



IMPORTANT INFORMATION FOR FUTURE REFERENCE

Record the following information from the appliance ID plate and retain this manual for the life of the equipment:

Model #: _____

Serial #: _____

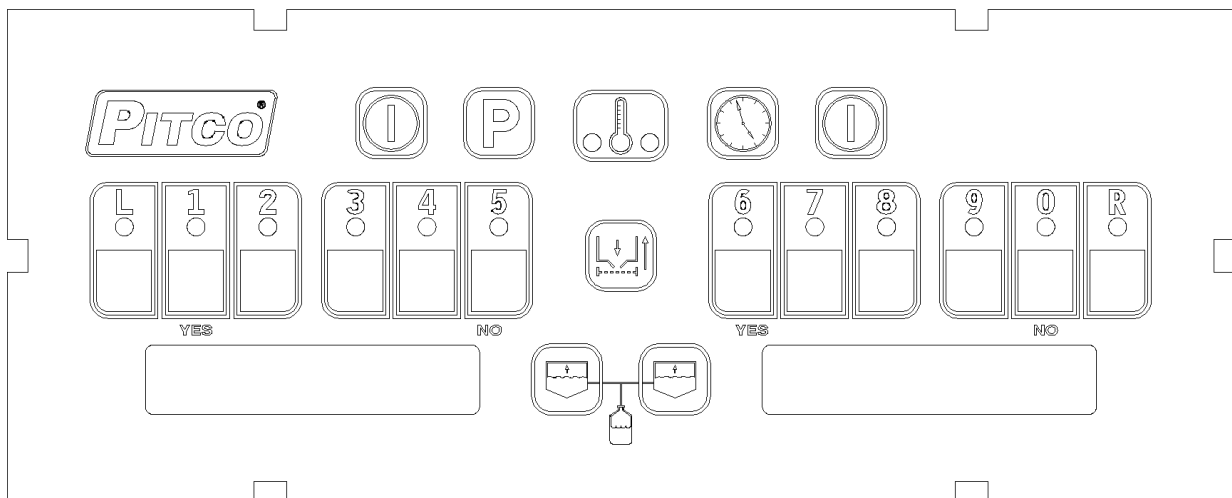
Date Purchased: _____

English

Service Manual

for Pitco P/N's 60149517 (Full Vat) and 60149518 (Split Vat)

I12+ Cooking Computer for ROV Fryers w/ Options: Auto-Filter, Auto-Topoff, & Filter Data Function



This control was developed specifically for Pitco fryer products. It utilizes the latest in microprocessor technology and is completely solid state. This control offers the latest cooking technology, including temperature and time compensation that requires no user adjustments for consistently cooked product. Other features include, drain valve interlock, faulty probe detection, selectable melt cycles, beeper volume, and cook temperature. Each product key may be programmed with cook, shake and hold times to keep pace with changing menus over time.

This manual details the operation and adjustment of the Solstice I12+ Cooking Computer For ROV Fryers. The target audience for this text is the Service Technician. This manual reveals all adjustments that are possible by keyboard entry, including passwords.



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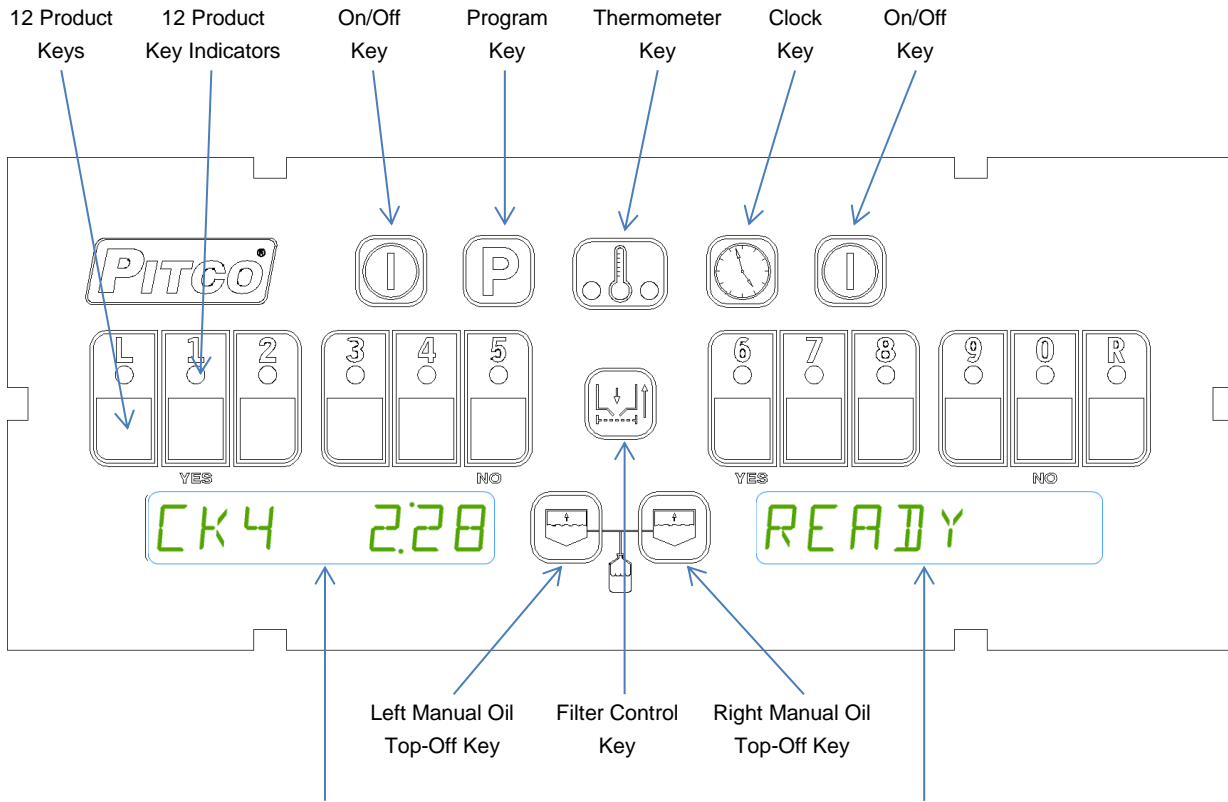


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1 Key Locations and Functions:



Displays show current operation. Throughout this text, a left only display will be printed as [CK4 2:28]. When both left and right displays should be interpreted together, this text will show them as [CK4 2:28][READY].

1.1 To turn the appliance ON:

If power is applied to the appliance, the displays will show **OFF**. Press the **I** key.

If the drain has been opened since the last time the fryer was turned on, the operator will be prompted to check and verify that the vat is full with oil before applying heat. The screen will display “**Is vat full?**” – press the YES [6/1] key if oil level is above the minimum level, otherwise press the NO [0/5] key. **Failure to accurately answer this prompt may result in unsafe conditions.**

Displays will show one of the following:

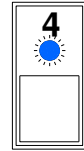
MELT, **HEATING**, or **READY**. Some messages may show in both left and right displays. Wait for the appliance to heat up to the **READY** condition before cooking.

1.2 To turn the appliance OFF:

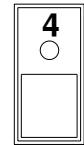
Press the **I** key. and then **OFF**.

1.3 To start a cook:

When the display is showing **READY** the appliance has reached set temperature and is ready to cook. Press the desired product key, and place product into the vat. The indicator above the product key will flash to indicate the cook timer is running. In the example above, product 4 is cooking with 2 minutes and 28 seconds remaining. The right side display of the dual vat control shown above, has no running cook timers, and shows **READY**.



Multiple cooks may run together. While cooks are running, the displays will always show the cook with the least time remaining. Longer running cooks will flash their indicators at a slower rate. Cook time remaining on these keys may be checked by pressing the key then pressing a product key.



1.4 To cancel a cook:

Press and hold the product key to cancel a running cook. If no other cooks are pending, controller displays will return to **READY**.

1.5 To check Actual and Set temperatures:

To view the actual vat temperature, press the key. The display will show **ACT 347F** or **ACT 175C**, where "F" is Fahrenheit, and "C" is Celsius. After a few moments, the display will return to **READY**, **MELT**, or **HEATING** if no cooks are running. [Cn mm:ss] will display for any cooks still running.

To view the set temperature, press the key twice. The display will show **SET 350F** or **SET 177C**, where "F" is Fahrenheit, and "C" is Celsius. After a few moments, the display will return to **READY**, **MELT**, or **HEATING**, or, [Cn mm:ss] for any cook still running.

1.6 To View Current Settings for Cook, Shake, Hold, and Hold Pre-Alarm:

To view the current settings for any product key, press the key, followed by the desired product key. The display will show [Cn mm:ss], followed by [Sn mm:ss], then [Hn mm:ss], ending with [Pn mm:ss]. Where "n" is the key number, and "mm:ss" is the time setting.

After a few moments, the display will return to **MELT**, **HEATING**, or **READY**, or, [Cn mm:ss] for any cook still running.

Typical displays using key 4 as an example:

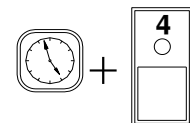
Key 4 Cook Time [C4] is set for 2 minutes and 28 seconds.

Key 4 Shake Time [S4] is set for 2 minutes and :00 seconds before the end of the Cook. *Default value is 00:00, or inactive.*

Key 4 Hold Time [H4] is set for 15:00 minutes. This is the amount of time cooked product may sit in holding bins before a new batch is started. *Default value is 00:00, or inactive.*

Key 4 Hold Pre-Alarm [P4] is set for 00:00 and is inactive (*default setting*). When activated his alarm warns the operators that the Hold Time is about to run out.

In a few moments, the display will return to **READY**.



C4	2:28
S4	2:00
H4	15:00
P4	0:00

1.7 Perform a Boil Out operation:

Normal maintenance of a fryer requires regular tank cleaning. This process involves draining the vat of oil and filling with water. Cleaning solution is added, and the control is set to boil by one of the following methods:

1.7.1 Automatic Boil Entry (Water Detection):

Fill the appliance with water and turn the appliance on. Heat will be applied to the vat warming the water. This control will detect the presence of water by temperatures not rising above the boiling point of water; 212°F (100°C). After a time at this temperature, displays will show

PRESS 0 TO BOIL

Heat will be disabled until the operator responds to this prompt. Pressing the [10/0] key is a **YES** response to the boil prompt. If pressed, display will show **BOIL**. Heat will maintain vat temperature at 185°F (85°C) for cleaning as long as the control remains on. To exit boil mode control must be turned off.

*Warning: Pressing any other key at the [PRESS 0] [TO BOIL] prompt is regarded by the control as a **NO** response. With this response, the control will apply heat to the vat as if oil were present in the vat. With water in the vat, a rolling boil will result. This will cause undesirable foam over condition and, a potential steam burn hazards to operators performing cleaning operations.*

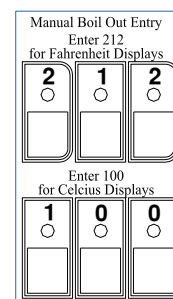
1.7.2 Manual Boil Entry:

After filling an empty vat with water, turn the appliance on. Press the



key and enter key sequence [2], [1], [2]. *If control is set to display in the Celsius scale, press [1], [0], [0] keys to manually enter boil mode.* The display will show **BOIL** to indicate entry into boil mode.


To exit boil mode, control must be turned off.




2 Oil Handling and Fryer Operations:

2.1 Fresh Oil Top-Off:

The fresh oil top-off system allows the operator to add oil to the vat to compensate for loss due to normal product draw-out. The top-off system is not intended for the refilling of an empty vat.

To add fresh oil to the vat on-demand, press and hold the  key.

- Release the Top-Off key when oil has reached an optimal level.
- Use the Left or Right  key to top-off the Left or Right vat, respectively, for split vat fryers.
- Manual top-offs are not permitted while there is an active cook.

This computer also supports the Auto Top-Off system (Option), where low oil levels will automatically be detected and oil added. This system has no operator interface.

- To disable the Auto Top-Off system, see section 10.8.


2.2 Manual Filtering:

This section applies to fryer configurations without the Automated Filtering option.


2.2.1 Filter Control (Option):

The filter return pump can be activated and deactivated through front panel for manual filter fryer applications. Activating the filter return will move oil from the filter pan to the user selected frypot.

With no cook timers running the display will show MELT, HEATING, READY, or OFF.

To start the return pump for the vat, press the  key.


- If fryer is a split vat, FILTER L and FILTER R will be displayed. To return oil to the Left vat, press product key [1] (YES), or to return oil to the Right vat, press product key [6] (YES).
- The display will show FILTER RETURN.

To stop the return pump, press the  key again.

- The display will show OFF.

2.2.2 FDF Triggering (Option):

With the display will showing **HEATING** or **READY**, FDF enabled (section 10.10), and the current vat temperature above the set filter temperature (section 10.5):

- ❑ Pull the drain valve to filter.
- ❑ Choose filter type:
 - The display will show **FILTER? Y OR N** – press YES to Filter, NO to skip.
 - The display will show **POLISH? Y OR N** – press YES to Polish, NO to skip.
 - The display will show **DISPOSE? Y OR N** – press YES to Dispose, NO to skip.
- ❑ This display will show a countdown timer based on the filter operation selected and the user settings in sections 10.2 and 10.3.
 - The drain must remain open while the countdown timer is running.
- ❑ Follow store procedures for filtering and wait until filter timer completes.
 - To start and stop the return pump, press the  key.
- ❑ Once the timer expires, the display will show **OFF** or **FILTER RETURN**.

2.3 Automated Filtering (Option):

This computer supports the use of automated oil processes FILTER, POLISH, and DISPOSE. After the selection of a process, the operator will be prompted with a series of questions verifying the current state of the fryer battery – as outlined by the “Initiate Check List” below. **Failure to properly comply with the check list may result in unsafe or undesirable conditions.** Once all prompts have been affirmed, the selected automated function will begin.

Initiate Check List

- ❑ **“Filter pan in-place and empty?”** – check the filter pan and verify it is fully in place and empty.
 - If filter pan is ready, press the YES key and continue.
 - If filter pan is not ready, press the NO key, resolve the filter pan condition, and start over.
- ❑ **“Autofilter now?”** – confirm the selection.
 - Press the YES key to start.
 - Press the NO to cancel.

When automated processes FILTER and POLISH are complete, the operator will be prompted to verify the current state of the battery – as outlined by the “Acknowledge Check List” below. Once all prompts have been affirmed, the fryer will return its original state (either ON or OFF).

Acknowledge Check List

- ❑ **“Is vat full?”** – verify the frypot has reached an appropriate oil level and the filter pan is completely empty.
 - If the filter pan is empty, press the YES key to complete.

- If there is still oil in the filter pan, press the NO key to run the pump for 20 additional seconds. “Is vat full?” will be prompted again when complete.

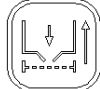
NOTE: NO may be selected for “Is vat full?” a maximum of three times.

- The fourth time NO is selected, the fryer will turn OFF and display “Possible Filter Issue - Check and Resolve”. Press product YES key to acknowledge.

2.3.1 Automatic Filtering:

The automated filtering process will open the drain and move oil from the vat to the filter pan, close the drain, and pump oil back to the vat. This allows for a quick filter by passing oil through the filter medium once.

With no cook timers running the display will show **READY**.


To perform an automatic filter, press the  key.

- If fryer is a split vat, **FILTER L** and **FILTER R** will be displayed. To perform a filtering operation on the Left vat, press product key [1] (YES), or to perform a filtering operation on the Right vat, press product key [6] (YES).
- The display will show **FILTER? Y OR N** – press product key [6] (YES) to confirm.
 - Follow the “Initiate Check List” procedures outlined above.
 - Wait until automated filter process completes.
 - Follow the “Acknowledge Check List” procedures outlined above.
 - Display will return to **HEATING**, **READY**, or **OFF**.

2.3.2 Automatic Polishing:

The automated polishing process will open the drain, moving oil from the vat to the filter pan, and then run the return pump. Oil will cycle through the vat and the filter pan, making multiple passes through the filter medium. After a set amount of time, the drain will close and oil will be pumped back to the vat. This allows for a longer filtering process to remove more debris from the oil – extending oil life and increasing oil quality.

With no cook timers running the display will show **READY**.

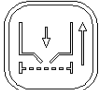
To perform an automatic polish, press the  key.

- If fryer is a split vat, **FILTER L** and **FILTER R** will be displayed. To perform a filtering operation on the Left vat, press product key [1] (YES), or to perform a filtering operation on the Right vat, press product key [6] (YES).
- The display will show **FILTER? Y OR N** – press product key [0] (NO) to skip.
- The display will show **POLISH? Y OR N** – press product key [6] (YES) to confirm.
 - Follow the “Initiate Check List” procedures outlined above.
 - Wait until automated filter process completes.
 - Follow the “Acknowledge Check List” procedures outlined above.
 - Display will return to **HEATING**, **READY**, or **OFF**.

2.3.3 Automatic Disposal:

The automated disposal process will open the drain and move oil from the vat to the filter pan, and then close the drain once empty. The operator may now dispose of oil from the filter pan.

With no cook timers running the display will show **READY**.

To perform an automatic disposal, press the  key.

- ❑ If fryer is a split vat, **FILTER L** and **FILTER R** will be displayed. To perform a filtering operation on the Left vat, press product key [1] (YES), or to perform a filtering operation on the Right vat, press product key [6] (YES).
- ❑ The display will show **FILTER? Y OR N** – press product key [0] (NO) to skip.
 - ❑ The display will show **POLISH? Y OR N** – press product key [0] (NO) to skip.
 - ❑ The display will show **DISPOSE? Y OR N** – press product key [6] (YES) to confirm.
 - ❑ Follow the “Initiate Check List” procedures outlined above.
 - ❑ Wait until automated filter process completes.
 - ❑ Display will return to **OFF**.

2.3.4 Blocked Drain

During all automatic sequences listed above, the message **ALERT – DRAIN CLOSING – REMOVE TOOLS** will appear with an audible alert for 10 seconds prior to the scheduled closure of the drain. Remove tools, such as a clean-out rod, from the drain. Failure to do so could cause damage to the equipment.

If a clean-out rod is accidentally caught in a closed drain, **DO NOT FORCEFULLY PULL OR OTHERWISE TRY TO REMOVE THE TOOL**. The drain will automatically reopen – remove caught tool at that time. After 10 seconds, the drain will close again and the automatic sequence will proceed normally. If the drain is unable to close for a second time, it will automatically reopen again and stop the return pump.

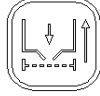
The display will scroll the message **CLEAR BLOCKED DRAIN – RETRY?**. If there is a tool still in the drain, remove it and press the YES key to continue. If there is no tool in the drain, use a clean-out rod to attempt to clear any drain obstruction, remove the clean-out rod, and press the YES key to continue. Once the drain is detected fully closed, the automatic sequence will complete normally.

If after 3 retry attempts, or if the NO key is pressed when prompted to *retry*, the drain will remain open and the fryer becomes inoperable. The display will show message **OFFLINE – CALL SERVICE – ERR 2002**. Call for service to resolve the blocked drain issue. Other fryers will be able to operate and filter normally.

2.4 Advanced Fryer Operations (For Automated Filtering Option):

The advanced fryer operation menu can be used to manually control the drain valve and return pump for processes such as oil rotation, custom cleaning procedures, and recovery from an interrupted automatic process.

With no cook timers running the display will show **MELT**, **HEATING**, **READY**, or **OFF**.

To enter the advanced oil handling menu, press and hold the  key until display shows


FRYER CONTROL.

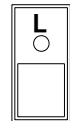
The advanced oil handling menu functions in a Select-and-Confirm interface. While in the advanced oil handling menu, product keys [L-5] can be pressed at any time to change the currently selected function, indicated on the left display. No action occurs during the selection a function.

When a desired function has been selected, press product key [6] to confirm the section and perform action. The specific action of product key [6] is indicated on the right display, which varies with the selected function.

2.4.1 Full Vat/Left Return Pump:


While in the advanced oil handling menu, press product key [L].

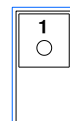
- Display shows **L RETURN TOGL ON**.
- Press product key [6] to run the pump and return oil to the target vat from the filter pan.
- Display shows **L RETURN TOGL OFF**.
- Press product key [6] to stop the pump. (If the function selection is changed or the advanced oil handling menu is exited while Return is active, the pump will stop automatically.)
- Press key  to exit the menu or select a product key [L-5] to perform another action.



2.4.2 Full Vat/Left Drain Valve:


While in the advanced oil handling menu, press product key [1].

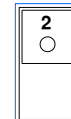
- Display shows **L DRAIN TOGL OPN**.
- Press product key [6] to open the drain valve and drain oil to the filter pan. **Verify the filter pan is in-place and empty before draining oil, the operator will NOT be prompted to check.**
- Display shows **L DRAIN TOGL CLS**.
- Press product key [6] to close the drain valve. (If the function selection is changed or the advanced oil handling menu is exited while Drain is open, the drain will close automatically.)
- Press key  to exit the menu or select a product key [L-5] to perform another action.



2.4.3 Full Vat/Left Manual Top-Off:


While in the advanced oil handling menu, press product key [2].

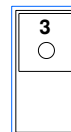
- ❑ Display shows **L TOPOFFHOLD ON**.
- ❑ Press and hold product key [5] to manually add fresh oil to the vat.
- ❑ Display will show **L TOPOFFRELS OFF** while product key [6] is held down.
- ❑ Release product key [6] to stop adding fresh oil.
- ❑ Press key  to exit the menu or select a product key [L-5] to perform another action.



2.4.4 Right Return Pump (Split Vat Only):


While in the advanced oil handling menu, press product key [3].

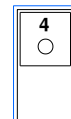
- ❑ Display shows **R RETURNTOGL ON**.
- ❑ Press product key [6] to run the pump and return oil to the target vat from the filter pan.
- ❑ Display shows **R RETURNTOGL OFF**.
- ❑ Press product key [6] to stop the pump. (If the function selection is changed or the advanced oil handling menu is exited while Return is active, the pump will stop automatically.)
- ❑ Press key  to exit the menu or select a product key [L-5] to perform another action.



2.4.5 Right Drain Valve (Split Vat Only):


While in the advanced oil handling menu, press product key [4].

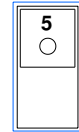
- ❑ Display shows **R DRAIN TOGL OPN**.
- ❑ Press product key [6] to open the drain valve and drain oil to the filter pan. **Verify the filter pan is in-place and empty before draining oil, the operator will NOT be prompted to check.**
- ❑ Display shows **R DRAIN TOGL CLS**.
- ❑ Press product key [6] to close the drain valve. (If the function selection is changed or the advanced oil handling menu is exited while Drain is open, the drain will close automatically.)
- ❑ Press key  to exit the menu or select a product key [L-5] to perform another action.



2.4.6 Right Manual Top-Off (Split Vat Only):

While in the advanced oil handling menu, press product key [5].



- Display shows `R TOPOFFHOLD ON`.
- Press and hold product key [5] to manually add fresh oil to the vat.
- Display will show `R TOPOFFRELS OFF` while product key [6] is held down.
- Release product key [6] to stop adding fresh oil.
- Press key  to exit the menu or select a product key [L-5] to perform another action.



3 Control Filter Lockout (CFL):

This computer includes the Cook Count-based Control Filter Lockout (CFL) function which enforces operator compliance with regularly scheduled filtering based on the number of cooks performed since the last filter.

Performing any automated oil filter operation will reset the cook counter. Also, any manual operation that includes the opening of the drain valve for 20 seconds or more will also reset the cook counter. The cook counter may be reset at any time, where the computer does not have to be in a Filter Soon or Filter Now state.

To check the current remaining cooks available before Filter Lockout, press the  key until the Cooks Remaining message `CKREMnnn` is shown. Press the  key again to show the maximum number of cooks allowed – `CKMAXnnn`.

3.1 Filter Soon:

Filter Soon message `FILTSOON` will show when the number of cooks since the last filter operation is greater than the Cook Counts Allowed value (section 10.6). It is suggested to perform a filter operation when business levels permit.

- The `FILTSOON` message will not be viewable if there are active cook timers.
- Additional cooks are allowed when in Filter Soon state.

3.2 Filter Now:

Filter Lockout messages `FILTER NOW` or `FILTLOCK` will show on the displays when the number of cooks since the last filter operation is equal to the sum of the Cook Counts Allowed value and the Cook Counts Deferred value (section 10.7). It is required to perform a filter operation at this time.

- The `FILTLOCK` message will display when the final allowed cook has been completed. Perform the required filtering when this cook completes.
- When in the Filter Lockout state, cooks are no longer allowed and product key presses are ignored.



4 Fresh Oil Supply Monitoring

This computer monitors the Jug-in-Box (JIB) fresh oil supply for oil remaining estimation and oil supply problems. The computer will monitor utilization of the JIB from on-demand, manual top-offs, automatic top-offs, and top-off events from other fryers in the battery.


4.1 JIB Oil Remaining:

Low JIB message **LOW JIB** will show and toggle with the current fryer state when the available fresh oil has dropped below the Low JIB configuration value (section 10.11.3).

Replace JIB message **JIBEMPTY** will show and toggle with the current fryer state when the available fresh oil has depleted. The operator at this time should replace the JIB with a new, full supply.

- ❑ It is not recommended to replace JIB with a less-than-full supply.

To reset the JIB Oil Remaining monitor once the supply has been replaced:

- ❑ Push-and-hold  until **RST JIB? Y OR N** is displayed.
- ❑ Press product key [6] (YES) to reset the fresh oil supply to the Max JIB configuration value (section 10.11.2).

Note: Only one cooking computer in a fryer battery needs to have the oil remaining monitor enabled (section 10.11.1).

4.2 JIB Check/Error:

For fryer configurations with the auto top-off option, the JIB error monitor displays the error message **CHECK JIB** when an auto top-off event has occurred three times within 15 minutes for a single frypot. This message indicates to the operator that a JIB or its hose has been installed improperly, the JIB has been emptied and not replaced, or there is some other fault condition.

Check the JIB and resolve any fault conditions. Press any cook key to clear the Check JIB message.

- ❑ When the Check JIB message is displayed, auto top-off for that frypot is temporarily disabled until the message is cleared and acknowledged.

5 Filter Data Function (FDF) Data Logging:

The FDF feature allows managers to track oil usage and filtering events by operators. These features can be incorporated into an overall oil management strategy to extend oil life through an enforced filtering regimen in combination with CFL.

Only successfully completed filter events (Filter & Polish) for both manual filter and autofilter configurations increase the respective count for FDF data logging. Interrupted filtering sequences, or opened drains which do not meet FDF triggering criteria, will be logged as incomplete.

5.1.1 Data Logging:

The FDF will store data for three batches of oil – the current batch, and the two past batches. The use of the Dispose function saves the current batch data to history and resets data logging values for the new oil batch.


For a batch of oil, the FDF logs the following data:

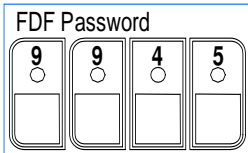
- Number of Filter Operations
- Number of Polish Operations
- Number of Oil Hours
- Number of Incomplete Filters

Management of oil through methods other than functions Filter, Polish, and Dispose are logged as incomplete filters.

5.1.2 Data Viewing:

With no cook timers running, displays will show one of the following displays: MELT, HEATING, or READY.

- Press the  key. The left display will show PROGRAM. The right display will be blank.

- Enter password  using the product keys as a numeric keypad for entry.

The display will show collected data on the current batch of oil (for the Left vat if split), as indicated by the number "1" in the first digit of the right display.

- FILTERS 1 nnnnn
 - This is the number of filter events completed (nnnnn) for the current batch of oil. Press product key [0] to continue, press the [P] key to exit.
- POLISHES 1 nnnnn
 - This is the number of polish events completed (nnnnn) for the current batch of oil. Press product key [0] to continue, press the [P] key to exit.
- OILHOURS 1 nnnnn
 - This is the number of hours (nnnnn) oil has been at temperature for the current batch of oil. Press product key [0] to continue, press the [P] key to exit.
- INCOMPLT 1 nnnnn



- This is the number of incomplete filters (nnnnn) for the current batch of oil. Press product key [0] to continue, press the [P] key to exit.

Display now shows data for the prior disposed batch of oil, as indicated by the number "2" in the first digit of the right display.

- **FILTERS 2 nnnnn**
 - This is the number of filter events completed (nnnnn) for the prior disposed batch of oil. Press product key [0] to continue, press the [P] key to exit.
- **POLISHES 2 nnnnn**
 - This is the number of polish events completed (nnnnn) for the prior disposed batch of oil. Press product key [0] to continue, press the [P] key to exit.
- **OILHOURS 2 nnnnn**
 - This is the number of hours (nnnnn) oil has been at temperature for the prior disposed batch of oil. Press product key [0] to continue, press the [P] key to exit.
- **INCOMPLT 2 nnnnn**
 - This is the number of incomplete filters (nnnnn) for the prior disposed batch of oil. Press product key [0] to continue, press the [P] key to exit.

Display now shows data for the second prior disposed batch of oil, as indicated by the number "3" in the first digit of the right display.

- **FILTERS 3 nnnnn**
 - This is the number of filter events completed (nnnnn) for the prior disposed batch of oil. Press product key [0] to continue, press the [P] key to exit.
- **POLISHES 3 nnnnn**
 - This is the number of polish events completed (nnnnn) for the prior disposed batch of oil. Press product key [0] to continue, press the [P] key to exit.
- **OILHOURS 3 nnnnn**
 - This is the number of hours (nnnnn) oil has been at temperature for the prior disposed batch of oil. Press product key [0] to continue, press the [P] key to exit.
- **INCOMPLT 3 nnnnn**
 - This is the number of incomplete filters (nnnnn) for the prior disposed batch of oil. Press product key [0] to continue, press the [P] key to exit.

For split vat fryers, continuing will display FDF data logged information for the Right vat.

With the display showing **PROGRAM**, press key **P** to return to normal operations.

Display will now show **MELT**, **HEATING**, or **READY**.


6 To Enter Programming Level 1 (for the Store Manager):

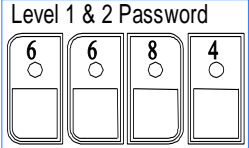
Note: The factory default setting for this control does not require a password to be entered.

However, the operator password requirement and value may be changed in section 3.2.

Entry of a password when NOT required will not interfere with the programming process.




With no cook timers running, displays will show one of the following displays: **MELT** ,

HEATING , or **READY** . Press the  key.

<p>If display shows:</p> <p>PASS-----PASSWORD , a password is required.</p> <p>Enter password  using the product keys as a numeric keypad for entry. With correct password entry, display will show PROGRAM .</p>	<p>If display shows:</p> <p>PROGRAM ; you do not need to enter a password.</p>
--	---

From the **PROGRAM** display, continue with this section or go to section 3, or 4.

6.1 To Set Cook Temperature:

- ❑ Press the  key once. The display will show [SET xxxF] [TEMP] or [SET xxxC] [TEMP], where “xxx” is the temperature setting.
- ❑ Use the product keys for numeric entry to adjust the current setting. Press the  key to save setting. Display now shows **PROGRAM** . To exit here, press  again, or continue.


6.2 To Change a Product Key–Cook, Shake, Hold, and Hold Pre-Alarm Times:


For each product key, Cook, Shake, Hold, and Hold Pre-alarm times are set in this section.

With display showing **PROGRAM** , continue with the following section for each product key to change.

6.2.1 Cook Time


Cook Time may be set for each product key. To deactivate any product key enter a zero value for cook time.

- ❑ Press the  key.
- ❑ Display will show **SELECT PRODUCT** . Press the desired product key to change.

The display is now showing [CKn mm:ss] where “n” is the key number, “CK” means Cook, and “mm:ss” is minutes and seconds. Use the product keys for numeric entry to adjust the current setting. Press the  key to save cook time and continue setup for this product key.

6.2.2 Shake Time:


Shake time is an alarm that sounds during Cook Time to prompt operators to shake the basket. Default for this value is zero, meaning the Shake Time is inactive. To use Shake Time, the time value must be a non-zero value, and, must be set to a value less than cook time.

- ❑ Display shows [SHn mm:ss] where “n” is the key number, “SH” means Shake, and “mm:ss” is time in minutes and seconds.
- ❑ Use the product keys for numeric entry to adjust the current setting. Press the  key to save shake time and continue setup for this product key.

Note: The value entered for shake time is the time from the end of the cook.


6.2.3 Hold Time:

Cooked product may stand in holding bins for a period of time. This timer produces an alarm to inform operators to discard old product and start a new cook. *Default for this value is zero, meaning the Hold Time is inactive.*

- ❑ Display is showing [HDn mm:ss], where “n” is the key number, “HD” means HOLD, and “mm:ss” is minutes and seconds.
- ❑ Use the product keys for numeric entry to adjust the current setting. Press the  key to save hold time and continue setup for this product key.

6.2.4 Hold Pre-Alarm:

Hold Pre-Alarm is a timer setting that is used to warn operators that the Hold Time is about to expire. To use Hold Pre-Alarm, the time value must be a non-zero value, and, must be set to a value less than Hold Time. *Default value is zero, meaning the Hold Pre-Alarm is inactive.*

- ❑ Display is showing [PAn mm:ss] where “n” is the key number, “PA” means Pre-Alarm, and “mm:ss” is minutes and seconds.
- ❑ Use the product keys for numeric entry to adjust the current setting. Press the  key to save pre-alarm time.


Note: Value entered for hold pre-alarm time is the time from the end of the hold period.

Display will again return to SELECT PRODUCT. Repeat steps from section 2.2.2 to make changes to any other product keys *or continue*.

6.3 To Exit Level 1 programming:

Display shows SELECT PRODUCT.

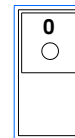
Press the  key. Display shows PROGRAM. Continue to section 3 “To Change Options”, or, exit here in the next step.

To exit Level 1 programming, press the  key again.

Displays will show MELT, HEATING, or READY, when no active cooks are running.

7 To Change Options Level 2 (for the Store Manager):

The display must show **PROGRAM** from section 2 to change these options. When the product key [0] is pressed, the display will show **SELECT OPTIONS**. Indicator lights above product keys will illuminate to represent options that may be changed. Each option listed below uses the product key [0] to toggle or scroll through available choices in the



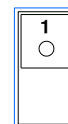
display. When the correct value is displayed, press the **P** key to save choice. The display will again return to **PROGRAM** for another option selection.



7.1 Fahrenheit or Celsius Display:

The Controller will display temperatures in the Fahrenheit or Celsius scales. The default scale is °F. With display showing **PROGRAM**, press the product key [10/0].

- Display shows **SELECT OPTIONS**.
- Press product key **1**, display shows [DEGREE n] [F OR C], where “n” is the current setting.
- Use the product key [0] to scroll through choices (F or C). Press **P** key to save choice.
- Display shows **PROGRAM**.

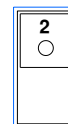


7.2 Password Change or Required:

With factory settings, an operator password is not required to enter programming Levels 1 and 2. The password may be activated or changed in these steps.

With display showing **PROGRAM**, press the product key [0].

- Display will show **SELECT OPTIONS**.
- Press product key **2**, display shows [SET PAS] [NEW PASS]. Use the product key [0] to scroll through choices [NO PASS] or [PASS REQ]. Press **P** key to save choice.
- If [NO PASS] is selected Display returns to **PROGRAM**.
- If [PASS REQ]. is selected, display will show [PASSnnnn] [NEW PASS] to prompt for new password. Displayed value “nnnn” is the current password. Use the product keys for numeric entry to change password. Press [P] key to save choice. Display then shows **PROGRAM**.



Note: The factory default password (6684) will always work even if a different password is selected here.


7.3 Beeper Volume and Tone:


Volume and Tone of the beeper alarm may be changed in this section. Volume ranges are 1,2 and 3, where 3 is the loudest setting. This model also has a selection for tone.


With display showing **PROGRAM**, press the product key [0].

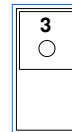
- ❑ Display will show **SELECT** **OPTIONS**. Press product key **3**, display shows [VOLUME n] [BEEPER].

- ❑ Use the product key [0] to scroll through choices (n= 1,2,3, or T). Beeper volume will change as each selection is made.

- ❑ Press  key on 1, 2, or 3 to save volume choice. Display shows **PROGRAM**.

- ❑ Press  key on "T" to set tone – an additional display is shown, [TONE n] [BEEPER]. Use the product key [0] to scroll through choices (n= 1,2,3). Beeper tone will change as each selection is made.

- ❑ Press  key on to save tone choice. Display shows **PROGRAM**.



7.4 Language Selection:

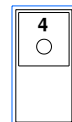
With display showing **PROGRAM**, press the product key [0].

- ❑ Display will show **SELECT** **OPTIONS**.

- ❑ Press product key **4**, display shows [ENGLISH] [LANGUAGE].

- ❑ Use the product key [0] to scroll through choices (ENGLISH, ESPANOL, FRANCAIS, DEUTSCH, HOLLAND).

- ❑ Press  key to save choice. Display shows **PROGRAM**.



7.5 Melt Cycle Type:

This adjustment allows selection of the melt cycle type and requirement when starting the appliance from a cold start.

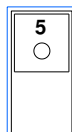
With display showing **PROGRAM**, press the product key [0].

- ❑ Display will show **SELECT** **OPTIONS**.

- ❑ Press product key **5**, display shows [LIQUID], the default setting.

- ❑ Use the product key [0] to scroll through choices (liquid, solid, or, no melt).

- ❑ Press  key to save choice. Display will again return to **PROGRAM**.

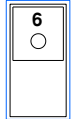


7.6 Recovery Test Value:

This controller maintains a record of heat up times for the appliance. A poorly running appliance will have increased recovery times stored in this display. There is no selection done here, just the display of recovery time values.

With display showing **PROGRAM**, press the product key [0].

- Display will show **SELECT** **OPTIONS**.
- Press product key **6**; display will show [RECOVERY] [TEST].
- Press the product key [0]. Display will show [FnnnLyyy], where nnn is the factory recovery value, and yyy is the last warm- up recovery value.

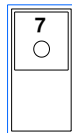



- After recording these values, press the  key. Display will again return to **PROGRAM**.

7.7 Control or Timer: (Left side of Dual or Single Vat):

With display showing **PROGRAM**, press the product key [0].

- Display will show **SELECT** **OPTIONS**.
- Press product key **7**; display will show [CONTROL].
- Use the product key [0] to scroll through choices (Control, Timer).



- Press  key to save choice. Display shows **PROGRAM**.

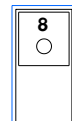
Note: If timer is selected, heat control outputs are disabled, leaving only the timer functions active. Do not make this selection on Solstice fryer models.

7.8 Control or Timer: (Right side of Dual Vat):

Note: This key has no function on single vat control # 60149518.

With display showing **PROGRAM**, press the product key [0].

- Display will show **SELECT** **OPTIONS**.
- Press product key **8**; display will show [CONTROL].
- Use the product key [0] to scroll through choices (Control, Timer).
- Press [P] key to save choice. Display shows **PROGRAM**.



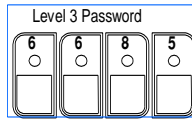
Note: If timer is selected, heat control outputs are disabled, leaving only the timer functions active. Do not make this selection on Solstice fryer models.

8 To Enter Programming Level 3 (for the Technician):

With no cook timers running, displays will show one of the following displays:

MELT , **HEATING** , or **READY** .

- ❑ Press the **P** key. The left display will show **PROGRAM** . The right display will be blank.



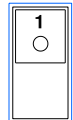
- ❑ Enter password using the product keys as a numeric keypad for entry.
- ❑ Display will show **SERVICE** . Product key indicators will illuminate to prompt operator to select a key. This section details parameters that may be changed in Level 3 programming.

8.1 Offset the Temperature Display:

This adjustment allows the displayed temperature value to be offset to reflect the true center vat temperature while reading the probe tip temperature. Default value is zero. With zero value set, displayed values are the probe temperature.

With display showing **SERVICE** press product key 1.

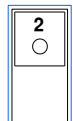
- ❑ Display shows [OFF nn F] [DEGREES], where “nn” is the value of the adjustment. Negative values are preceded with a minus sign.
- ❑ To change this value, use the product keys for numeric entry of a new value.
- ❑ Press the **P** key. Display will show [POSITIVE] [DEGREES].
- ❑ Use the product key [0] to scroll choices (Positive or Negative value). After selection, press the **P** key. Display returns to **SERVICE** .



8.2 Melt Cycle ON Time:


With display showing **SERVICE** press product key 2.

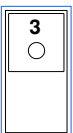
- ❑ Display shows [MLTON :nn] [MELT ON], where “nn” is the value, in seconds, of time for a melt cycle heat pulse.
- ❑ To change this value, use the product keys for numeric entry of a new value.
- ❑ Press the **P** key. Display returns to **SERVICE** .



8.3 Minimum ON and OFF Cycle Time:

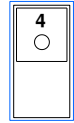
With display showing **SERVICE** press product key 3.

- ❑ Display shows [MIN ON:nn] [MIN ON], where “nn” is the value, in seconds, of time for minimum heat pulse period.
- ❑ To change this value, use the product keys for numeric entry of a new value, then press the  key to save. Display shows [MIN OFF:nn] [MIN OFF], where “nn” is the value, in seconds, of time for minimum heat off period. Use the product keys for numeric entry of a new value. Press the **P** key. Display now shows **SERVICE** .




8.4 Recovery Times:

This controller maintains a record of heat up times for the appliance. A poorly running appliance will have increased recovery times stored in this display. There is no selection done here, just the display of recovery time values.



With display showing **PROGRAM**, press the product key [0].

- ❑ Display will show **SELECT** **OPTIONS**.
- ❑ Press product key 4; display will show [RECOVERY] [TEST].
- ❑ Press the product key [0]. Display will show [FCTY nnn][RECOVERY], where nnn is the factory recovery value.
- ❑ Press the product key [0]. Display will show [OLD nnn][RECOVERY], where nnn is the factory recovery value.

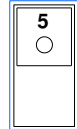
- ❑ After recording these values, press the  key. Display will again return to **PROGRAM**.

8.5 Diagnostic Menu Entry:

The diagnostic menu is used to determine the functionality of controller outputs and inputs. By exercising each output and examining inputs, a determination can be made if an appliance problem is controller related. In the diagnostic menu, product keys are assigned specific inputs or outputs.

All outputs in the ON state should produce 24VDC at the appropriate pins on the controller connector. Controller inputs can be verified by the on or off state of the indicator above the product key. This section details the process of checking each input and output.

- ❑ With display showing **SERVICE** press product key **5**.
- ❑ Display will show [DIAGNOST] [DIAGNOST].



The following list describes the function of each key in the diagnostic mode.

Function	Description	Button
Basket Lift Output Left	Toggles basket lift output on and off Display will show [LBASKET]	1
Basket Lift Output Right	Toggles basket lift output on and off Display will show [RBASKET]	2
Heat Demand Output	Hold the product key 3 to force Heat Demand output ON. Display will show [HEAT DEM]. Releasing the key will force output OFF.	3
Side On Output	Toggles the "Side ON" output ON. Display will show [SIDE ON] Press again to toggle output OFF.	4
Drain Switch Input	Display will show state of the Drain Valve input. Display will show [DRN ON (or OFF)]. Product key 5 indicator shows the ON or OFF state of the input.	5
Lamp Test (Press and Hold)	All display indicators will be forced on. The purpose is to reveal non-functional indicators or displays.	6
Heat Feedback Input	Display will show state of the Heat Feedback input [FBxxx], where xxx is ON or OFF. Key 7 indicator shows the ON or OFF state of the input.	7

8.5.1 Exit Diagnostic Menu:

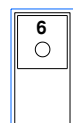
To exit diagnostic menu, press the **P** key. Display will return to **SERVICE**.
Other service menu items may be selected for changes.

8.6 Ready Level:

With display showing **SERVICE** press product key **6**.

Display shows [READY nn], where "nn" is the value, in degrees below set temperature that the **READY** message is displayed.

- ❑ To change this value, use the product keys for numeric entry of a new value.
- ❑ Press the **P** key. Display now shows **SERVICE**.

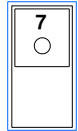


8.7 Temperature Operating Range:

Forces the control to display the range of temperatures that may be set by operators.

With display showing **SERVICE** press product key 7.

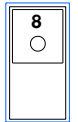
Display shows [RANGE 1] [200-380]. No adjustments are permitted here. This is an information display only. Press the **P** key. Display returns to **SERVICE**.



8.8 More Service Menu Entry:

With display showing **SERVICE** press product key 8 to enter submenu. Display now shows **MORE SERVICE**.

Product keys will illuminate where adjustments are permitted; all other keys are inactive. The following section details each product key function in the **MORE SERVICE** menu.



8.8.1 Instant On Toggle

This setting is to allow disabling the instant on feature. This feature applies a momentary heat pulse to the appliance when a cook key is pressed. *Factory default value is ON.*

- With display showing **MORE SERVICE**, press product key L.
- Display will show [INST ON [xxx]], where “xxx” is ON or OFF.
- Use product key [0] change value. Press the **P** to save choice.
- Display returns to **MORE SERVICE**.

8.8.2 Cook Now

Should operators be forced to acknowledge a Cook Done Alarm before starting another cook? This setting forces that requirement. *Factory default value is OFF.*

- With display showing **MORE SERVICE**, press product key 1.
- Display will show [NOW xxx] [COOK NOW], where “xxx” is ON or OFF.
- Use product key [10/0] change value. Press the **P** to save choice.
- Display returns to **MORE SERVICE**.

Note: With OFF value selection, operators must acknowledge a done cook [DONE n] display before starting any another cooks.

With an ON value, operators are permitted to start a cook on the opposite side before acknowledging a cook done alarm.

Example: The left display is showing [DONE 2] with the beeper alarm sounding. Indicator 2 is flashing needing to be acknowledged. All other product indicators are off.

With a set value of OFF, no other cooks can start until product key 2 is pressed to acknowledge and clear the cook done alarm.

With a value of ON set, a cook on the right side of the control (keys 6-R) may be started before operator clears the cook done alarm for product key #2 on the left side.

8.8.3 Heat Demand Profile:

With display showing **MORE** **SERVICE**, press product key **3**. Display will show [xxxxxxx] [HEAT DEM], where xxxxxx may be one of 5 heat control profiles listed below.

1. [GENERIC 1] for gas fired fryer appliance.
2. [GENERIC 2] for electric fryer appliances, and model SGH50.
3. [T-STAT] control operates as a mechanical thermostat for general applications on gas or electric fryers. This setting offers the quickest possible recovery times at the expense of temperature overshoot suppression.
4. [ROV1] for use with SSHLV type models only.
5. [ROV2] for use with SELV models only. *This is the factory default.*

Use product key [0] change value, then press the **P** to save choice Display returns to

MORE **SERVICE**.

8.8.4 Shake Alarm Duration:

With display showing **MORE** **SERVICE**, press product key **4**. Display will show [SH-DUR:nn] [DURATION], where “nn” is the time in seconds the shake alarm will sound. Use

product keys for numeric entry of desired value, then press the **P** to save choice. Display

returns to **MORE** **SERVICE**.

8.8.5 Hold Alarm Duration:

With the display showing **MORE** **SERVICE**, press product key **5**. Display will show [HD-DUR:nn] [DURATION], where “nn” is the time in seconds the hold alarm will sound.

Use product keys for numeric entry of desired value, then press the **P** to save choice.

Display returns to **MORE** **SERVICE**.

8.8.6 Cancel Duration:

With the display showing **MORE** **SERVICE**, press product key **6**. Display will show [CANCEL:nn] [DELAY], where “nn” is the time in seconds the operators must press a product key to cancel a cook. Use product keys for numeric entry of desired value, then press

the **P** to save choice. Display returns to **MORE** **SERVICE**. Default value is 2 seconds.

8.8.7 Configuration Value:

With display showing **MORE** **SERVICE**, press product key **7**. Display will show [CFG hhhh], where “hhhh” is a hexadecimal checksum of the configuration memory contained in the controller. Modifications to any part of the setup of this control will change the check

sum value. Press the **P** display will return to **MORE** **SERVICE**.

8.8.8 Factory Reset:

Factory Reset provides a quick way to erase all setup changes and restore control to factory settings.

Warning: Any settings made prior to a factory reset will be lost. This includes customer specific downloads performed at Pitco Frialator. Heat profile after a reset is ROV2 for electric appliances.

With the display showing **MORE** **SERVICE**, press **8** product key. The operator will be prompted to confirm the factory reset, press the YES [6] key to continue. After a few

moments, the display will show [P]. Press the **P** display will return to

MORE **SERVICE**.

8.8.9 Standing Pilot Toggle:

For some applications, it is desirable to maintain the gas pilot flame when the appliance is OFF. Heat from the pilot keeps solid shortening in the liquid state for quicker warm-ups in the morning. Default setting for standing pilot is off.

Note: Heat Demand Profile (section 4.8.3) must be set to Generic 1, or T-stat.

Standing Pilot toggle has no effect in with any other setting.

With the display showing **MORE** **SERVICE**, press product key **9**. Display will show [STANDING] [PILOT n], where “n” is ON or OFF. Use product key [0] change value, then

press the **P** to save choice. Display returns to **MORE** **SERVICE**.

8.8.10 Flex Time Toggle:

- ❑ With display showing **MORE** **SERVICE**, press product key [0].
- ❑ Display will show [FLEXTIME][xxx]. Where “xxx” is ON, OFF, SHRINK, or STRETCH.
 - “ON” – Both shrink time and stretch time are active.
 - “OFF” – Both shrink time and stretch time are inactive.
 - “SHRINK” – Only shrink time is active, cook times only shorten from setting.
 - “STRETCH” – Only stretch time is active, cook times only lengthen from setting.
- ❑ Use product key [0] change value, then press the **P** to save choice.
- ❑ Display returns to **MORE** **SERVICE**.

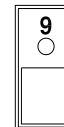
8.8.11 Exit More Service sub menu:

With display showing **MORE** **SERVICE**, press **P** key.

Display will show **SERVICE**. Continue with Level 3 programming in this section (display showing [SERVICE]), or continue.

8.9 Number of Basket Lifts:

With the display showing **SERVICE**; press key 9. Basket lift setting determines which cook keys drive which basket lift outputs.



- Display will show ; **BASKET 2** where the number is the current setting for basket lift outputs. Use product key [0] to scroll through the choices:

Full Vat Fryer (60149517):

BASKET n	J1 OUTPUTS	
Setting	LBL	RBL
0		
1	L-R	
2*	L-5	6-R

Split Vat Fryer (60149518):

LBASKETn	J1 OUTPUTS		RBASKETn	J2 OUTPUTS	
Setting	LBL	RBL	Setting	LBL	RBL
0			0		
1	L-5		1	6-R	
2	L-2	3-5	2	6-8	9-R
3*	L-5	6-R^	3*	6-R	

*Default setting.

^Output is driven by RBASKET3 selection. LBASKET may not be selection 2.

- Press the **P** key to save your choice.
- The display will show **SERVICE**, Press the **P** key to exit.
- Press the **P** key to save your choice. The display will show **SERVICE**.

8.10 To Exit Programming Level 3:

With display showing **SERVICE**, press the **P** key.


- Display will show **PROGRAM**. Continue with changes in sections 2 or 3, or continue exit with the next step.
- To return to normal operations, press the **P** key again.

Display will return one of the normal displays: **MELT**, **HEATING**, or **READY**.

9 To Enter Factory Menu Level 4 (for the Technician):

With no cook timers running, displays will show one of the following displays:

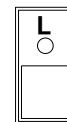
MELT , **HEATING** , or **READY** .

- ❑ Press the **P** key. The left display will show **PROGRAM** . The right display will be blank.
- ❑ Enter password  using the product keys as a numeric keypad for entry.
- ❑ Display will show **FACTORY** . Product key indicators will illuminate to prompt operator to select a key. This section details parameters that may be changed in Level 4 programming.

9.1 Pitco Collect (toggle)

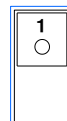
With display showing **FACTORY** press product key **L**.

- ❑ Display shows [PCOLLECT] [OFF]. This toggle forces the RS-485 link to output data collection parameters during test, and calibration. This has no meaningful use in the field. *Do not change this setting.* Factory shipped default is **OFF**.
- ❑ To change this value, use the 0 key to select a new value.
- ❑ Press the **P** key. Display returns to **FACTORY** .



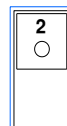
9.2 Offset Temperature Display:

With display showing **FACTORY** , press product key **1**. See section 8.1 for Offset Temperature Display.



9.3 Melt Cycle ON Time:

With display showing **FACTORY** , press product key **2**. See section 8.2 for Melt Cycle ON Time.



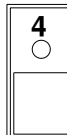
9.4 Minimum ON and OFF Cycle Time:

With display showing **FACTORY** , press product key **3**. See section 8.3 for Minimum ON and OFF Cycle Time.



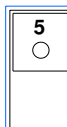
9.5 Recovery Test Values:

With display showing **FACTORY** , press product key **4**. See section 8.4 for Recovery Times.



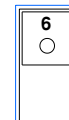
9.6 Diagnostic Menu Entry:

With display showing **FACTORY** , press product key **5**. See section 8.5 for Diagnostic Menu.



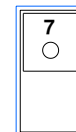
9.7 Ready Level:

With display showing **FACTORY**, press product key **6**. See section 8.6 for Ready Level.



9.8 Operating Temperature Range:

With display showing **FACTORY**, press product key **7**. See section 8.7 for Temperature Operating Range.



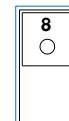
9.9 High Limit Value:

With display showing **FACTORY** press product key **8**.

Pressing product key 8 shows the temperature *above the set temperature*, where the high limit alarm will sound. This is for display only, this value cannot be changed with a keypad entry.

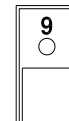
Press the **P** key. Display now shows **FACTORY**.

Note: Factory default value is 40°F over set temperature, or 410°F absolute, whichever is less.



9.10 Number of Basket Lift:

With the display showing **SERVICE**; press key **9**. See section 8.9 for Number of Basket Lift.



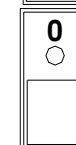
9.11 Test On/Off:

With display showing **FACTORY** press product key **10/0**.

Display shows [TEST xx], where “xx” is ON or OFF. If ON is selected, temperatures displayed by the controller are probe tip temperatures unaltered by values set in section 4.1, or 5.1. For normal operations, this setting should remain OFF.

To change this value, use product key 0 to toggle choice (ON or OFF).

Press the **P** key. Display now shows **FACTORY**.



9.12 To Exit Factory Menu (Level 4):

To exit Factory Programming, Press the **P** key. Display will show **PROGRAM**. Continue with settings in section 2 or 3, or exit in the next step.

To return to normal operations, press the **P** key again.

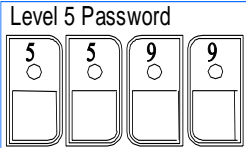
- Display shows **MELT**, **HEATING**, or **READY**.

10 To Enter Filter Settings Menu Level 5 (for the Store Manager):

Not all menu options will be available. Available menu options are determined by your fryer configuration and optional features.

With no cook timers running, displays will show one of the following displays: **MELT**, **HEATING**, or **READY**.

- Press the **P** key. The left display will show **PROGRAM**. The right display will be blank.

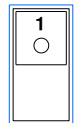
- Enter password  using the product keys as a numeric keypad for entry.
- Display will show **FILTER CONFIG**. Product key indicators will illuminate to prompt operator to select a key. This section details parameters that may be changed in Filter Configuration.

10.1 Drain Time:

This adjustment controls the drain time for auto-filter operations FILTER, POLISH, and DISPOSE. This value should be selected to allow adequate time for the vat to completely drain into the filter pan before continuing the automatic process. Factory default: Full – 0:30, Split – 0:20.

With display showing **FILTER CONFIG**, press product key [1].

- Display shows **DRN TIME** **MSS**, where m:ss is the time the vat will drain.
- To change this value, use the product keys for numeric entry of a new value. Acceptable entry range is 0:20 to 4:00.
- Press the **P** key to save entry. Display returns to **FILTER CONFIG**.

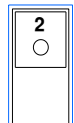


10.2 Filter Time:

This adjustment controls the oil cycle time for filter operation FILTER. This value should be selected to allow oil to make multiple passes through the filter pan. Factory default – 1:00.

With display showing **FILTER CONFIG**, press product key [2].

- Display shows **FLT TIME** **MSS**, where m:ss is the time the vat will filter.
- To change this value, use the product keys for numeric entry of a new value. Acceptable entry range is 00:00 to 99:59.
- Press the **P** key to save entry. Display returns to **FILTER CONFIG**.



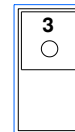
10.3 Polish Time:

This adjustment controls the oil cycle time for filter operation POLISH. This value should be selected to allow oil to make multiple passes through the filter pan. Factory default – 30:00.

With display showing **FILTER CONFIG**, press product key [3].

- ❑ Display shows **POL TIME** , where m:ss is the time the vat will polish.
- ❑ To change this value, use the product keys for numeric entry of a new value. Acceptable entry range is 00:00 to 99:59.

- ❑ Press the **P** key to save entry. Display returns to **FILTER CONFIG**.



10.4 Fill Time:

This adjustment controls the vat fill time for auto-filter operations FILTER and POLISH. This value should be selected to allow adequate time for the filter pan to be completely emptied and return lines cleared of oil. Factory default: Full – 1:15, Split – 0:45.

With display showing **FILTER CONFIG**, press product key [4].

- ❑ Display shows **FIL TIME** , where m:ss is the time the vat will fill.
- ❑ To change this value, use the product keys for numeric entry of a new value. Acceptable entry range is 0:30 to 4:00.

- ❑ Press the **P** key to save entry. Display returns to **FILTER CONFIG**.



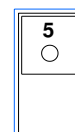
10.5 Filter Temperature:

This adjustment selects the minimum oil temperature allowed for auto-filter operations to be initiated. Manual filter operations are unaffected by this value. Factory default – 275 °F.

With display showing **FILTER CONFIG**, press product key [5].

- ❑ Display shows **FLT TEMP DEG** , where nnn is the minimum oil temperature autofilter operations can be performed, and where X is F (Fahrenheit) or C (Celsius).
- ❑ To change this value, use the product keys for numeric entry of a new value.

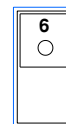
- ❑ Press the **P** key to save entry. Display returns to **FILTER CONFIG**.



10.6 Cook Counts Allowed:

This adjustment selects the number of cooks allowed before FILTER SOON is displayed to the operator. Factory default: Full – 10, Split – 5.

With display showing **FILTER CONFIG**, press product key [6].

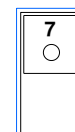


- ❑ Display shows **nn CFL COOK**, where nn is the number of cooks allowed before recommended filtering.
- ❑ To change this value, use the product keys for numeric entry of a new value. A value of 0 will disable Cook Filter Lockout.
- ❑ Press the **P** key to save entry. Display returns to **FILTER CONFIG**.

10.7 Cook Counts Deferred:

This adjustment selects the number of defers allowed before FILTER NOW is displayed and additional cooks are prohibited. The total number of cooks allowed after a filter event is the sum of *Cook Counts Allowed* and *Cook Counts Deferred*. Factory default – 2.

With display showing **FILTER CONFIG**, press product key [7].

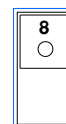


- ❑ Display shows **nn CFL DFRS**, where nn is the number of defers allowed before forced filtering.
- ❑ To change this value, use the product keys for numeric entry of a new value. A value of 0 will not prevent operator from performing additional cooks once the Cook Counts Allowed value has been reached.
- ❑ Press the **P** key to save entry. Display returns to **FILTER CONFIG**.

10.8 Oil Level Probe/Auto Top-Off Enable:

This selection allows the enabling and disabling of the Auto Top-Off feature.

With display showing **FILTER CONFIG**, press product key [8].



- ❑ Display shows **OLP xxx**, where xxx is either ON or OFF.
- ❑ To change this value, use product key [0] to toggle between ON and OFF.
- ❑ Press the **P** key to save entry. Display returns to **FILTER CONFIG**.

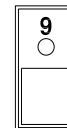
10.9 Auto Top-Off Time:

This adjustment selects the amount of time fresh oil is added to the vat during Auto Top-Off events. An event can only occur once every 3 minutes. Factory default: Full – 0:09, Split – 0:05.

With display showing **FILTER CONFIG**, press product key [9].

- ❑ Display shows **ATO TIME M55**, where m:ss is the time auto top-off will add oil to the vat per event.
- ❑ To change this value, use the product keys for numeric entry of a new value. Acceptable entry range is 0:03 to 0:20.
- ❑ Press the **P** key to save entry. Display returns to **FILTER**

CONFIG.



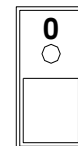
10.10 Filter Data Function Enable:

This selection allows the enabling and disabling of the Filter Data Function feature.

With display showing **FILTER CONFIG**, press product key [0].

- ❑ Display shows **FDF XXX**, where xxx is either ON or OFF.
- ❑ To change this value, use product key [0] to toggle between ON and OFF.
- ❑ Press the **P** key to save entry. Display returns to **FILTER**

CONFIG.



10.11 More Filter Menu Entry:

With display showing to **FILTER CONFIG** press product key [R] to enter submenu.

Display now shows **MORE FILTER**.

Product keys will illuminate where adjustments are permitted; all other keys are inactive. The following section details each product key function in the **MORE FILTER** menu.


10.11.1 JIB Monitor (Oil Remaining) Enable

This selection allows the enabling and disabling of the JIB monitor for oil remaining feature.

- ❑ With display showing **MORE FILTER**, press product key [1].
- ❑ Display shows **JIBT XXX**, where xxx is either ON or OFF.
- ❑ Use product key [0] change value. Press the **P** to save choice.
- ❑ Display returns to **MORE FILTER**.


10.11.2 Maximum JIB Time

This adjustment selects the amount of oil in terms of “pump time” for a full JIB. Factory default – 1:30.

- ❑ With display showing `MORE` `FILTER`, press product key [2].
- ❑ Display shows `JIB MAX` `MSS`, where m:ss is the time the reset value for a new JIB.
- ❑ To change this value, use the product keys for numeric entry of a new value. Acceptable entry range is 0:00 to 4:00.
- ❑ Press the  key to save entry.
- ❑ Display returns to `MORE` `FILTER`.


10.11.3 Low JIB Time

This adjustment selects the amount of oil remaining in terms of “pump time” for a low JIB. Factory default – 0:20.

- ❑ With display showing `MORE` `FILTER`, press product key [3].
- ❑ Display shows `JIB LOW` `MSS`, where m:ss is the time remaining when “LOW JIB” is displayed.
- ❑ To change this value, use the product keys for numeric entry of a new value. Acceptable entry range is 0:00 to 4:00.
- ❑ Press the  key to save entry.
- ❑ Display returns to `MORE` `FILTER`.


10.11.4 JIB Monitor (Check/Fault) Enable

This selection allows the enabling and disabling of the JIB monitor for error conditions feature.

- ❑ With display showing `MORE` `FILTER`, press product key [4].
- ❑ Display shows `JIBC xxx`, where xxx is either ON or OFF.
- ❑ Use product key [0] change value. Press the  to save choice.
- ❑ Display returns to `MORE` `FILTER`.

10.11.5 Filter Return Key Enable


This selection allows the enabling and disabling of the Filter Return key for manual filter configurations.

- ❑ With display showing `MORE` `FILTER`, press product key [5].
- ❑ Display shows `RTN xxx`, where xxx is either EN or DIS.
- ❑ Use product key [0] change value. Press the  to save choice.

- Display returns to `MORE` `FILTER` .

10.11.6 On-Demand Top-Off Key Enable

This selection allows the enabling and disabling of the Manual Top-Off key.

- With display showing `MORE` `FILTER` , press product key [6].
- Display shows `MTD` `xxx` , where xxx is either EN or DIS.
- Use product key [0] change value. Press the  to save choice.
- Display returns to `MORE` `FILTER` .


10.11.7 To Exit More Filter Menu

With display showing `MORE` `FILTER` , press the  key.

- Display returns to `FILTER` `CONFIG` .

10.12 To Exit Programming Level 5:

With display showing `FILTER` `CONFIG` , press the  key.

- Display will show `PROGRAM` . Continue with changes in sections 2 or 3, or continue exit with the next step.
- To return to normal operations, press the  key again.

Display will return one of the normal displays: `MELT` , `HEATING` , or `READY` .

11 Other Displays:

PROBE OP OPEN

Open probe detection is standard on all Pitco controls. If probe is detected open, normal heating and cooking activities are suspended.

HIGH TMP HIGH TMP

This display warns operators that the vat temperature has exceeded set temperature by +40°F (+22°C), or an absolute maximum of 410°F (210°C). The alarm will also sound. This display does not show the status of the mechanical high limit switch.

DRAINING TURN OFF

This message indicates that the drain valve has been opened, the vat is assumed to be empty by the controller. Normal heat control activities are suspended. Display will show an alternating message [DRAINING] [TURN OFF]. To restore to normal operation, close the drain valve. Display will show [TURN OFF] [TURN OFF].

Turn controller off, and refill the vat. Continue with normal operations at section 1.

HEAT FAILURE

This message indicates that the heating system failed to respond. Typically, the high temperature limit switch has tripped and is in need of resetting. In the case on gas fired appliances, this message will display if the pilot fails to light or is detected marginal by the ignition module.

SYSTEM FAILURE

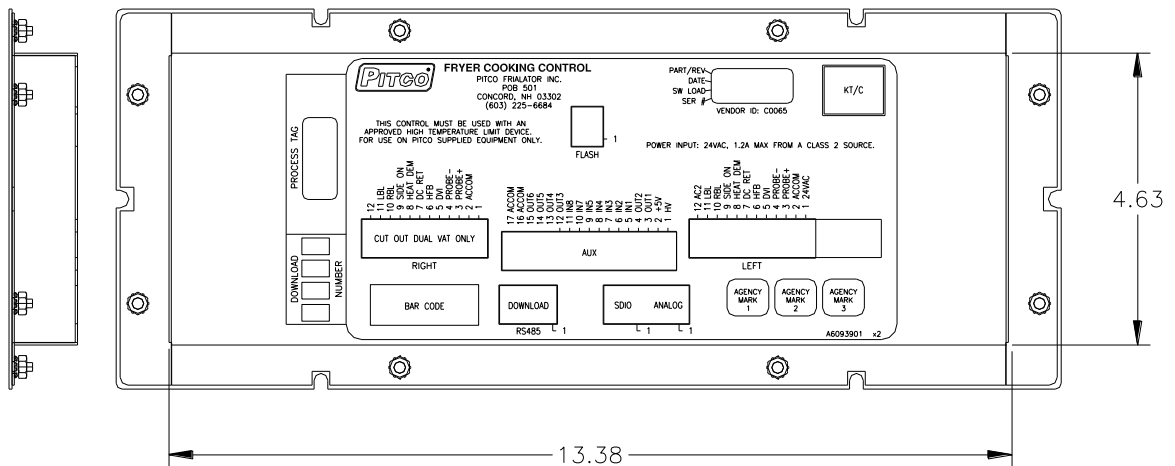
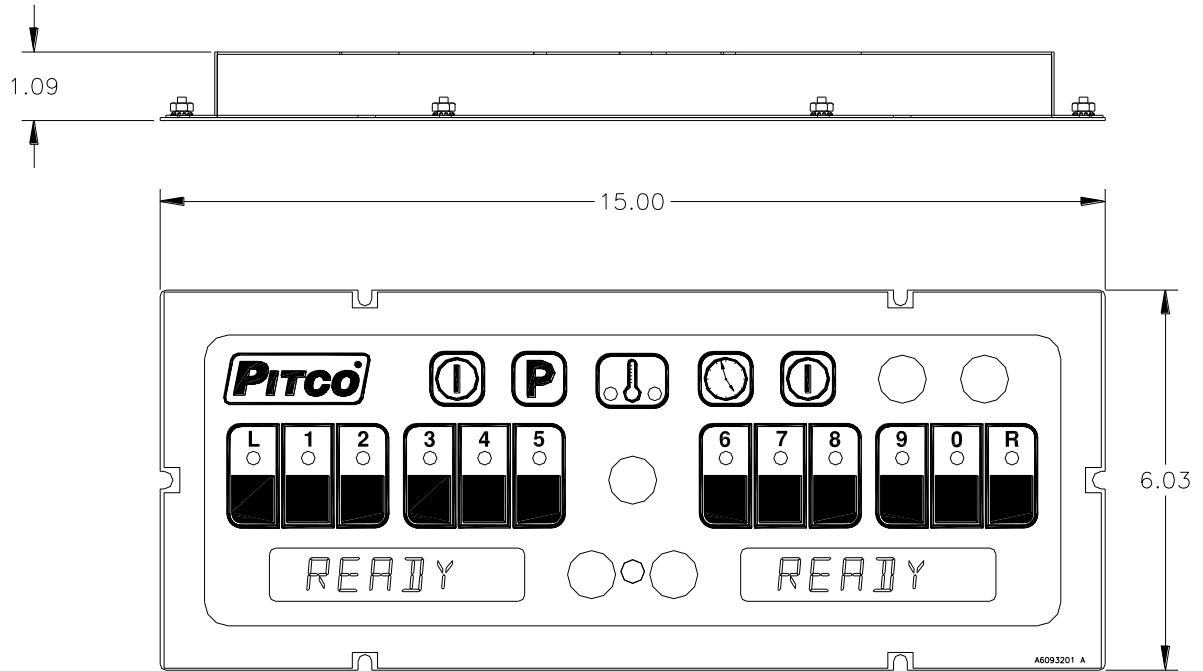
This message indicates a shorted probe. If probe is detected as a short circuit, normal heating and cooking activities are suspended.

COMMLINK FAILURE

This message indicates the computer has lost communication with the autofilter control board and oil management operations are suspended. Normal cooking activities are unaffected.



12 Mechanical Dimensions:



13 Electrical Connections at LEFT and RIGHT connectors):



As viewed from the rear of the control.

J1(Left)	Inputs	Type	Nominal	Notes:
1	ACH	PWR	24VAC	24VAC +20% -15% 50/60Hz.
2	ACN	PWR	24VACN	24VAC Return.
3	PROBE+	Thermistor Proble	Resistance varies with vat temperature. 942 Ohms @ 350°F	
4	PROBE-			
5	DVI	IN	24VAC	Drain Valve Interlock
6	HFB	IN	24VAC	Heat Feed Back
7	24VDC COM	IN	24VDC	DC Return
8	HD	OUT	24VDC	Heat Demand
9	SO/xFER	OUT	24VDC	Side ON or XFER
10	RBL	OUT	24VDC	Right Basket Lift
11	LBL	OUT	24VDC	Left Basket Lift
12	AC2	PWR	24VAC	Aux Power Input

Tip: Use the diagnostic menu to verify operation of outputs, and inputs.



14 Probe Resistance Chart:

Probe Resistance in 5°F Increments.								
Probe Temp (°F)	Probe Temp (°C)	Resistance (Ohms)	Probe Temp (°F)	Probe Temp (°C)	Resistance (Ohms)	Probe Temp (°F)	Probe Temp (°C)	Resistance (Ohms)
10	-12.2	562734	175	79.4	11719	340	171.1	1058.23
15	-9.4	483875	180	82.2	10716	345	173.9	998.09
20	-6.7	417167	185	85.0	9812	350	176.7	942.00
25	-3.9	360589	190	87.8	8995	355	179.4	889.67
30	-1.1	312474	195	90.6	8255	360	182.2	840.78
35	1.7	271446	200	93.3	7586	365	185.0	795.10
40	4.4	236370	205	96.1	6979	370	187.8	752.38
45	7.2	206311	210	98.9	6427	375	190.6	712.41
50	10.0	180491	215	101.7	5926	380	193.3	674.95
55	12.8	158252	220	104.4	5470	385	196.1	639.87
60	15.6	139055	225	107.2	5055	390	198.9	606.96
65	18.3	122489	230	110.0	4675	395	201.7	576.09
70	21.1	108051	235	112.8	4329	400	204.4	547.09
75	23.9	95539	240	115.6	4013	405	207.2	519.86
80	26.7	84644	245	118.3	3723	410	210.0	494.24
85	29.4	75136	250	121.1	3458	415	212.8	470.16
90	32.2	66823	255	123.9	3214	420	215.6	447.49
95	35.0	59540	260	126.7	2991	425	218.3	426.13
100	37.8	53146	265	129.4	2785	430	221.1	406.02
105	40.6	47523	270	132.2	2597	435	223.9	387.04
110	43.3	42569	275	135.0	2422	440	226.7	369.14
115	46.1	38195	280	137.8	2262	445	229.4	352.24
120	48.9	34328	285	140.6	2113.9	450	232.2	336.29
125	51.7	30902	290	143.3	1977.3	455	235.0	321.21
130	54.4	27862	295	146.1	1851.0	460	237.8	306.94
135	57.2	25161	300	148.9	1734.3	465	240.6	293.46
140	60.0	22755	305	151.7	1626.1	470	243.3	280.69
145	62.8	20610	310	154.4	1525.9	475	246.1	268.61
150	65.6	18695	315	157.2	1433.0	480	248.9	257.15
155	68.3	16981	320	160.0	1346.7	485	251.7	246.30
160	71.1	15446	325	162.8	1266.6	490	254.4	236.00
165	73.9	14069	330	165.6	1192.1	495	257.2	226.24
170	76.7	12823	335	168.3	1122.8	500	260.0	216.96

Notes: Resistance, of either probe lead, to the frame of the appliance should read as "open" on the meter. Typically this is 1Meg ohms or more.

°C = 5/9 (°F-32)

°F = (9/5 * °C) +32



NOTES:



NOTES:



In the event of problems with or questions about your order, please contact the Pitco Frialator factory at

(603) 225-6684 World Wide

www.pitco.com

In the event of problems with or questions about your equipment, please contact the Pitco Frialator Authorized Service and Parts representative (ASAP) covering your area, or contact Pitco at the numbers listed to the left.

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