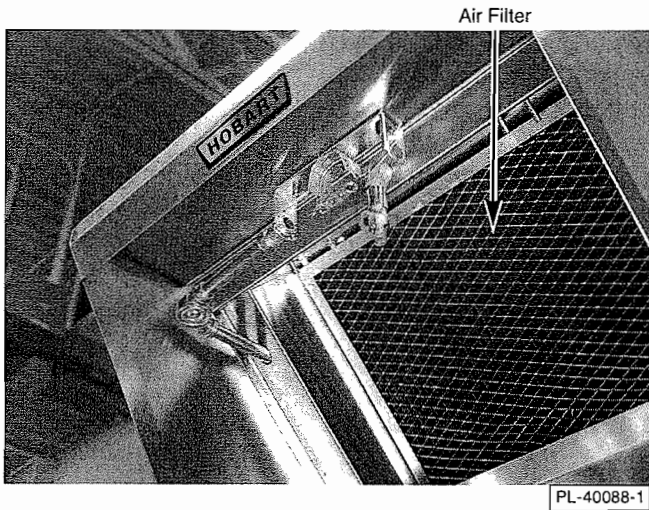


Fig. 9

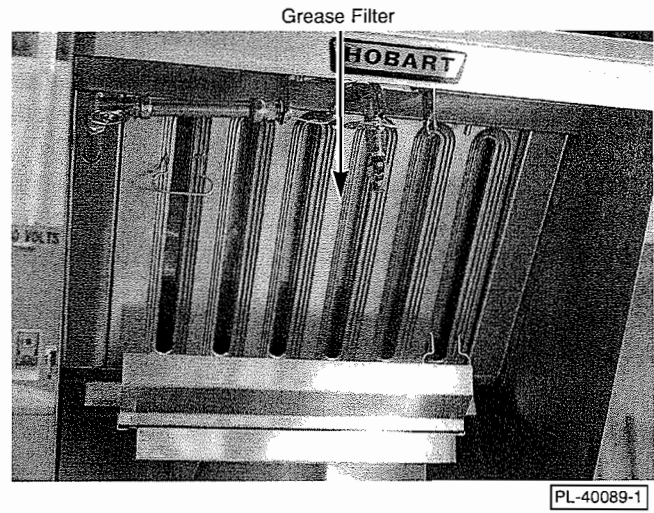


Fig. 10

FILLING THE KETTLE WITH LIQUID SHORTENING

Oil Capacity: 26 lb.

Use only a pure vegetable hydrogenated oil prescribed for use in pressure fryers, such as Mel Fry, Crystal, FryMax, or Gold Label. Never add suet.

Close drain valve (Fig's 11 & 12). **Fill kettle with liquid shortening; solid shortening is not recommended.**

- If shortening is hot, fill kettle to oil level line (Fig. 13).
- If shortening is room temperature, fill kettle to 1/2" below the oil level line. This level allows for oil expansion when heated. **Do not overfill.**

Regularly add enough oil to keep the oil level in the kettle to the oil line.

When changing to new oil, keep the level 1/2" below the oil level line.

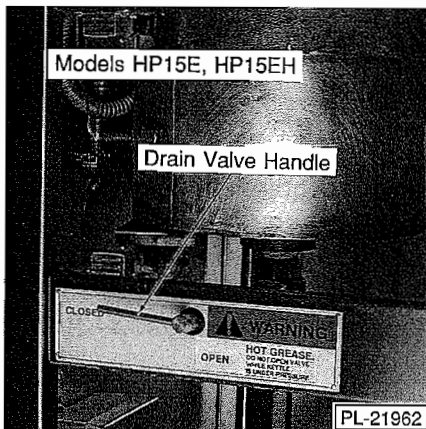


Fig. 11

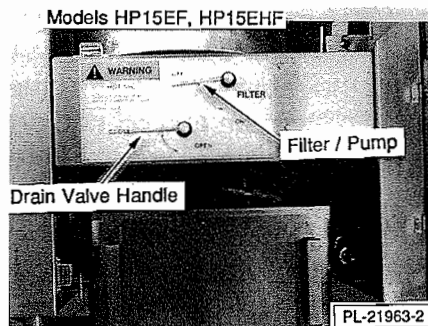


Fig. 12

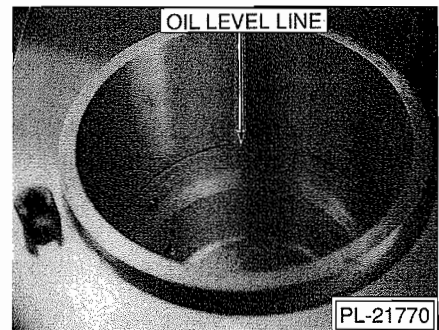


Fig. 13

USING THE PRESSURE FRYER

CAUTION: Before turning the fryer on, the kettle must be filled to the correct level with liquid shortening. If this is not done, the kettle walls can be damaged. Warpage can cause leaks.

Pressure is created by the containment of moisture escaping from the product that is being fried. Dry products that produce little or no moisture will not create sufficient pressure to pressure fry that product. Pressure will not build without product in the kettle.

Fryer with Standard Controls

1. Once the kettle is filled to the correct level, make certain the thermostat is set to "0."
2. Immerse the frying basket in the oil.
3. Place the power switch in the ON position and set the thermostat to 325°F. The red power light is lit when the fryer is powered. The white light is lit when the oil is **below** the selected temperature and the fryer is heating.
4. Before the first load of the day, allow the fryer to cycle one time before loading food. Wait for the white light to come on for the second time and go off for the second time before you begin cooking (allow 45 minutes). After the first cooking cycle of the day, food may be loaded whether the white heat light is glowing or not.
5. Make sure the frying basket is immersed in the oil.
6. Using tongs or other long-handled utensil, place prepared foods evenly around the basket.
7. After loading 10-12 pieces of food, use the insulated mitts and lift the basket high enough to clear the bottom of the kettle. Swirl the basket a couple of times in the oil to keep pieces from sticking together.
8. Lift the basket out of the oil and hang the basket on the lip of the kettle. Continue loading the food (maximum capacity is 15 pounds of food). When the desired amount of food is placed in the basket, give the basket one more swirl in the oil. Close the lid. **Make sure the lock post is fastened in the overarm post catch (Fig. 14).** Tighten the handle.

WARNING: IF THE LID WILL NOT LOCK, DO NOT OPERATE THE FRYER.

9. After tightening the lid, set the timer to the desired cooking time.
10. Forty-five seconds prior to the end of the cooking cycle, the pressure will automatically be released. The heating elements will continue to cycle on and off and product will continue to cook until the buzzer sounds at the end of the cooking cycle. Turn the timer knob OFF to silence the buzzer.
11. A lid-locking device will permit opening the lid **only** after all pressure has been released. At this time, the pressure gauge will read "0."
12. When pressure gauge reads "0," turn the handle counterclockwise **UNTIL IT STOPS** before opening the lid. **CAUTION: Seal damage can occur if handle is not completely unscrewed. Do not force the lid to open.**

- Using insulated mitts or tongs, raise the frying basket out of the oil and hang the basket on the lip of the kettle. Allow food to drain approximately 20 to 25 seconds. Remove the food and return the basket to the oil.

It is not necessary to turn the fryer OFF for this procedure. The cooking cycle is controlled by the setting of the timer, and the oil temperature is regulated by the thermostat.

Turning the Fryer Off

- Turn the thermostat OFF.
- Turn the power switch OFF.

Extended Shutdown

- Turn the thermostat OFF.
- Turn the power switch OFF.
- Clean fryer following instructions in the CLEANING section of this manual. The solenoid assembly must be cleaned thoroughly and routinely.

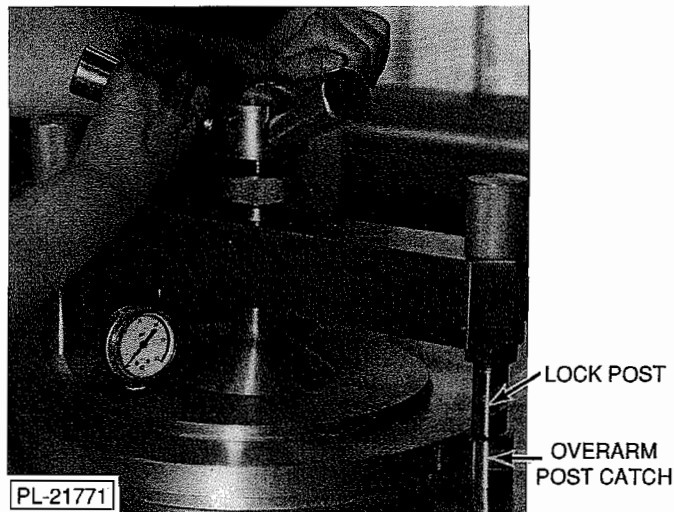


Fig. 14

Fryer with Optional Programmable Controls

- Plug fryer into proper receptacle.
- Program Menu Keys and temperature if required.
- Once kettle is filled with oil to the correct level, turn power switch to ON. Display will show "00:00." This initial state is called the "start-up condition."
- There is a 5-second delay before you can select any key.

5. To cook, press Preheat Key. Light over Preheat Key will light and Heat Light will flash. Heating elements will turn on to bring oil to programmed temperature.

If you do not intend to begin cooking immediately but you would like to begin heating the oil in order to reduce preheating time later, press Standby Key. Light over Standby Key will light and Heat Light will flash. Heating elements will turn on and bring oil temperature up to 275°F. When ready to cook, press Preheat Key to allow oil to heat to desired temperature.

6. When oil is at cook temperature, display will show "REDY" and Ready Light is lit. **NOTE:** Fryer must be in Preheat mode and not Standby mode to cook.

7. Immerse the frying basket in the oil.

8. Using tongs or other long-handled utensil, place prepared foods evenly around the basket.

9. After loading 10-12 pieces of food, use the insulated mitts and lift the basket high enough to clear the bottom of the kettle. Swirl the basket a couple of times in the oil to keep pieces from sticking together.

10. Lift the basket out of the oil and hang the basket on the lip of the kettle. Continue loading the food (maximum capacity is 15 pounds of food).

11. When the desired amount of food is placed in the basket, give the basket one more swirl in the oil. Close the lid. **Make sure the lock post is fastened in the overarm post catch (see Fig. 14).** Tighten the handle.

WARNING: IF THE LID WILL NOT LOCK, DO NOT OPERATE THE FRYER.

12. After tightening the lid, push desired Menu Key. The light above the selected Menu Key will flash and cooking will begin. Display will show countdown time. Once a menu is started, there is a 5-second delay before there is any response to further Menu Key presses.

Fryers with #9 Menu Key: If you wish to cancel the cooking cycle before the end of the preset cooking cycle time, press the selected Menu Key again and hold for 2 seconds. Cooking will stop and the display will show "REDY."

If you press the wrong Menu Key, you can change it, but you must do it within 30 seconds. To change your selection, press the wrong Menu Key again and hold it in until the display shows "REDY" (approximately 2 seconds). The fryer will stop cooking. Then press the correct Menu Key. The fryer will begin cooking, the light above the new Menu Key will light and the display will show the new menu time minus the time that's already expired (between 3 and 30 seconds).

Example: Menu Key 1 was selected and ran for 11 seconds, then cancelled. Menu Key 2 is selected. Menu Key 2 programmed time is 9 minutes. Therefore, the display, when Menu Key 2 is selected, will show "8:49" (9 minutes minus 11 seconds). If Menu Key 2 were selected after the 30-second time period, the display would show "9:00."

Fryers with Stop Key: To cancel the cooking cycle before the end of the preset cooking cycle time, press (but do not hold) the Stop Key. Cooking will stop immediately and the display will show "REDY." If you press the wrong Menu Key, press the Stop Key to cancel the cooking cycle, then press the correct Menu Key.

All Models: Whether you use the Menu Key or Stop Key to stop the cooking cycle (to stop cooking altogether or to reselect a menu), pressure in the kettle will release and the lid may be opened.

13. Pressure will begin to release when countdown reaches 1 minute. When display counts down to 00:00, the buzzer will sound. The selected Menu Key will flash. Press the Menu Key to stop the alarm. Display will show "REDY."
14. A lid-locking device will permit opening the lid **only** after all pressure has been released. At this time, the pressure gauge will read "0."
15. When pressure gauge reads "0," turn the handle counterclockwise **UNTIL IT STOPS** before opening the lid. **CAUTION: Seal damage can occur if handle is not completely unscrewed. Do not force the lid to open.**
16. Using insulated mitts or tongs, raise the frying basket out of the oil and hang the basket on the lip of the kettle. Allow food to drain approximately 20 to 25 seconds. Remove the food and return the basket to the oil.

It is not necessary to turn the fryer OFF for this procedure. The cooking cycle and the oil temperature are regulated by the programming parameters of the Menu Keys.

To view the programmed oil temperature for the Menu Keys, you must enter the programming mode by pressing and holding (5 seconds) the Up and Down Arrow Keys simultaneously. The display will flash between the preset temperature and "PRHT." Then push the Clock Key 2 times to exit the programming mode.

To view the actual oil temperature at any time, just press the Temperature Key while outside the programming mode. The actual temperature will be displayed for 5 seconds, then revert back to the previously displayed parameter.

High Limit

If an over temperature situation occurs, the heaters will be turned off and the Limit light will flash. (See HIGH LIMIT SWITCH in this manual.) Once the oil temperature cools to below the high limit temperature, the high limit thermostat will reset automatically. It is recommended that you turn the power off and open the kettle lid to allow the oil to cool.

Turning the Fryer OFF.

To turn the fryer OFF, turn the power switch OFF.

Extended Shutdown

1. Turn the power switch OFF.
2. Clean fryer following instructions in the CLEANING section of this manual. The solenoid assembly must be cleaned thoroughly and routinely.

COOKING GUIDELINES (All HP15E Series Models)

The cooking guidelines in the charts below are suggested only. They are based on average-sized portions. Heavier portions require more time. Frozen portions will require a longer cooking time. Maximum capacity is 15 pounds, or approximately 45 pieces of chicken. A typical load is considered to be 6-9 lb. of raw, breaded chicken.

FOOD	TEMPERATURE (°F)	TIME (Minutes)	TIME (Minutes)
		Food warmer than 40°F.	Food refrigerated.
Chicken, 2 lb. 2¼ lb. 2½ lb. 2¾ lb. 3 lb. or more*	325	8	9
	325	8½	9
	325	9	9½
	325	9½*	10*
	325	*Add 1 min. per ¼ lb.	*Add 1 min. per ¼ lb.
Pork Chops, 3-4 oz. 5-6 oz. 7 oz.	325	5	5½
	325	6½	7
	325	7	7½
Frozen Breaded Shrimp (regular, medium-size)	325	1½ - 2	3½ - 5
Potatoes (French Fries) Raw Frozen (blanched)	325	4	
	325		3
Breaded Veal Cutlet, 3 oz. 4 oz.	325	5	6
	325	11	12
Lamb Chops, 2-4 oz. (thin) 5-6 oz. (thick)	325	5	6
	325	11	12

*For amounts of chicken larger than 2¾ lb., add one minute per ¼ lb. to the time allotted for 2¾ lb. chicken.

FOOD	TEMPERATURE (°F)	TIME (Minutes)
Chicken Fried Steak	325	8
Liver	325	4
Sweet Breads	325	4
Fish Fillets (Frozen and pre-breaded)	325	5
Shrimp (Fresh)	325	4
Oysters	325	2
Lobster Tail	325	4
Scallops	325	2
Croquettes	325	3
Franks Wrapped in Bacon	325	4
Onion Rings	325	1
Asparagus	325	1
Brussels Sprouts	325	1
Corn-on-the-cob	325	3

HIGH LIMIT SWITCH

The pressure fryer is equipped with a high temperature limit switch which senses a higher-than-normal temperature. If a higher-than-normal temperature is sensed by the high temperature limit switch, the fryer will shut off and the pressure will be exhausted. On fryers with standard controls, the Power and Heat lights will turn off, and the yellow Hi Temp Limit light will illuminate. On fryers with programmable controls, the Limit light will illuminate. After the kettle has cooled to normal operating temperature, operation will resume automatically. The high limit switch may activate during initial start-up if the oil is hotter at the top of the kettle than at the bottom. Normal operation will return after the oil temperature has stabilized. If the high limit switch activates anytime after initial start-up, turn the fryer off and call your local Hobart service office.

PRESSURE RELIEF VALVE

The pressure relief valve is located on the fryer lid. This relief valve is non-adjustable and preset at the factory to release the kettle pressure automatically if over 15 psig. This valve is also equipped with a manual lever (Fig. 15) which should be lifted if kettle pressure exceeds 15 psig and the valve does not release the pressure automatically. **CAUTION: Do not allow kettle pressure to exceed 15 psig.** Keep the exhaust port of the pressure relief valve clear of obstructions.

WARNING: STEAM RELEASED BY THE PRESSURE RELEASE VALVE MAY CAUSE BURNS. USE CAUTION WHEN OPENING THE VALVE.

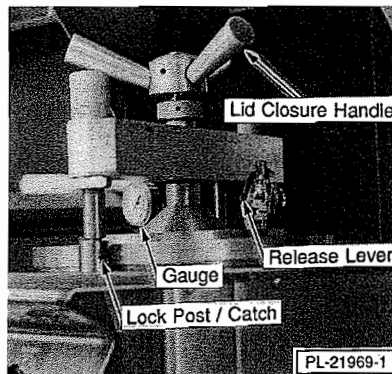


Fig. 15

DRAINING AND FILTERING OIL

WARNING: HOT OIL AND PARTS CAN CAUSE BURNS. USE CARE WHEN OPERATING, CLEANING OR SERVICING THE FRYER.

WARNING: DO NOT DRAIN OR FILTER OIL WHILE KETTLE IS UNDER PRESSURE.

To prolong oil life, it is recommended that you filter the oil after 85 to 90 pounds of product have been cooked. Filter the cooking oil using the Hobart HOF40 Portable Filter, the integral filter included with Models HP15EF and HP15EHF, or with a vacuum or gravity style filter by others. Draining through cheesecloth will not clean the oil sufficiently for pressure frying.

Using the HOF40 Portable Filter

Follow the instructions shipped with the unit.

Using the Built-in Oil Filter (Models HP15EF and HP15EHF with Standard Controls)

1. Turn Power Switch to FILTER. Open kettle lid if necessary. Make certain filter paper and screen are in place on bottom of filter tank. (Optional: Add diatomaceous earth to oil.) Carefully open drain valve. Allow kettle to drain completely.
2. Close drain valve. Turn filter ON by turning Filter Handle to ON position. Allow approximately 2" of oil to fill kettle. Then turn filter OFF by turning Filter Handle to OFF. Doing so while the drain valve is closed returns oil to kettle in order to wash down kettle wall. Use a brush to clean wall and bottom of kettle. After cleaning, open drain valve to return oil to filter tank.
3. With drain valve open, turn Filter Handle to ON to filter the oil. Allow to run approximately five minutes to filter oil completely. Close drain valve. Allow oil to return to kettle. Turn Filter Handle to OFF. Turn Power Switch to ON to continue cooking, or OFF for nightly shutdown.
4. Maintain oil level at the line in the kettle, making up any loss as necessary. Cooking may resume after fryer reaches correct temperature.

Using the Built-in Oil Filter (Models HP15EF and HP15EHF with Programmable Controls)

1. Oil temperature must be at least 275°F to filter.
2. Press Filter Key. The light above the Filter Key will light and all power to heaters will be turned off.
3. Open drain valve and allow kettle to drain completely. Turn Filter Handle to ON position. The pump will start 15 seconds after Filter Handle is turned to ON.
4. To clean tank walls, turn drain valve to CLOSED position. Allow approximately 2" of oil to fill kettle. Then press Filter Key to stop pump. Wash down walls with a brush. Open drain valve to drain. Press and hold Filter Key (approximately 5 seconds) to restart pump. Run pump approximately 5 minutes to filter oil completely.
5. Close drain valve to return oil to kettle. When kettle is full or bubbling, turn Filter Handle to OFF and press Filter Key. Filter Light will go out and pump will stop. **CAUTION: Do not run the pump dry.** Fryer will return to "start-up" condition (as if you had just turned the Power Switch on).
6. Maintain oil level at the line in the kettle, making up any loss as necessary. Cooking may resume after fryer reaches correct temperature.

Filtering Oil During the Production Period (Models Without a Built-in Filter)

1. Turn fryer thermostat and power switch OFF before draining or filling. Open lid.
2. Position filtering system under the drain, open drain valve and drain oil into the filter tank.
3. Using a long-handled brush, wash sides and bottom of kettle with some remaining warm oil. Rinse with warm oil.
4. When clean, close the drain valve and return oil to kettle.
5. Check oil level and turn fryer ON. Cooking can resume when the white heat light goes out.

Filtering Oil and Cleaning Kettle at the End of the Production Day (All Models)

This procedure must be done while the kettle is still warm. Filtering time increases as the oil cools.

1. Turn fryer thermostat and power switch OFF before draining or filling. Open lid.
2. If you use filter powder (diatomaceous earth), follow the manufacturer's instructions and add filter powder to oil in kettle. Stir with the wooden stick provided.
3. Position filtering system under the drain, open drain valve and drain oil into the filter tank. Drain until approximately 2" of oil remains in kettle.
4. Using a long-handled brush, wash sides and bottom of kettle with the remaining warm oil, then finish draining tank.
5. While oil is out of the kettle, remove any excess breading from the bottom of the kettle. Use the wooden stick provided to dislodge any material that may have collected in the kettle drain (Fig. 16).
6. The kettle must be cleaned daily while it is still warm. Open drain valve to drain oil into filter tank, then close drain valve. Disconnect wand from hose at coupling. Push filter tank to extreme rear of fryer to allow a suitable pot or vessel to be placed under drain valve outlet to receive cleaning water from kettle.

CAREFULLY pour 2-3 gallons of COLD water into the kettle. Use a nylon pad (non-abrasive, plastic web-type, non-rusting, non-shredding pad) to wash the kettle completely. Drain water into a drainage receptacle. Rinse kettle well with clear water. Drain again. Wipe the kettle dry with a soft, clean, lint-free cloth. Close drain valve.

Reposition and reconnect filter tank. Return oil to kettle, filtering until clean. When returning oil to kettle, follow the instructions under USING THE BUILT-IN OIL FILTER . . . for Standard Controls or Programmable Controls, depending upon your fryer (see page 18). Check oil level. Fryer is ready for production.

7. Wash the fry basket in warm soapy water. Rinse thoroughly and wipe dry with a soft clean cloth.
8. Wipe the under part of the lid clean, including the diaphragm (Fig. 17).
9. Continue with the cleaning instructions described in the CLEANING section of this manual.

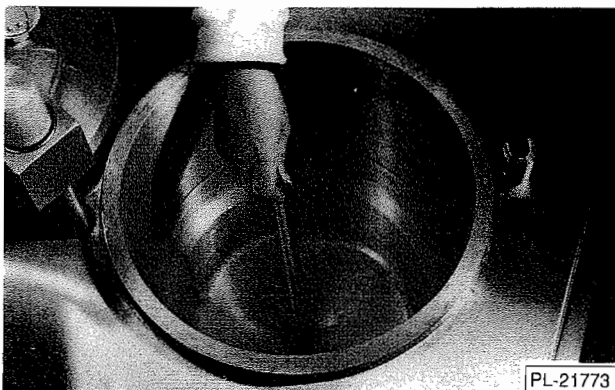


Fig. 16

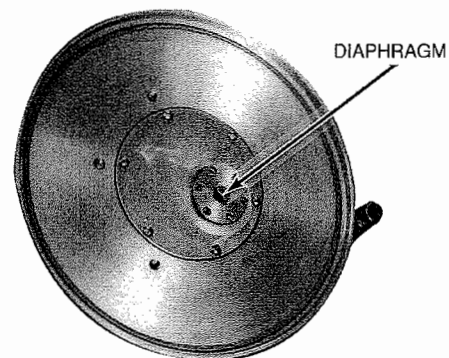


Fig. 17

Using a Power Filter Device From Another Manufacturer

If you use a power filter supplied by another manufacturer, follow the instructions included with the device.

CLEANING THE FILTER (All Models)

Remove sediment from tank bottom with plastic scraper or spatula. After residue is removed, replace cover and slide filter tank to correct position.

CHANGING FILTER PAPER (All Models)

Change filter paper approximately once per week.

1. Pull filter tank forward and disconnect wand from hose, then pull forward.
2. Remove lid.
3. Remove crumbs and residue with plastic scraper or spatula.
4. Remove wand/hold down plug assembly, 2 silicone washers and filter screen (Fig. 18).
5. Replace filter paper (available from Hobart) (see Fig. 18) and staple onto screen.
6. Replace 1 silicone washer, then screen, 1 silicone washer, then wand/hold down plug assembly in order given (see Fig. 18). Tighten finger tight only.
7. Replace cover and slide tank into cabinet and over locking pin. Pull tank forward until it rests against locking pin. Connect quick-connect from hose to wand assembly.

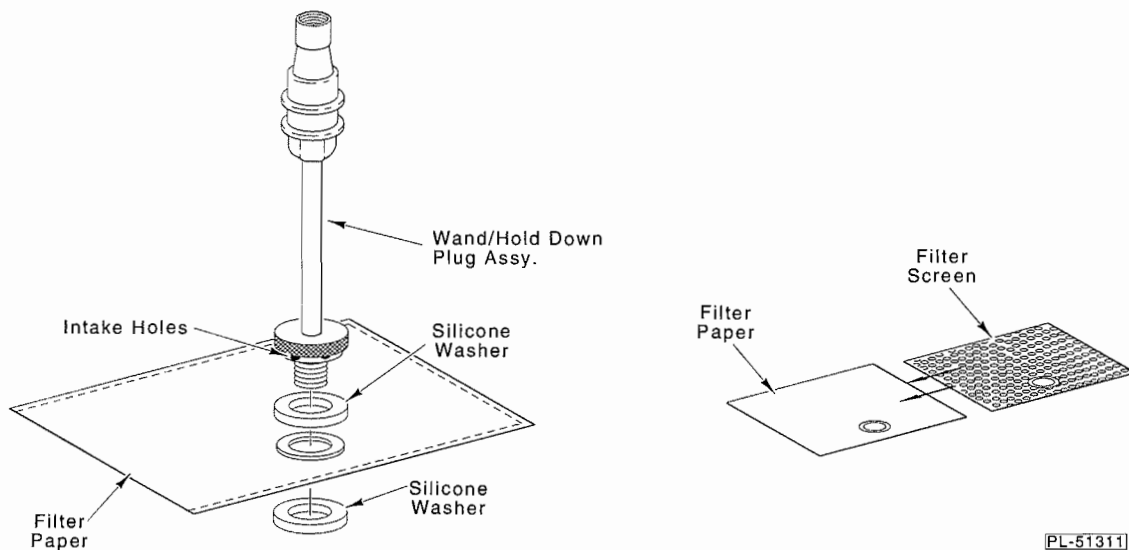


Fig. 18

CLEANING

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE THAT YOU ARE WORKING ON THE CIRCUIT.

Daily Cleaning

— Stainless Steel

Clean stainless steel regularly with a damp cloth and polish with a soft dry cloth. If regular cleaning is neglected, grease will be burned on and discolorations may form. These may be removed by washing with any detergent or soap and water. Particularly stubborn discolorations may be removed with a self-soaping scouring pad or a paste made of water and a mild scouring powder applied with a plastic open pad or sponge. **CAUTION: Always rub with the "GRAIN" in a horizontal direction.**

It is important to keep the fryer exterior clean and free of accumulated grease. Wash all exterior surfaces at least once daily. Use a cloth with warm water and a mild soap or detergent. Follow with a clear rinse, then dry.

— Aluminum Kettle

See cleaning procedure for aluminum kettle on page 19 under FILTERING OIL AND CLEANING KETTLE AT THE END OF THE PRODUCTION DAY (ALL MODELS), Step 6.

Cleaning After Every Production Period

— Exhaust Tank

The exhaust tank should be drained at the end of every production period while the liquid is hot. The exhaust tank drain valve is located behind the front access door at the lower right.

1. Attach the drain pipe extension (supplied) (Fig.19), and drain the exhaust tank by turning the handle clockwise.
2. After draining the exhaust tank, turn the handle counterclockwise to close the drain valve, then remove the drain pipe extension before closing the door.

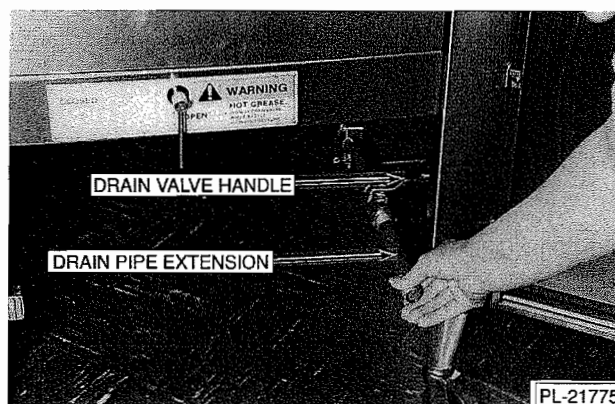


Fig. 19

Weekly Cleaning (More often if required)

— Solenoid Assembly

CAUTION: The kettle pressure regulator in the solenoid assembly must be cleaned at least once a week during normal usage or the fryer may malfunction.

Dismantle and clean the solenoid assembly. The solenoid assembly (Fig. 20) is located behind the second access door above the drain valve for the exhaust tank. An open-end wrench is supplied with each machine for this purpose.

1. Unplug the electrical cord attached to the upper portion of the solenoid assembly (see Fig. 20). To unplug, twist the plug counterclockwise and pull out.

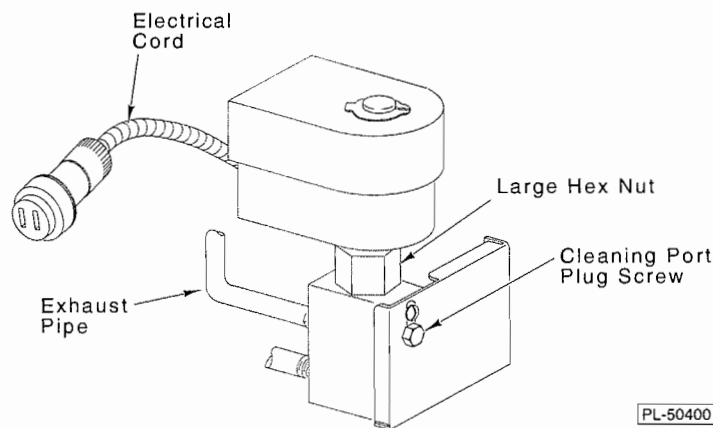


Fig. 20

2. Using the wrench supplied, loosen large hex nut on solenoid (Fig. 21) and remove top portion of solenoid assembly.
3. Remove the kettle pressure regulator assembly (Fig. 22). Wash the complete assembly with a Scotchbrite pad and warm soapy water. Rinse thoroughly and wipe dry.

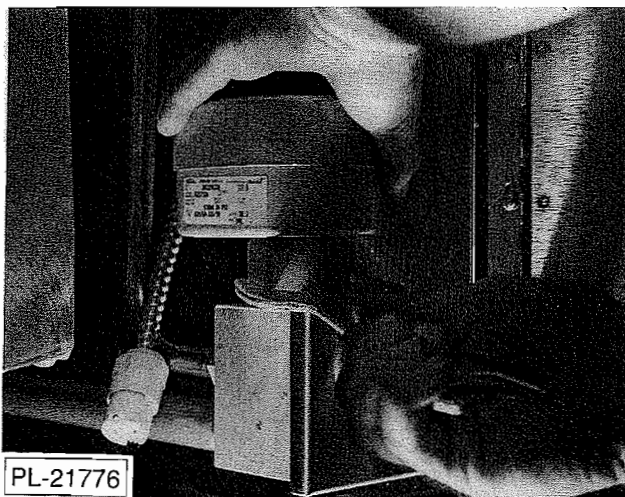


Fig. 21

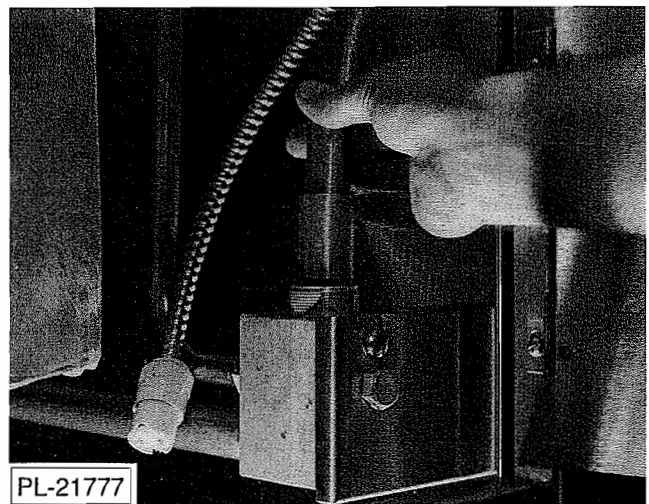


Fig. 22

4. With the kettle pressure regulator assembly out, use wrench (small end) to remove the plug screw from the cleaning port on the solenoid block (Fig. 23).
5. Remove the elbow joint from inside the kettle (Fig. 24).
6. Using the flexible cleaning rod supplied, clear any obstructions from the exhaust pipe (Fig. 25).

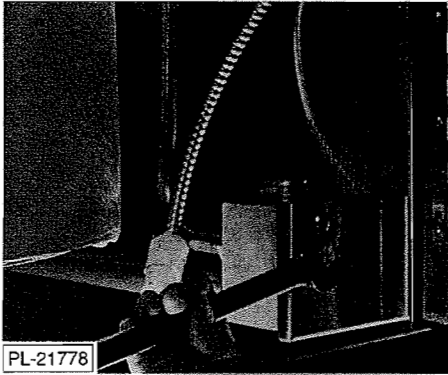


Fig. 23

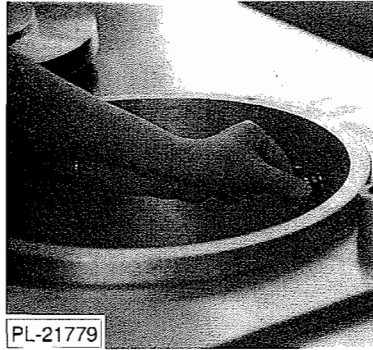


Fig. 24

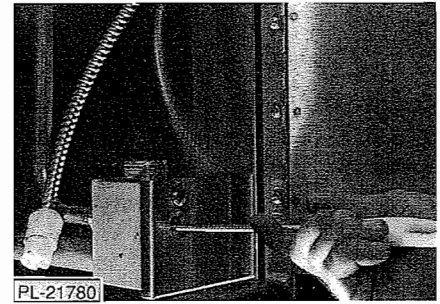


Fig. 25

7. Replace the plug screw and the kettle pressure regulator assembly.
 - A. Before reinserting kettle pressure regulator assembly, dip O-ring end of assembly in cooking oil to protect O-ring.
 - B. Ensure that the spool of the kettle pressure regulator assembly is positioned **CORRECTLY** (Fig. 26). Window of spool must face cleaning port. If spool is positioned **INCORRECTLY**, the pressure discharge port will be partially blocked causing excessive pressure.
 - C. Make certain that O-ring of kettle pressure regulator assembly is well seated in the solenoid block (Fig. 27).

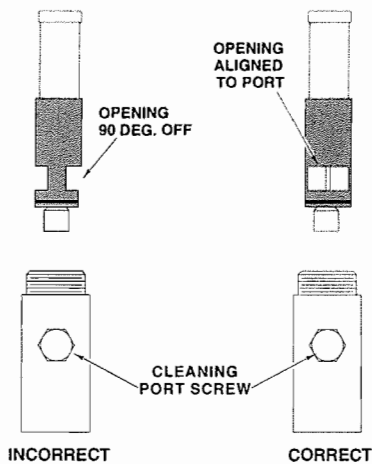


Fig 26

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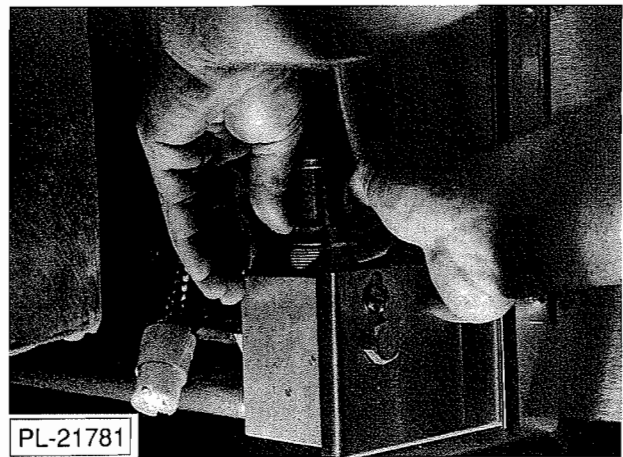


Fig. 27

8. Replace the upper portion of the solenoid assembly and tighten well.
9. Plug the cord back into the upper portion of the solenoid, and twist clockwise to ensure a good connection.

— Kettle Lid

Clean the kettle lid weekly.

1. Remove the lid assembly. To remove, open lid clear of overarm post catch, remove pivot post knurled cap, and lift up on lid until the overarm bar clears the pivot post.
2. Remove the O-ring from the underside of the kettle lid by prying it loose at one point with a plastic knife (Fig. 28) or other blunt thin tool. Avoid slicing or gouging the O-ring. Wash the O-ring separately in warm soapy water, then rinse thoroughly and dry with a soft clean cloth. **CAUTION: Never use a metallic or sharp instrument to remove or insert the O-ring.**
3. Wash the lid assembly in warm soapy water. Rinse thoroughly and dry with a soft clean cloth.
4. Before replacing the O-ring, make certain that the groove (Fig. 29) is free of particles and the edges of the groove are not sharp or burred.

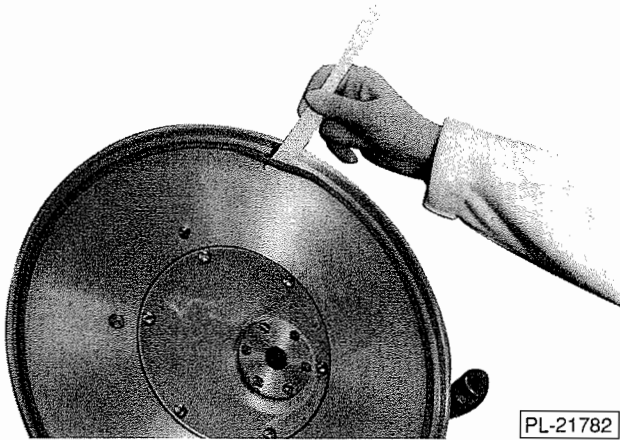


Fig. 28

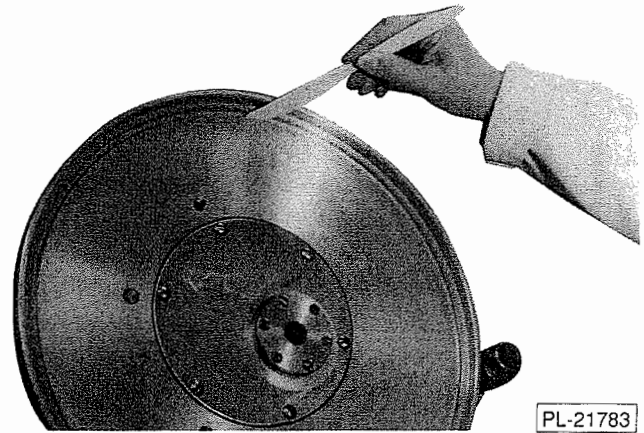
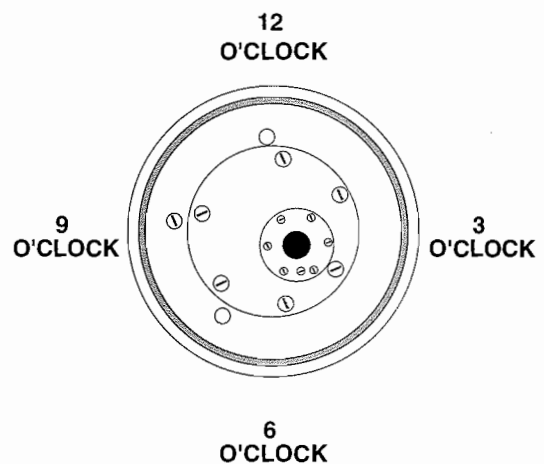


Fig. 29

5. Dip the O-ring in cooking oil for lubrication, and insert it into the groove. **IMPORTANT:** First press O-ring into place at the 12, 6, 3, and 9 o'clock positions (Fig. 30). Using finger pressure only, stretch and work the O-ring into the groove until it is seated all around. Apply pressure straight down. Do not twist or roll the ring into the groove; this may fracture the skin of the ring.
6. To reinstall kettle lid, reverse the procedure described in Step 1.



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Fig. 30

— Pressure Relief Valve

Once a week, operate the pressure relief valve release lever by lifting it up (see Fig. 15) and then back down.

— Air Filters and Hood (Models HP15EH and HP15EHF)

Clean the air filters and hood weekly (Fig. 31).

1. Push in the bottom of the Grease Filter; tilt the top of the filter forward using the handles; and remove the filter. Scrub the Grease Filter in warm soapy water; rinse, drain and towel dry.
2. Push in the bottom of the Air Filter; tilt the top of the filter forward; and remove the filter. Scrub the Air Filter in warm soapy water; rinse, drain and towel dry.
3. Push in the bottom of the Charcoal Filter; tilt the top of the filter forward using the handles; and remove the filter. When the Charcoal Filter needs to be cleaned, it is best to remove the charcoal from the filter. Remove the (4) screws from the filter frame, being careful not to spill the charcoal. Remove the frame end piece. Carefully pour the charcoal from the filter and save it for future re-use, if possible. Replace the frame end piece and (4) screws. Scrub the empty Filter Frame in warm soapy water; rinse, drain and towel dry. Remove the frame end piece again (4 screws). Put the charcoal back in the frame; use either old or new charcoal, as required. Replace the frame end piece and (4) screws.

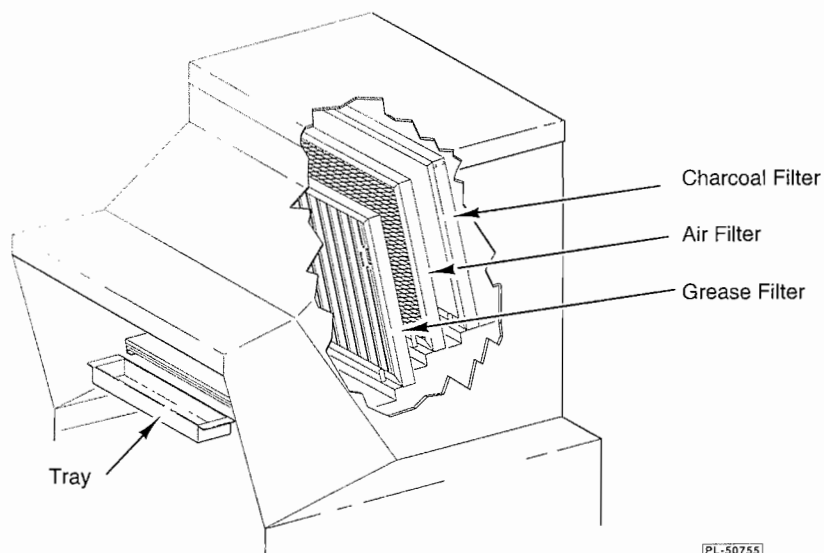


Fig. 31

4. Scrub the hood interior and tray (Fig. 31) with warm soapy water, nylon pad or Scotchbrite as required.
5. Reinstall the Charcoal Filter, the Air Filter, and the Grease Filter. Make sure the filters fit right (see POSITIONING HOOD FILTERS in this manual). **THE FRYER WILL NOT OPERATE UNLESS ALL THREE FILTERS ARE PROPERLY INSTALLED.**

Replacement activated charcoal may be purchased from anyone that handles air filtering equipment. The charcoal used in the charcoal filter is coconut activated charcoal, 4 x 8 mesh. Approximately 9 pounds is required to refill the filter. Recommended replacement schedule is approximately once every four months of normal use.

Monthly Cleaning

— Exhaust Tank

Remove the exhaust tank at the rear of the fryer and flush with hot water. To remove the exhaust tank:

1. Remove (4) screws in back panel (Fig. 32) and remove back panel.
2. If the exhaust pipe (Fig. 32) hinders removal of the exhaust tank, unscrew the pipe and remove it.
3. Disconnect the drain pipe (Fig. 32) that runs from the kettle pressure regulator housing to the exhaust tank at the union.

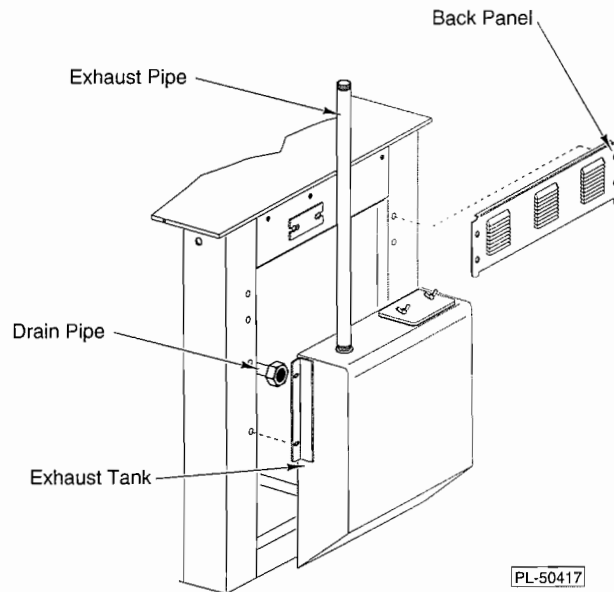


Fig. 32

4. Remove bolt from exhaust tank drain line clamp (Fig. 33).
5. Remove (4) screws holding exhaust tank in place (see Fig. 32) and remove exhaust tank.
6. Flush exhaust tank with hot water.
7. Reverse procedure to reinstall exhaust tank.

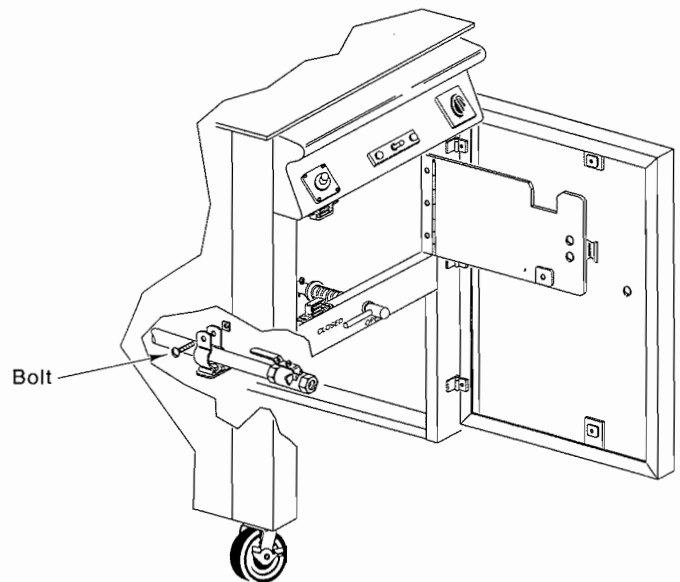


Fig. 33

MAINTENANCE

WARNING: HOT OIL AND PARTS CAN CAUSE BURNS. USE CARE WHEN OPERATING, CLEANING AND SERVICING THE FRYER.

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE YOU ARE WORKING ON THE CIRCUIT.

LID O-RING SEAL REPLACEMENT

Removal and replacement instructions for the lid O-ring are described in WEEKLY CLEANING — KETTLE LID (Page 24).

OTHER O-RING SEAL REPLACEMENTS

Kettle Pressure Regulator Assembly

The O-ring seal on the kettle pressure regulator assembly (Fig. 34) needs to be replaced if oil is leaking from the kettle lid. If steam leaks around the kettle pressure regulator O-ring and goes into the exhaust tank, pressure will not build in the kettle. Dip the new O-ring in cooking oil for lubrication and insert it into the groove.

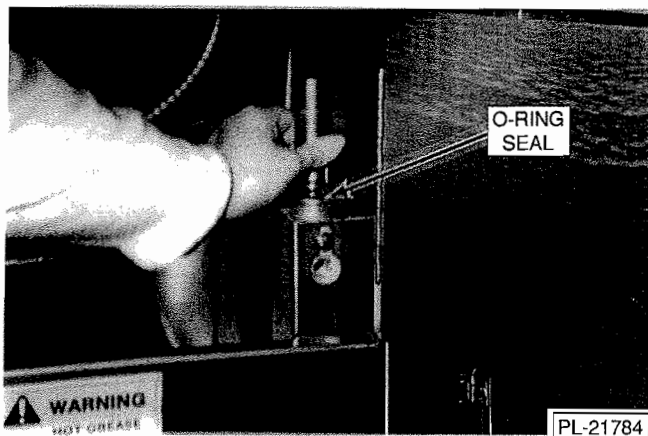


Fig. 34

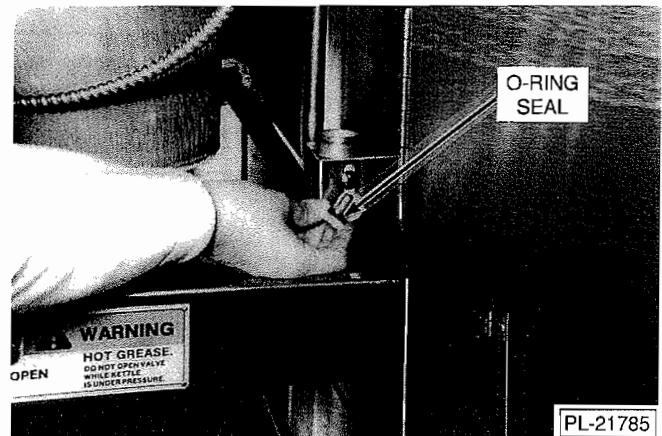


Fig. 35

Cleaning Port Plug Screw

The O-ring seal on the cleaning port plug screw (Fig. 35) needs to be replaced if liquid is leaking around the screw.

TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSES
Fryer will not operate.	<ol style="list-style-type: none"> 1. Hood filters may have been incorrectly positioned after cleaning. See POSITIONING HOOD FILTERS in this manual. 2. Fryer unplugged. 3. Blown fuse in main electrical panel (standard controls). 4. Problem with programmable controls.*
Pressure will not build.	<ol style="list-style-type: none"> 1. No product or very dry product loaded. 2. Lid not tightened. 3. Lid O-ring not sealing. Replace O-ring.
High pressure in kettle.	<ol style="list-style-type: none"> 1. Dirty exhaust line to solenoid. 2. Dirty line from kettle pressure regulator to exhaust tank. 3. Exhaust tank vent plugged. 4. Problem with the pressure relief valve.*
Loss of pressure during cooking cycle.	Kettle pressure regulator leaks. Make sure the solenoid plug is locked in place.
No heat.	<ol style="list-style-type: none"> 1. Thermostat not turned on (standard controls). 2. Problem with programmable controls.* 3. Problem with heaters.*
Oil smokes, bubbles vigorously and breaks down after a few cookings.	<ol style="list-style-type: none"> 1. Oil has not been properly filtered. 2. Suet may have been added. <u>Never</u> add suet. 3. Breeding is accumulating in the bottom of the kettle.
Oil leaking from kettle lid.	<ol style="list-style-type: none"> 1. Kettle pressure regulator O-ring needs to be replaced. 2. Lid not adjusted.*
Pressure doesn't exhaust properly.	<ol style="list-style-type: none"> 1. Exhaust pipe between solenoid and kettle needs to be cleaned. Follow CLEANING - SOLENOID ASSEMBLY procedure in this manual. (If the exhaust pipe is restricted or plugged, the pressure relief valve on the lid will open.) 2. The kettle pressure regulator is dirty. 3. The timer is not opening the solenoid.*
Pressure releases too slowly at the end of a cooking cycle.	Spool in kettle pressure regulator assembly may have been incorrectly positioned after cleaning. See Fig. 26 for proper position.
Lid will not lock — DO NOT OPERATE FRYER.	Lid diaphragm or locking mechanism needs to be replaced.*

*Contact your local Hobart Service Office.