

# INSTALAB 700 QUICK START GUIDE

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Safety notices are one of the primary ways to call attention to potential hazards.



**This Safety Alert Symbol identifies important safety messages in this manual. When you see this symbol, carefully read the message that follows. Be alert to the possibility of personal injury or death.**



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**Use of the word WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.**

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**Use of the word CAUTION with the Safety Alert Symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.**

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**Use of the word CAUTION without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in equipment damage.**

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## DISCLAIMER

DICKEY-john reserves the right to make engineering refinements or procedural changes that may not be reflected in this manual. Material included in this manual is for informational purposes and is subject to change without notice.

## INTRODUCTION

This quick start guide provides the minimum requirements to begin using the Instalab 700 NIR Grain Analyzer and is organized according to typical sequential actions for installation, startup, analyzation, and results.

More detailed information is available in the Operator's manual that addresses:

- Installation
- Calibrations
- Sample preparation
- Navigation
- Password restrictions
- System setup
- Startup
- Analyzing
- Results
- Database Storage and Record Deletion
- Diagnostics
- Troubleshooting
- Maintenance

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## INSTALLATION

Inspect the unit for damage that may have occurred during shipping. If damage is found, immediately file a claim with the carrier and notify your DICKEY-john sales representative and return unit in original packing materials.

**IMPORTANT:** The Instalab and printer (optional) must not be used in hazardous (classified) locations as defined in Article 500 of the NFPA Handbook of the National Electrical Code.

1. The Instalab should be placed on a level surface and in a location where it is protected from rapid changes in ambient temperature.
2. Connect the power cord to a 3-wire (grounded) 120 VAC, 60 Hz or a 220 VAC, 50 Hz outlet. The unit automatically adjusts for 120V or 220V.

**CAUTION:** Proper grounding must be made to ensure the safe and proper operation of the unit.

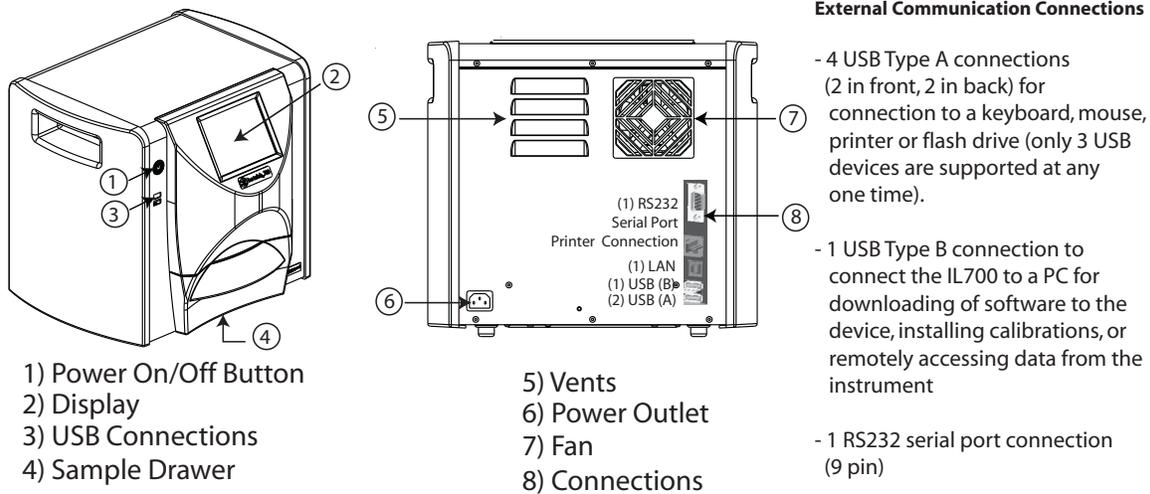
### **WARNING**

The grounding pin on the power cord plug is connected to the Instalab enclosure. If an adapter with a grounding wire is used, verify the grounding wire is connected to a good earth ground. Otherwise, a shock hazard may be present. Do not use a 3-pin to a 2-pin adapter.

## UNIT OVERVIEW

Figure 1

IL700



### **CAUTION**

Appropriate space must be left around the input power connector to allow easy disconnection at the unit.

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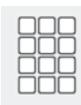
## NAVIGATION

The user interacts with the IL700 via the LCD touch screen display. Screen interaction by finger touch or using a dull, pointed object, such as a stylus or retracted pen is recommended.

### CAUTION

**Do not use any sharp objects on the display. Damage to screen can result.**

## TOUCH SCREEN BUTTON FUNCTIONS

Button Image	Button Function	Description	Button Image	Button Function	Description
	<b>HOME</b>	Returns to the Main Menu screen.		USB	Connects the unit direct to a computer for downloading software and installing calibrations.
	<b>POWER OFF</b>	Turns the system off from the touch screen display. The system must be turned on using the On/Off button located on the front panel but can be turned off from either the screen display or the On/Off button.		CLEAR	Removes a test result and does not save the result to the database.
	<b>PRINT</b>	Prints test results to a connected printer.		INSTRUMENT INFORMATION	Appears on the Main Menu screen providing details regarding unit service date, serial number, and software version. Typically used for troubleshooting purposes.
	<b>BACK</b>	Returns to the previous screen.		LCD DISPLAY TOUCH SCREEN CALIBRATION	Re-calibrates the display when screen responsiveness does not occur effectively to a finger touch or stylus.
	<b>ENTER</b>	Accepts the action taken and proceeds to next screen. Parameters changed on the screen typically requires the Enter button to be pressed to save changes.		KEYPAD	Keypad icon appears on those screens that require text entry. Pressing the Keypad icon opens the virtual keyboard for typing text on the screen. The virtual keyboard is used when an external keyboard, mouse, or barcode scanner are not available.
	<b>ID</b>	Displays the ID screen to manually modify or add a Customer ID or Sample ID.			

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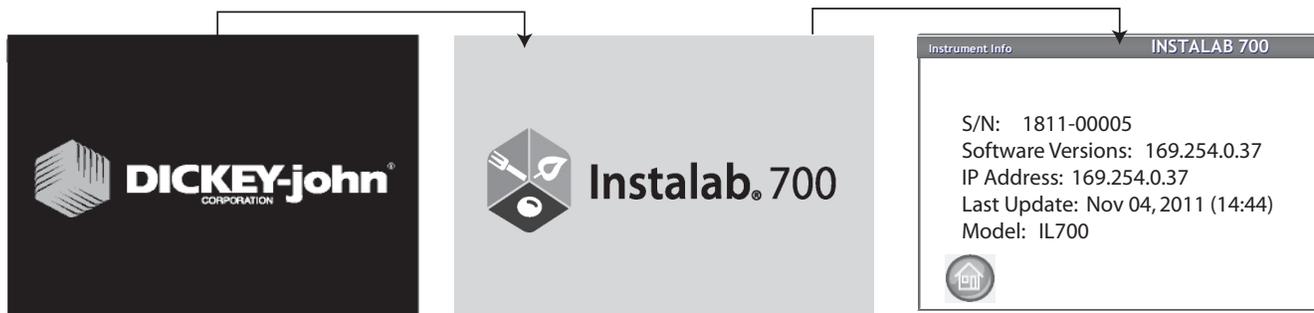
## STARTUP

The Instalab IL700 is powered on by pressing the on/off switch located on the front panel. A series of Startup screens load after the system is turned on. A status bar will indicate the loading of forms and upon completion, the Instrument Information screen displays for several seconds before the Main Menu screen displays.

**IMPORTANT:** The unit is designed to remain on and not be turned off. If turned off, it is recommended that the unit be powered on for 3 hours before measurements are taken.

Figure 2

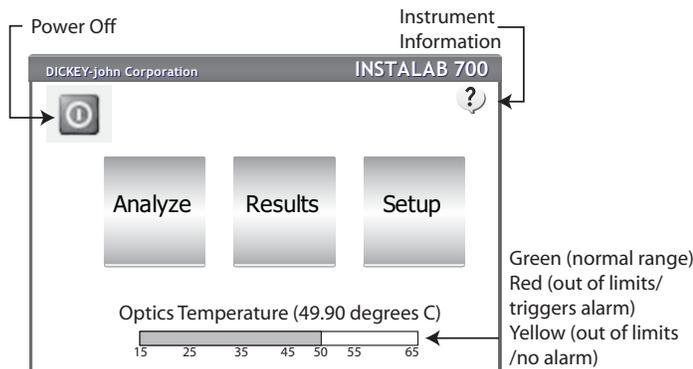
Startup Screens



## MAIN MENU SCREEN

**NOTE:** Regular maintenance routines are recommended for optimum unit performance. Frequency is dependent on environmental conditions. Refer to the Operator's manual for maintenance instruction.

The Main Menu screen appears after all Startup screens have loaded. The "Home" menu is the main screen that all other screens are accessed. Main functions available at the Main Menu are analyzing, accessing test results, and system setup.



### Optics Temperature Thermometer

An optics temperature thermometer displays the temperature of the optics chamber. The bar is red until the temperature reading is within +/- .50 degrees C of the optimum set point of 50.00 degrees C. The bar turns green when the temperature is within +/- .10 degrees C of the setpoint. Upon power up of the unit, the temperature will climb to 50.00 degrees C and likely overshoot. Some oscillation will occur before stabilizing. A temperature warning appears when the bar is red but analysis can still occur and is flagged with a symbol indicating the result is suspect.

**IMPORTANT:** It is highly recommended that NO analysis is performed until the temperature bar is consistently green. Stabilization can take a minimum of 30 minutes but is highly recommended the unit be on for 3 hours before performing an analysis.

Optics Temp Bar Status	Operating Temperature Limits
Green	Within normal range for analysis +/- .10 degrees C
Yellow	Optics temperature is within +/- .50 degrees C of set point. Grain analysis is not inhibited but not recommended.
Red	Optics temperature is greater than +/- .50 degrees C of set point. Grain analysis is not inhibited but not recommended.

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## PASSWORD RESTRICTIONS

Setting an administrator user name and password to restrict modification of system settings to an administrator are optional. The unit is shipped with an Admin user name of "GUEST" and password setting of "GUEST". The Admin user name screen is found in the Setup.

Keeping the Admin user name and password as "GUEST" retains the unit in open access mode allowing any user to enter System Settings and modify unit settings. Press the **Enter** button to proceed. **IMPORTANT:** To restrict access to System Setup that affects overall unit functionality, a new Admin User name and password must be created. Refer to the Operator's manual (System Setup) for creating a name and password.

**Figure 3**

### Password Screen (Open Access)



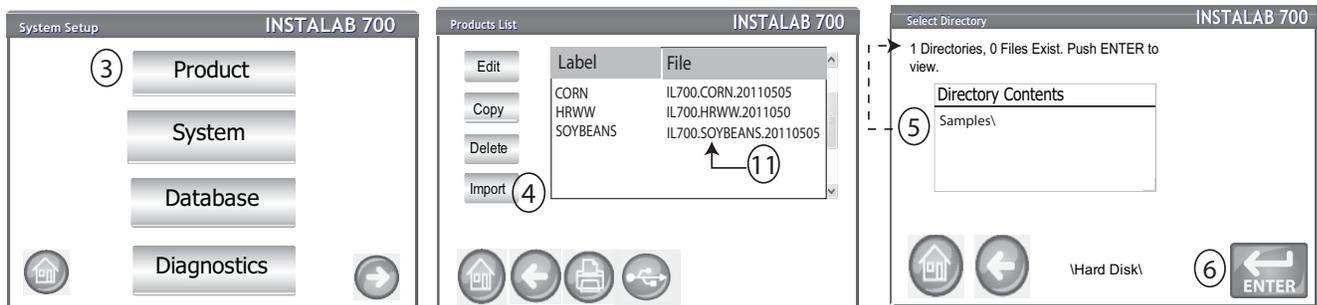
## IMPORT PRODUCT

New products can be loaded to the IL700 using a USB memory device. Follow the onscreen instructions to begin file import.

1. Insert USB memory device into unit.
2. At the Main Menu, press the **Setup** button.
3. At the System Setup screen, press the **Product** button.
4. At the Products List screen, press the **Import** button.
5. Select the desired directory, if shown, displayed in the Directory Contents window. The number of directories and/or files on the USB displays on screen.
6. Press the **Enter** button to view calibration (.cal) files.

**Figure 4**

### Import Product



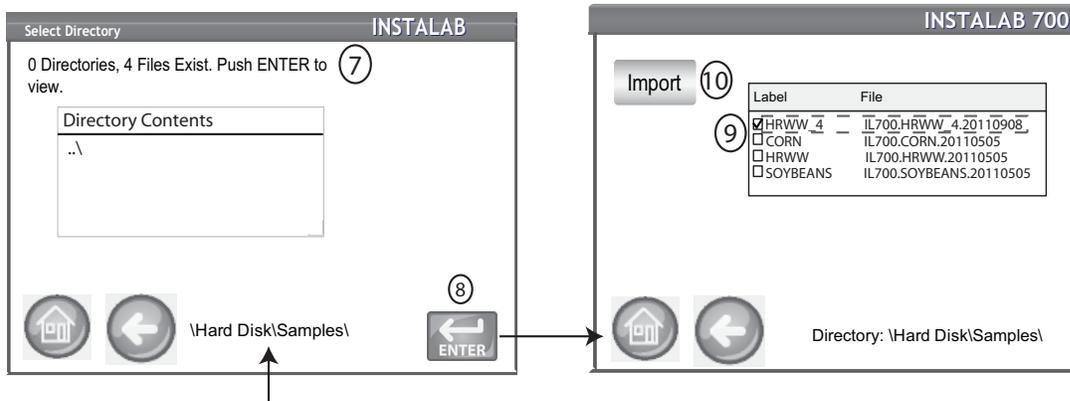
7. The number of files stored on the USB device display in the Directory Contents window. Pressing "..\." displayed in the Directory Contents window returns to the previous level in the directory structure.
8. Press the **Enter** button again to display the file name on the USB.
9. Select the checkbox(s) for the files to import. The box must be checked for the download to occur.
10. Press the **Import** button to begin import.
11. Verify product(s) imported at the Product List screen.

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Figure 5

## Import Product

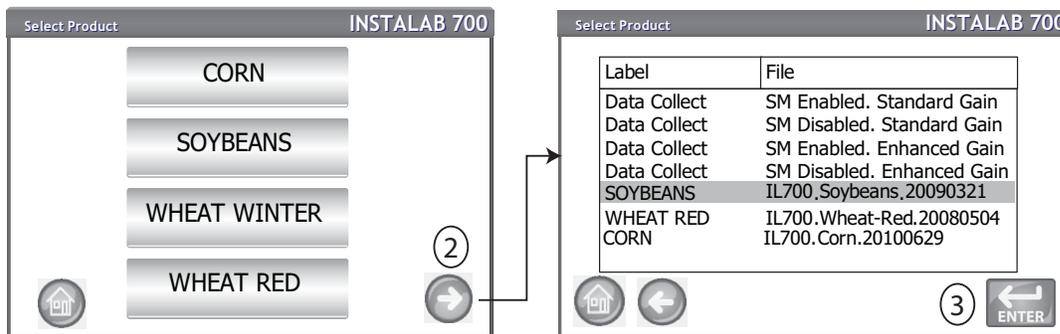


## ANALYZE

1. At the Main Menu screen, press the **Analyze** button. A pre-defined list of the 4 most recent products tested appear on the Select Product screen. Products are saved in a "last used" order.
2. To view additional products, press the **More** button.
3. Highlight the desired product and press **Enter** to select.

Figure 6

## Select Product



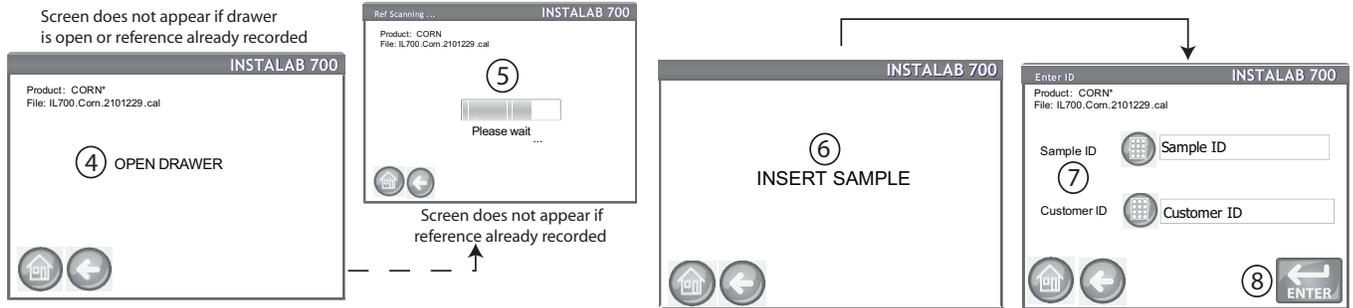
4. A screen may prompt to open the drawer to prepare for analysis if not already open or if a recent reference has not been recorded.
5. Open drawer to complete open position and insert sample. A reference scan will not start if drawer is not in the complete open position.
  - A status bar indicates progress if a scanning reference is required.
6. Insert Sample and close drawer at screen prompt to begin analysis.
7. The Enter ID screen appears only if a sample ID and/or a customer ID is required.
8. Press the **Enter** button to proceed.
  - When enabled, Auto Sequencing will automatically enter the next sample ID number.
  - When enabled, Last Used Customer ID will continue loading a Customer ID until the next power cycle occurs.
  - If neither are required, this screen is skipped.

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Figure 7

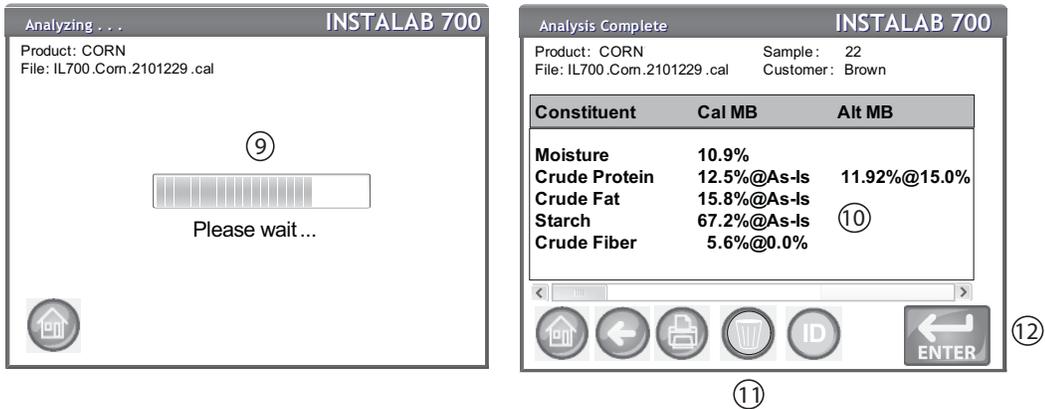
## Analysis Process Screens



9. During analysis, a testing status bar indicates progress.
10. The Analysis Results screen displays:
  - Product tested
  - Sample ID, if enabled
  - File name
  - Customer ID, if enabled
  - Constituent results (An alternate moisture basis reading displays when required by the calibration)
11. Test results are automatically saved to the unit unless the **Clear** button is pressed.
12. Press the **Enter** button to analyze another sample or open the drawer.

Figure 8

## Analysis Results Screen



## ANALYSIS READINGS DEFINED

READING	DESCRIPTION
As-ls	Actual sample moisture is moisture basis
Out of Limits (*)	A reading that is above or below defined parameters. Example: 12.5% @ As-ls*
Cal MB	Native moisture basis of calibration
Alt MB	Alternate moisture basis
Temp Out of Limits +/-	A reading taken when the optics temperature is too high (+) or too low (-)

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## RESULTS

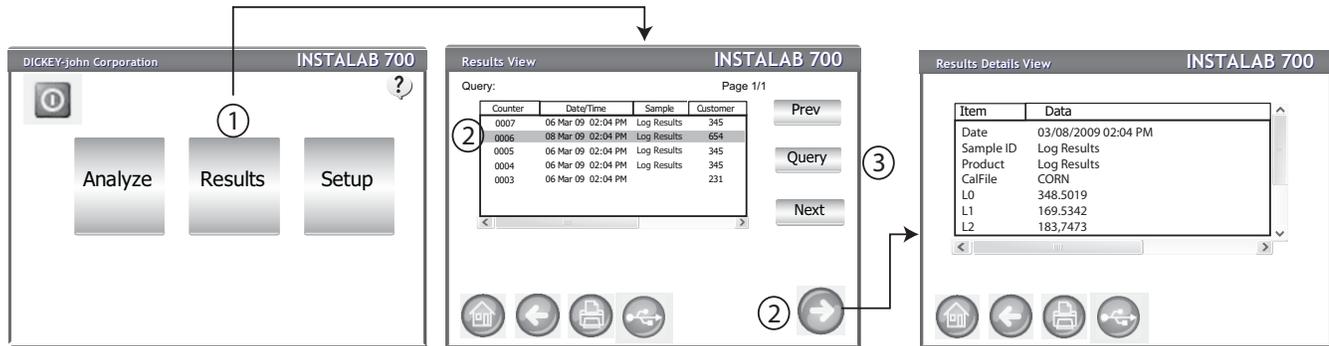
The Results screen displays a listing of sample test results and date relevant to a specific test (Counter, Date and Time, Sample ID, and Customer ID)

### To display Results:

1. At the Main Menu screen, press the **Results** button. The Results View screen default displays all stored test results.
  - Press the **Previous** and **Next** buttons to scroll up and down the window to view additional results.
2. Highlight a product and press the **More** button to view that product's specific results details.
  - Press the **Back** button to return to the Results view screen.
3. At the Results View screen, press the **Query** button to display the Refine Query screen.

Figure 9

### Results Screen

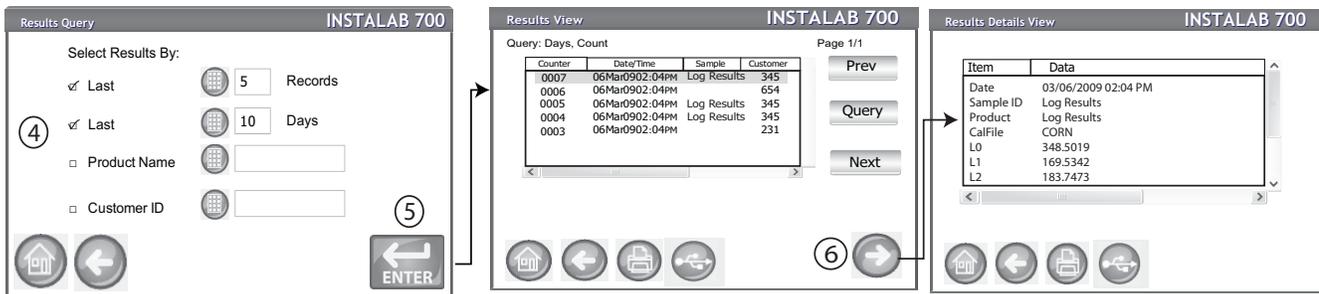


### To refine Query Options:

4. A query of records can be performed by selecting a check box to enable:
  - last number of records
  - last number of days
  - by product name
  - by customer id
5. Press the **Enter** button to display query results. At the Results View screen, the table displays the results based on enabled queries.
6. To view a sample's specific details, press the **More** button.

Figure 10

### Query Screen



**LAST NUMBER OF RECORDS:** Allows entry of a specified number of records to display or print starting with the last sample taken, such as printed the last 5 samples.

**LAST NUMBER OF DAYS:** Allows entry of a specified number of days to display or print starting with the most current date.

**PRODUCT NAME:** Allows entry of a product name to perform a product search. Exact product name must be entered to find results but is case insensitive.

**CUSTOMER ID:** Allows entry of a specific customer ID to view or print.