Filler/Dispenser/IBC

HI-3010

USER GUIDE

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CHAPTER 1: OVERVIEW

General Introduction to the Hardy Filler/ Dispenser/IBC HI 3010 User Guide

This User Guide provides the User with a complete description of the operating procedures for the HI 3010 Filler/Dispenser/IBC. To get the maximum service life from this product, operators should use this instrument in accordance with recommended practices either implied or expressed in this manual. Before using the Filler/Dispenser/IBC all operators should read and understand all cautions, warnings, and safety procedures, referenced or explicitly stated in this manual, to insure the safe operation of this instrument. Hardy Instruments sincerely appreciates your business. We encourage input about the performance and operation of our products from our customers. Should you not understand any information in this manual or experience any problems with this product, please contact our Technical Support Department at:

> **Phone:** (858) 278-2900
> **FAX:** (858) 278-6700
> **E-Mail:**

- hardysupport@hardysolutions.com
- hardyinfo@hardysolutions.com

Or visit our web site at:

http://www.hardysolutions.com

Our web site is full of useful information about our products, process weighing and vibration analysis applications. You can also update the Filler/Dispenser/IBC Manual. The latest revised manuals are available FREE in the Support Section of our Web Site. While you're on the site feel free to visit the other web pages which can provide answers to your questions about, load points, process weighing, vibration analysis or other Hardy instruments. Be sure to sign up for the Hardy Newsletter to get the latest information on all Hardy products and services. For answers to technical issues and service problems check the Hardy Web Tech on our Hardy Web Site. Most problems can be resolved by the Hardy Web Tech, 24 hours a day 7 days a week. You can still contact a technician by phone during our operating hours if necessary.

Description

The Hardy Process Solutions Filler/Dispenser/IBC controller is part of a complete line of application specific process weighing instruments. The Filler/Dispenser/IBC instrument is available as an HI 3010, a stand alone controller with a display (4 lines; 20 characters) and key pad or an HI 3010R, blind remote stand-alone controller, swivel mounted with no display. A remote 6 digit, 7 segment LED display is available as an option for the HI 3010R. The Filler/Dispenser

controller has built-in totalizers that keep you up to date as to the following:

- History of Totals for each of the twelve (12) internally stored material configurations include:

  1. Number of Cycles
  2. Amount of material in a cycle

The Hardy Filler/Dispenser/IBC is designed with output alarms, for example:

- Over Fills/Under Fills
- Feed Time-outs
- Out of Tolerance
- Not OK to Fill
- Too Many Jogs
- Discharge gate is not responding
- Change an Intermediate Bulk container

The HI 3010 Filler/Dispenser/IBC is field configurable for filling, dispensing and IBC (Intermediate Bulk Container) applications. This instrument is a stand-alone controller with fast and slow speeds and auto-adjusting preacts for precise, rapid process control. Displays keep the user up to date as to the number of cycles and amount of material in the cycle. In addition the instrument maintains a history of the totals for each of the twelve internally stored material configurations. Output alarms warn the operator of overfills, feed time-outs, out of zero tolerance, not OK to fill, too many jogs, if the discharge gate is not responding or when to change an intermediate bulk container. The Filler/Dispenser/IBC contains Hardy's core features:

- WAVERSAVER® - Eliminates the effects of vibration on the scale.
- C2® Electronic Calibration - Calibration without test weights.
- SMM (Secure Memory Module) - Memory for manual transfer of configuration data to another HI 3010 instrument(s).

All of Hardy's 3000 Series instrumentation is loaded with standard features like a selectable 10/100 BaseT Ethernet port and an embedded web server to link performance diagnostics and setup data to and from your local Intranet, Extranet, VPN or via the Internet (World Wide Web). A standard Devicenet interface allows multiple applications to be viewed and controlled from one display and allows 3rd party I/O to be easily added to the system. Mapped I/O saves you wiring costs by distributing the I/O where you need it at the process or in the control room. The controllers act as "Mas-

ters" over Ethernet/IP and Devicenet communications while optional interfaces for Allen-Bradley Remote I/O, Profibus provides communication to PLC® and DCS systems. Hard copy records can be printed via a standard 232 simplex printer port to an external printer.

NOTE: PLC® is a registered trademark of the Allen-Bradley Corporation.

Built-in Smart Diagnostics (Knowledgebase) learns how your system operates and auto-tunes it for maximum throughput to finish your process faster. Alarms alert you to problems or potential problems that can affect your process. If a load sensor malfunctions the instrument will electronically take the malfunction sensor off line, re calibrate the system and alert you of the change. The Filler/Dispenser/IBC has Internet Wizards that walk you through the instrument set up while on board help files are just a key press away.

Typical Applications

- Filling a Vessel Using a Feeder - Filling is the adding (gain-in-weight) of a material into a container on a scale. (See Fig. 1-1)
- Filling into a Vessel from another Vessel (See Fig. 1-2)
- Dispensing A Vessel Using a Feeder - Dispensing is the adding of a material by (loss-in-weight) from a vessel on a scale to a container which is off the scale. (See Fig. 1-3)
- Dispensing from a vessel to another vessel. (See Fig. 1-4)
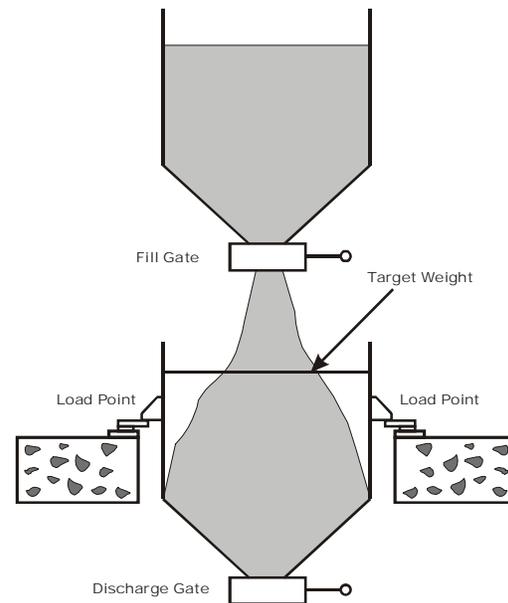
FIG. 1-2 FILLING INTO A VESSEL FROM ANOTHER VESSEL
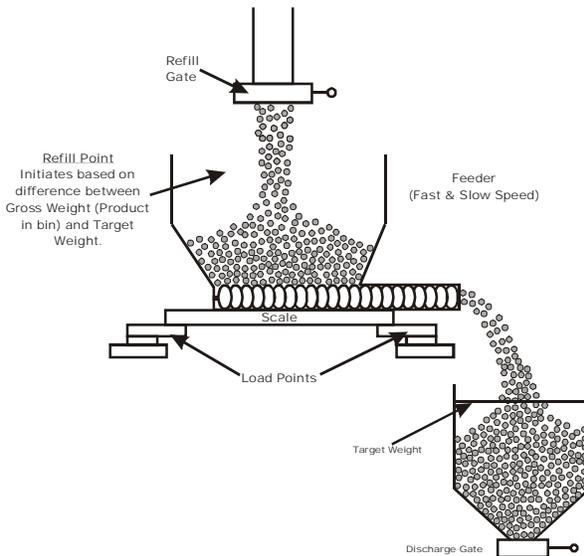
FIG. 1-3 DISPENSING INTO A VESSEL FROM A FEEDER
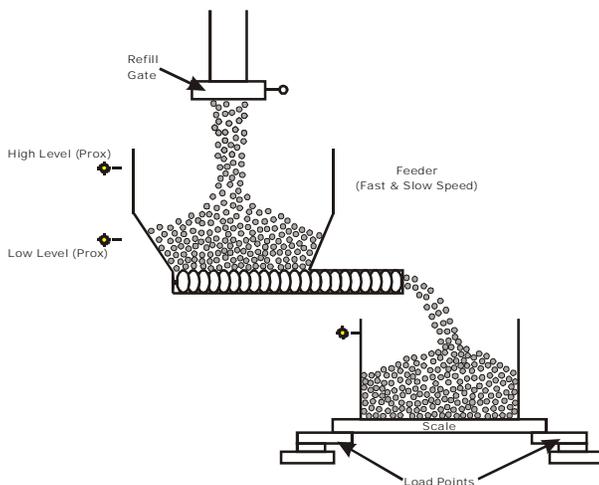
FIG. 1-1 FILLING A VESSEL USING A FEEDER
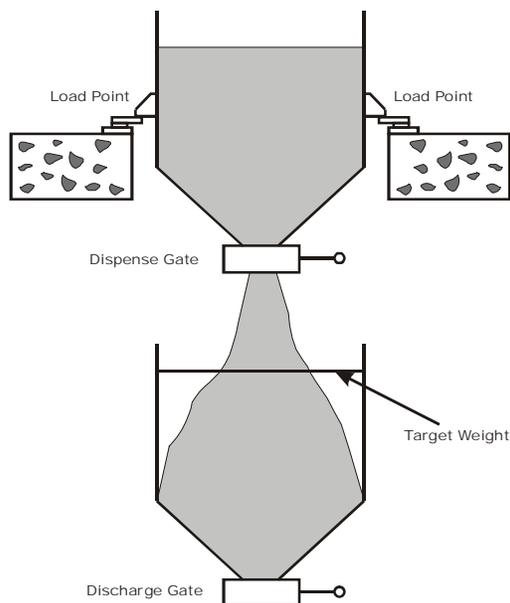
FIG. 1-4 DISPENSING (LOSS-IN-WEIGHT) FROM A VESSEL TO ANOTHER VESSEL

Connectivity

All HI 3000 Series products enable the user to use the selectable 10/100 base T Ethernet IP port or use its embedded web server to link performance, diagnostics and setup data to and from your intranet, extranet, VPN or the internet. Receive alarms via e-mail or over WAP enabled devices including cellular phones and PDA's. A DeviceNet interface allows multiple applications to be viewed and controlled from a display and additional 3rd party I/O to be easily added to the filling/dispensing system. The controller has single RS-232 serial port configured as a printer port.

Setup Wizards

Setup Wizards enable the user to walk through the instrument set up. On-board Help files are just a key press or click away.

Mapped I/O

Mapped I/O saves wiring costs by distributing the I/O where you need it, at the process or in the control room. The controller is a DeviceNet Scanner and the DeviceNet Scan table is configured using RS Networks®. Optional interfaces for Allen-Bradley Remote I/O, Profibus provide communications to PLC and DCS systems.

WAVERSAVER®

Typically, mechanical noise (from other machinery in a plant environment) is present in forces larger than the weight forces trying to be detected. The HI 3010 is fitted with

WAVERSAVER® technology which eliminates the effects of vibratory forces present in all industrial weight control and measurement applications. By eliminating the factor of vibratory forces the controller is capable of identifying the actual weight data. WAVERSAVER® can be configured from the front panel to ignore noise with frequencies as low as 0.25 Hz. One of four higher additional cut off frequencies may be selected to provide a faster instrument response time. The default factory configuration is 0.50 Hz vibration frequency immunity.

C2® Calibration

C2® Electronic Calibration enables a scale system to be calibrated electronically without using certified test weights which equals the systems load capacity. A C2 weighing system consists of up to eight load sensors, a junction box, interconnect cable and an instrument with C2 capabilities, such as the Filler/Dispenser/IBC. All Hardy C2 certified load sensors contain digital information detailing its unique performance characteristics. The Hardy Filler/Dispenser/IBC reads the performance characteristics of each individual load sensor and detects the quantity of load sensors in the system. Calibration is performed by simply adding a reference point from the front panel, or via the Web Server. The reference can be zero (no weight on the scale) or alternatively, a known weight on the scale. The instrument is capable of performing traditional calibration such as with the use of certified test weights.

NOTE: WAVERSAVER® and C2® are registered trademarks of Hardy Process Solutions Inc.

On-Board Diagnostics

The HI 3010 has a built in diagnostics utility which enables the operator to rapidly troubleshoot a weighing system from the front panel of the controller or via the Web Server. Simply press the Test button and scroll through several tests that will furnish the current state of each of the parameters that concern your application and the weigh system. Help is just a click away in the event you should not understand the information on the display or need a description of the parameter.

Secure Memory Module (SMM)

The Secure Memory Module stores critical configuration (up to 12 material configurations), calibration and setup data of the HI 3010 Filler/Dispenser/IBC, thereby protecting this information from corruption. During system operation when a new parameter is entered, the SMM automatically updates the value in its memory. Data stored in one HI 3010 can be restored in another HI 3010 by physically transferring the SMM to the new instrument. The SMM is conveniently accessible from the instruments rear panel.

Set Point Relays

The HI 3010 is fitted with four (4) standard internal selectable and Form A mechanical (SPST) relays. The relays can be used to open or close valves or gates, turn on/off motor, mixers, vibration equipment, heaters or coolers to name a few.

Serial Port

One standard RS 232 serial port which can be configured to receive commands and transmit weight data to a serial printer. Baud rates are user selectable at 600, 1200, 2400, 4800, 9600 or 19,200.

Options

-JB

Enables the instrument to sum four load sensor inputs to act as a built-in summing box.

HI 3000-RC

Rear cap for the HI 3000 Series controllers. Upgrades the entire assembly to a NEMA 4X rating by enclosing all the rear panel connectors.

-PB

Profibus interface allows full instrument capabilities to be communicated remotely to and from a Siemens or other Profibus compatible processor.

-AC

AC input power for the HI 3000 Series remote mount instrument to act as a booster power supply for multiple instruments on Devicenet.

-RIO

Allen-Bradley Remote I/O interface allows full instrument capabilities to be communicated remotely to and from an Allen-Bradley processor.

-SD

Smart Diagnostics adds capability in the instrument to sum four load sensor inputs to act as a built-in summing junction box. Three additional A/Ds one per channel are added to read individual load sensor parameters and provide extended diagnostics.

-MB

Stainless steel wall mount swivel bracket/stand for wall or desk top mounting.

Communication Options

NOTE: *For Installation, Configuration and Setup please refer to the HI 3000 Operation and Installation Manual, Cabling and Networks Sections.*

EtherNet/IP™

EtherNet/IP, short for **E**thernet **I**ndustrial **P**rotocol, is an open industrial networking standard that takes advantage of commercial, off-the-shelf Ethernet communication chips and media. Ethernet technology, enables the user to access device-level data from the Internet. The Ethernet/IP networking standard supports both implicit messaging (real-time I/O messaging) and explicit messaging (message exchange). EtherNet/IP is an open network that takes advantage of commercial technology that already exists.
TCP/IP is the transport and network layer protocol of the Internet and is commonly linked with all Ethernet installations and the business world. TCP/IP provides a set of services that any two devices can use to share data. Because Ethernet technology and standard protocol suites such as TCP/IP have been published for public use, standardized software tools and physical media have been mass-produced and are readily available, offering you the benefits of known technology and accessibility. The UDP/IP (User Datagram Protocol) is also used in conjunction with the Ethernet network. UDP/IP provides fast, efficient data transport required for real-time data exchange.

MOD-Bus/TPC/IP

TCP/IP is the common transport protocol of the Internet and is actually a set of layered protocols, providing a reliable data transport mechanism between machines. Ethernet has become the de facto standard of corporate enterprise systems and it has also become the de facto standard for factory networking. Ethernet has matured to the point that the cost of implementing this network solution has been dropping to where its cost is commensurate with those of today's fieldbuses. Using Ethernet TCP/IP in the factory allows true integration with the corporate Intranet and MES systems that support your factory.

OPC

OLE for Process Control (OPC) enables an HI 3000 module to communicate with any device that supports OLE/COM. The architecture is designed to utilize the Microsoft distributed OLE technology (DCOM) to facilitate clients interfacing to remote servers.

Remote I/O (RIO) Interface to the Allen Bradley Network

The RIO port allows bi-directional communications with Allen-Bradley Programmable Logic Controllers (PLC) and Small Logic Controllers (SLC). The HI 3010 represents a selectable 1/4, 1/2, 3/4 or full rack of discrete I/O (32 bits in the Logic Controllers output and input image files) to the

PLC Controller and supports both discrete and block transfers of data. It can support up to 230.4 Kbaud transfer rates.

Profibus

Allows bi-directional communications to Profibus (Process Fieldbus) products including those made by Siemens, GE Fanuc and Texas Instruments. This interface supports PROFIBUS-DP (Decentralized Periphery) and processes both Selectable Predetermined and Block transfer commands. It supports up to 12 Mbaud transfer rates.

CHAPTER 2: CALIBRATION

Getting Started

The Hardy Filler/Dispenser can be calibrated two ways. The first is with the Hardy C2® Second Generation calibration which requires no test weights. C2® Calibration is one of Hardy's Core Technologies. We will describe the C2 Calibration process in this chapter. The second calibration technique is called traditional calibration which requires certified test weights. For detailed information about traditional calibration See The HI 3010 Service Manual. It is important to note that the procedures contained in this section either explicitly stated or implied should be followed to guarantee the performance of the instrument. Alternatives to the procedures listed here are not recommended.

Before you can calibrate the instrument you first need to check to see if the system is ready to be calibrated.

Binding

Step 1. Due a visual check to see if the load points have been installed so that nothing is binding the weighing system. Make sure that nothing is draped over the scale or vessel such as a hose, electrical cord, tubes or other objects.

CAUTION: BINDING ON A SCALE/VESSEL OR LOAD CELL DOES NOT ALLOW THE LOAD CELL FREE VERTICAL MOVEMENT AND MAY PREVENT THE INSTRUMENT FROM RETURNING TO THE ORIGINAL ZERO REFERENCE POINT.

Step 2. Check to see that the load sensor is mounted so that 100% of the load (Vessel with Contents) vertically passes through the load cell always at the same point. (See Fig. 2-1)
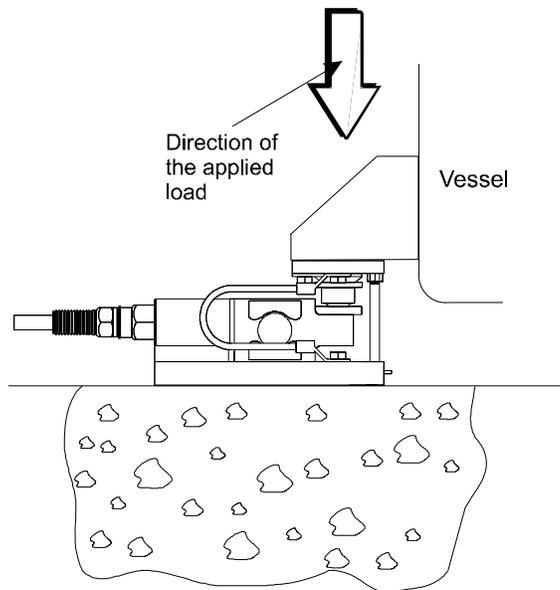
FIG. 2-1 PROPERLY INSTALLED LOAD CELL WITH NO BINDING

Electrical Check Procedures

Step 1. Check to see that there is power to the controller.

   • If there is power to the controller The front panel display should be lit.

Step 2. Check to see that all communication and power cables are securely fastened to the connectors on the rear panel.

C2 Quick Calibration From the Front Panel

Step 1. Press the Setup/3 button. The Configuration Menu appears. (See Fig. 2-2)
Step 2. Press the down arrow until the cursor is in front of CALIBRATION. (See Fig. 2-2)
Step 3. Press the Enter button. The CALIBRATION Menu appears with the C2 Cal Type. (See Fig. 2-3)


```
    CONFIGURATION MENU
    ADJUST INGREDIENT          -->
    SETUP                      -->
  > CALIBRATION               -->
```
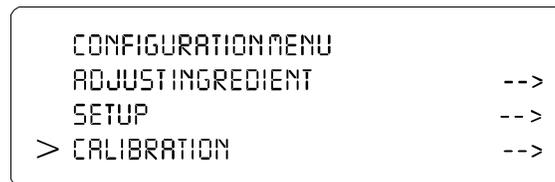
FIG. 2-2 CONFIGURATION MENU/SELECTING SETUP
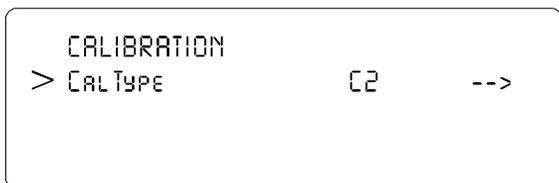
FIG. 2-3 CALIBRATION MENU/C2 CAL

Step 4. Press the Enter button. C2 CAL Sub-menu appears. (See Fig. 2-4)

FIG. 2-4 C2 CALIBRATION SUB-MENU

Step 5. The Load Sensor number is a read only field. It tells you how many load sensors are connected to the instrument.

Step 6. Press the down arrow button to move the cursor in front of the Ref Point. (See Fig. 2-5)

    a. The Reference Point is the total weight that is currently on the scale.

    b. If you have nothing on the scale the Ref Point is 0. If you have 5 lbs on the scale the Ref Point is 5.

FIG. 2-5 ENTERING THE REFERENCE POINT

Step 7. Press the Clr (Clear) button to clear the entry.

Step 8. Use the Alphanumeric keypad to enter the weight that is currently on the scale.

Step 9. Press the down arrow button to move the cursor in front of Do C2 Calibration. (See Fig. 2-6)

Step 10. Press the Enter button to complete the Calibration.

FIG. 2-6 C2 CALIBRATION

Step 11. A "function OK" momentarily appears on the screen indicating the calibration was successful

    • A message that says "function Error" means that the calibration was not successful. Check the Troubleshooting Section of the Technical Service manual for corrective action.

    • Another message may occur which is: Security Violation. This means that the User does not have the security level required to do a calibration.

Step 12. Press the Exit button until you return to the Standby display.

Step 13. C2 calibration is complete.

C2 Quick Calibration From the Web Page

Step 1. On the Filler/Dispenser Home Page Click on Configuration.   (See Fig. 2-15) The Configuration page appears. (See Fig. 2-16)

FIG. 2-7 CONFIGURATION MENU/SELECTING SETUP

Configuration

Adjust Ingredient

Instrument Setup

Calibration

Basic Mapping

Advanced Mapping

Security

FIG. 2-8 CONFIGURATION PAGE

Step 2. Click on Calibration. The Calibration Sub-menu appears. (See Fig. 2-17)

Configuration - Calibration

INSTRUMENT ID: Hardy Filler

C2 Calibration

Load Sensor Number: 1

Reference weight: 3.000

Do C2 Calibration

FIG. 2-9 CALIBRATION SUB-MENU

Step 3. The Load Sensor number is a read only field. It tells you how many load sensors are connected to the instrument.

Step 4. To enter the Reference Weight click in the Reference Weight field. (See Fig. 2-17)

    a. The Reference Point is the total weight that is currently on the scale.

    b. If you have nothing on the scale the Ref Point is 0. If you have 5 lbs on the scale the Ref Point is 5.

Step 5. To clear the entry, move the cursor over the current reference weight which highlights the weight value.

Step 6. Use your keyboard to type in the new value. In our example we entered 3.00. (See Fig. 2-17)

Step 7. Click on the Do C2 Calibration button.

Step 8. A page telling you that the C2 Calibration completed OK appears. (See Fig. 2-18)

Cal completed OK

Back

FIG. 2-10 CAL COMPLETED OK

Step 9. Click on "Back" to return to the Calibration page.

Step 10. Click on "Home" to return to the Filler/Dispenser Home page.

Step 11. C2 calibration is complete.

CHAPTER 3: OPERATING PROCEDURES/FILLER

About Chapter 3

Chapter 3 contains step-by-step instructions for operating the Hardy Process Solutions, HI 3010 Filler/Dispenser. The procedures include complete instructions for operating the Filler from the Front Panel, DeviceNet, and the Web Browser. We highly recommend reading the procedures before operating the Filler/Dispenser. Being familiar with the operating procedures insures that the Filler/Dispenser will provide trouble free service.

Getting Started

Before operating the Hardy HI 3010 Filler/Dispenser, check to make sure the following procedures have been performed:

- Power and Load Point cables properly installed.
- Communication cables properly installed.
- Calibration Performed.

All the features of the Filler/Dispenser operate the same no matter what the interface. First let's get familiar with operating the Filler/Dispenser from the front panel of the instrument. (See Fig. 3-1)

Help

About Help

As you move through the setup/configuration menus you may on occasion need assistance. If you need help, do the following:

Step 1.   Use the up and down arrows and move the cursor in front of the Menu Item you want help on.
Step 2.   Click the Help button either on the front Panel or Web Page and a Help Dialog appears. The help dialog tells you what the Menu Item is used for or other descriptive information to help you enter the right parameters for the current menu item.
Step 3.   Push the Exit button to return to the current menu.

Operating the Filler/Dispenser from the Front Panel

FIG. 3-1 FRONT PANEL

Front Panel Display

The Front Panel Display is a 4 line x 20 Alphanumeric character LCD. The screen displays all the menus for Configuring, Calibrating and Operating the HI 3010 Filler/Dispenser.

Button Functions

Start Button
The Start Button starts or restarts the filling or dispensing process.

Stop Button
The Stop button if pressed once will pause the filling or dispensing process. If the Stop Button is pressed twice it stops the process and puts the Filler/Dispenser in a standby mode.

Help Button

The Help button displays a Help message for the current Menu item (the Menu item in front of the cursor) that is displayed. In Standby the Help button does not display a Help message.

Manual Button

Enables you to enter the manual mode of operation

Print Button

The Print Button when pressed brings up a series of screens (See Fig. 3-1) and allows the user to Print the following:

- Current Fill/Dispense
- Current Cycle
- Totals
- Setup Data

Press the Print button, the following screen appears:

```
  > Print current Fill
    Print current cycle
    Totals
    Setup Data
```
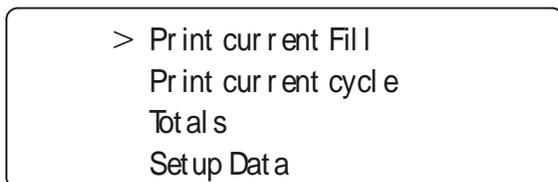
FIG. 3-2 FILLER/PRINT SCREEN DEFAULT

Note that the cursor is in front of the Print Current Fill menu. That is the default setting. The print button will only print the menu with a cursor in front of it. To move to another menu press the up or down arrow until the cursor is in front of the menu you want to print. (See Fig. 3-3)

Up/Down - Left/Right Buttons
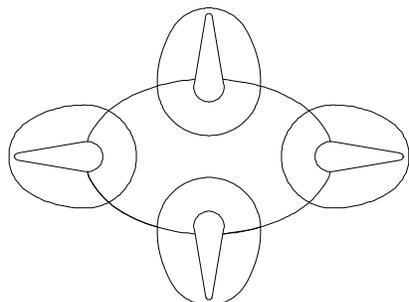
FIG. 3-3 DIRECTIONAL BUTTONS

The Up/Down arrow buttons move the cursor vertically allowing the user to scroll through each item of a menu. The Left/Right arrow buttons move the cursor horizontally left and right. The Left arrow button has an added backspace function. For example if there are Alpha/Numeric characters that appear in the display, as you press the left button it erases the characters. The Right arrow button moves the cursor to the right in the display and does not erase a alphanumeric entry. The Left/Right arrow buttons also move the cursor through a pick list. (See Fig. 3-3)

Enter Button

The Enter button enters the Alpha/Numeric value entered for a menu item in the display. The Enter button also enters the selections from a pick list. (See Fig. 3-4)

```
  Select Units using
  Left & Right Buttons
  then press ENTER     LB  Pounds
                  >    KG  Kilograms
                       Oz  Ounces
                       G   Grams
```
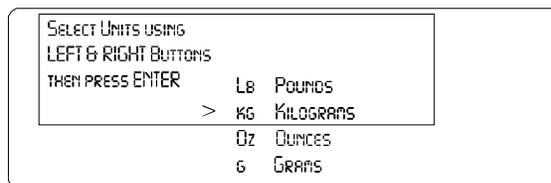
FIG. 3-4 LIST SELECTION/ENTER BUTTON

For example, when selecting units from a pick list, use the left and right arrows to move the cursor in front of the unit you want and press the Enter button. In the Standby Menu, the Enter button toggles between Gross Weight and Net Weight.

Exit Button

The Exit button disregards the current value entry, restores the previous value and moves the cursor to the last menu.

Clear Button

The Clear button clears the total Alpha/Numeric Entry and repositions the cursor for the first entry.

Ingr./1 Button

Enables you to change the pre programmed ingredient (1-12) while in the Standby Mode. Also enters the integer 1 in the display.

2/ABC Button

Enters the integer 2 in the display. Also enters the characters A, B, C. Pushing the button once enters the integer 2.

NOTE: For numeric entries only: Push the button and the number on the button is entered.

NOTE: For Alphanumeric entries only: Pushing the button once, the first letter on the button is entered in uppercase, A, D, G, and so on. Push the button a second time, the second letter is entered in uppercase, B, E, H, K and so on. Push the button a third time, the third letter is entered in uppercase, C, F, I, L, and so on. Push the button a fourth time, the fourth letter is entered in uppercase, S, Z. Push the button a fifth time the first letter is entered in lowercase, a, d, g, and so on. After you go through the lowercase letters, you can push the button again for the number. You need to push the buttons rapidly. If you delay too long the instrument will accept the alphanumeric character and move the cursor to the left preparing for the next alphanumeric entry. This is true for all the Alphanumeric buttons. If this occurs use the

left arrow button to erase the current entry and enter another.

Setup/3/DEF Button

This enables you to access the configuration and setup menus. Also enters the number 3 and the letters D, E, F.

Amount/4/GHI

Enables you to change the amount of the ingredient while in the standby mode. Also enters the number 4 and the letters C, H, I.

Units/5/JKL Button

Enables you to change the units of measure (Lbs/Kg/oz/g) while in the standby mode of operation. Also enters the integer 5 and the letters J, K, L.

6/MNO Button

Enters the integer 6 and the letters M, N, O.

Cycle/7/PQRS Button

Enables you to change the number of cycles (fills or dispenses) while in the standby mode. Also enters the integer 7 and letters P, Q, R, S.

8/TUV Button

Enters the integer 8 and the letters T, U, V.

Test/9/WXYZ Button

Enables you to enter the selftest or diagnostics mode. Also enters the inter 9 and letters W, X, Y, Z.

User/./_/@ Button

Enables you to change the 3 digit user code while in the standby mode. Also enters the period (.), underscore (_) and @ symbols.

0/Char. Button

Enters the integer 0 in the display. When you push the button the second time a set of characters appears in the display.

Step 1. Using the up and down arrow buttons move the cursor in front of the character you want to display.

Step 2. Press the Enter Button to select the character.

Step 3. Press the Exit Button to return to the display. The character should now appear next to the cursor.

Starting Up for the First Time

When the HI 3010 Filler/Dispenser powers up after delivery from the factory, a display appears asking you to choose the application you want to use. The Display appears in the Front Panel Display and Web Site.

Step 1. The First display you will see on a product right from the factory or when you change from a Filler to a Dispenser, is the "How Will I Be Used?" Display asking you what you how to use the Filler/Dispenser. (See Fig. 3-5)

How Will I Be Used?
Press Enter Key to
Choose.
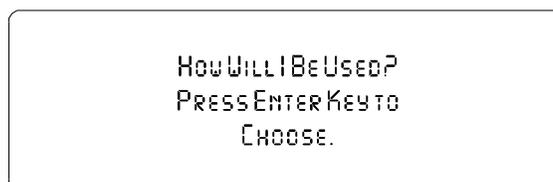
FIG. 3-5 FIRST DISPLAY

Step 2. Press the Enter Button from the Front Panel or left mouse click in the Web Dialog Box. The "Choose One" Screen appears. (See Fig. 3-6)

Choose One
> FILLER
  DISPENSER
  IBC DISPENSER
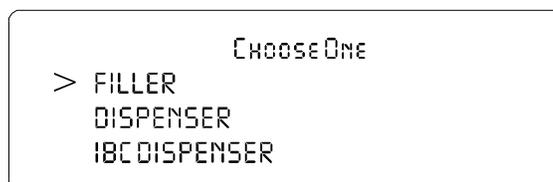
FIG. 3-6 INSTRUMENT SELECTION DISPLAY

Step 3. Use the up and down arrows to move the cursor in front of the instrument you want to use. The Filler Instrument is the default selection.

Step 4. Press on the Enter button. The Selection Alert display appears asking if you are sure you want this instrument. (See Fig. 3-7)

- If you are sure you want the Instrument Selected, press the Enter Key from the Front Panel or click on OK in Web Page. The Standby Display appears.

- If you are sure you DO NOT want this instrument, or are uncertain about what selection you have made, press the Exit Key or left click on Cancel in the Web Page. The Instrument Selection Display reappears. Repeat Steps 2 and 3.

```
┌────────────────────────────────┐
│                                │
│      IF YOU ARE SURE YOU       │
│     WANT THIS INSTRUMENT TO    │
│           BE A FILLER?         │
│      PRESS THE ENTER KEY       │
│                                │
└────────────────────────────────┘
```
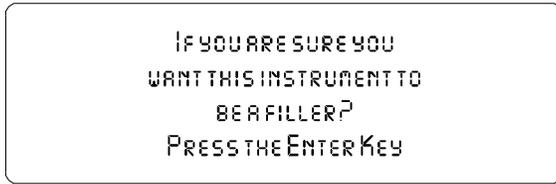
FIG. 3-7 SELECTION ALERT DISPLAY

Filling Procedures

About Filling

The Filling Operation is a Gain-in-Weight process. The Filler controller measures the weight gain into a vessel until the pre-set, weight set point has been reached. The Filler controller then stops filling and automatically goes to a wait condition waiting for the next container to be positioned for filling. Once the new container is positioned the Filler begins the process over again. The Hardy Filler/Dispenser enables both single speed and dual speed filling including sequential and simultaneous modes of operation.

Prefill Procedures

Step 1.   Check to be sure that the first container is in position for filling.
Step 2.   Check to see if the Filler is configured for your specific filling application. If it is not you will have to configure the instrument. For configuration procedures please refer to the HI 3000 Service/Installation Manual for instructions.
Step 3.   Check to see if the instrument is in the Standby mode. The Standby Display should appear in the display with an ingredient listed. (See Fig. 3-8)
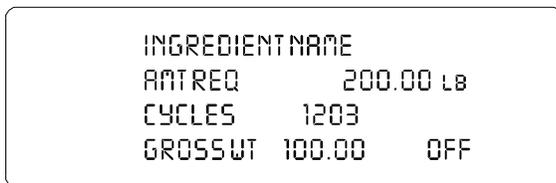
```
┌────────────────────────────────┐
│                                │
│     INGREDIENT NAME            │
│     AMT REQ       200.00 LB    │
│     CYCLES     1203            │
│     GROSS WT  100.00     OFF   │
│                                │
└────────────────────────────────┘
```

FIG. 3-8 STANDBY DISPLAY

Enter The User ID

Step 1.   Press the User button. The User Menu appears. (See Fig. 3-9)

```
┌────────────────────────────────┐
│                                │
│   ENTER USER NAME    ___       │
│                                │
└────────────────────────────────┘
```

FIG. 3-9 USER MENU

Step 2.   Press the Clear button to erase the current entry.
Step 3.   Use the Alphanumeric buttons to enter your user ID. A user ID is three (3) characters long and can consist of Alphanumeric characters.

   Some examples:

   • Joe
   • 312
   • J15
   • JD7

Step 4.   Press the Enter button to set the New User.

Filling - Single Speed

NOTE: The values are used for illustration purposes only, your requirements may vary.

Step 1.   If the ingredient is the ingredient you want. Go to Step 3.
Step 2.   If the ingredient that appears in the Standby Menu is NOT the ingredient you want, do the following:

   • Press the Ingr./1 button once. The Ingredient Menu appears with the ingredient number that appears on the Standby Display. (See Fig. 3-10)

```
┌────────────────────────────────┐
│                                │
│  > CHOOSE    INGREDIENT    1   │
│                                │
│                                │
└────────────────────────────────┘
```
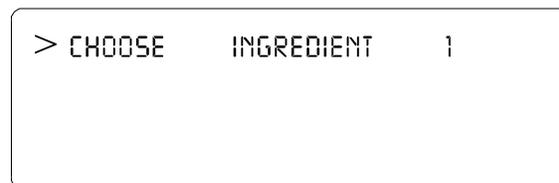
FIG. 3-10 INGREDIENT MENU

   • You can change the ingredient number two ways.

      1.   Press the left or right arrow buttons to select the ingredient number you want.

2. Press the Clear button to remove the current ingredient number. Use the Alphanumeric buttons to enter the new Ingredient number. For example enter the number 3 for the flour ingredient (See Figs. 3-11 & 3-12)

```
> CHOOSE    INGREDIENT
```
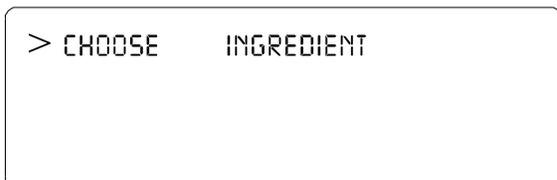
**FIG. 3-11 CLEAR BUTTON TO ERASE THE
INGREDIENT NUMBER**

```
> CHOOSE    INGREDIENT    3
```
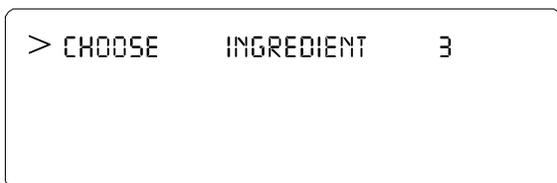
FIG. 3-12 NEW INGREDIENT NUMBER/3

*NOTE: The ingredient number listed usually will have an
ingredient name, which is created during the
Filler setup process.*

• Press the Enter button. The Standby Menu appears with the chosen ingredient name, cycle number, amount required and Gross Weight. In our example Ingredient 03 was flour. (See Fig. 3-13)

```
FLOUR
AMTREQ    150.00 LB
CYCLES    1203
GROSSWT 100.00       OFF
```
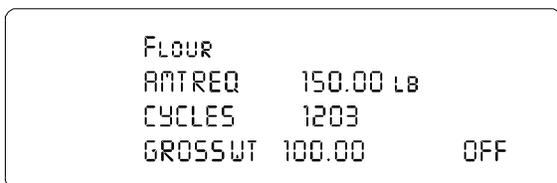
**FIG. 3-13 STANDBY MENU/SELECTED
INGREDIENT - FLOUR**

Step 3.   If the Amount Required is the amount that you want. Go to Step 5.

Step 4.   If you want to change the Amount Required, do the following:

*NOTE: The values entered here do not change the setup
values for this ingredient. The changes made here
are for this session of filling/dispensing only and*

*are not saved when the instrument is powered
down. The ingredient parameters that are config-
ured in setup are the only parameters that are
saved. If you want to permanently change the
parameters for this ingredient you must go
through the configuration process. For configu-
ration information see the HI 3010 Installation
and Service Manual for instructions.*

• Press on the Amount/4 button once. The Target WT. Menu appears. (See Fig. 3-14)

```
>TARGET WT    100.00
```
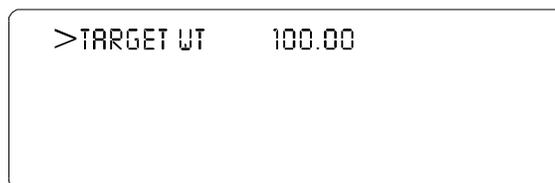
FIG. 3-14 TARGET WEIGHT

• You can change target weight values two ways:

1. Enter the number by using the Alpha-numeric keypad without pressing the Clear button.
2. Press the Clear button to erase the values displayed then use the alphanu-meric keypad to enter the new target weight. (See Figs. 3-15 & 16)

```
>TARGET WT    ___
```
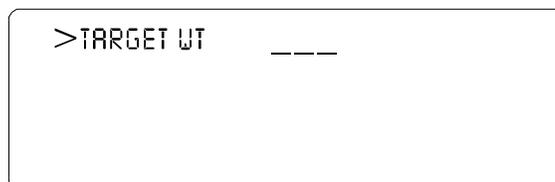
FIG. 3-15 TARGET WEIGHT/ERASED VALUES

*NOTE: You can enter values from .000001-999999 based
on the Decimal Point placement. (See the HI
3010 Installation and Service Manual for Deci-
mal Point Setup Information)*

```
>TARGET WT    225.00
```
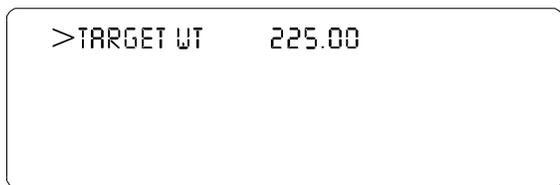
FIG. 3-16 TARGET WT/NEW VALUE

- Press the Enter button. The Standby Menu appears with the new Amount Required. In our example we used 225 lbs. (See Fig. 3-17)

```
FLOUR
AMT REQ     225.00 LB
CYCLES        56
GROSS WT    100.00        OFF
```
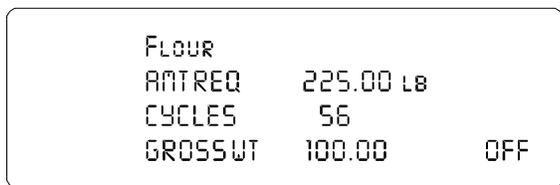
FIG. 3-17 STANDBY MENU/NEW AMOUNT REQUIRED

Step 5.   If the number of fills is the number you want, go to Step 7.

Step 6.   If you want to change the number of fills, do the following:

NOTE: 1 Fill = 1 Cycle. Fills and Cycles are used inter-changeably.

- Press the Cycle/7 button. The Choose Cycles Menu appears. (See Fig. 3-18)

```
> CHOOSE CYCLES:       1305
```

FIG. 3-18 FILLS MENU

- You can change the number of bills two ways:

    1.   Enter the number by using the Alpha-numeric keypad without pressing the Clear button.
    2.   Press the Clear button to erase the values displayed, then use the alphanu-

meric keypad to enter the new target weight. (See Figs. 3-19 & 3-20)

```
> CHOOSE CYCLES:       _____
```

FIG. 3-19 FILLS MENU/ERASED VALUES

NOTE: You can enter values from 1 - 9999.

```
> CHOOSE CYCLES:       56
```

FIG. 3-20 FILLS MENU/NEW FILLS NUMBER

- Press the Enter button. The Standby Menu appears with the new cycles value. (See Fig. 3-21)

```
FLOUR
AMT REQ     225.00 LB
CYCLES        56
GROSS WT    100.00        OFF
```
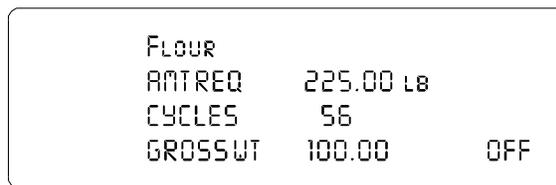
FIG. 3-21 STANDBY MENU/NEW FILLS NUMBER

Step 7.   **Press the Start Button**.

NOTE: When you Press the Start button to begin the fill-ing process. The Standby Display changes and shows that the instrument is on and waiting to Fill (See Fig. 25). The instrument automatically checks for motion, autozeros the scale, and auto-tares the scale. If the Initial Auto Refill function is turned ON the instrument begins checking to see if there is enough material in the vessel. The Auto Refill is user selectable. For configuration infor-mation see the HI 3010 Installation and Service Manual for instructions.

- If the material is below the high level mark, the instrument begins to refill the vessel. The Refill display appears. the

refill can occur at any time during the filling process. (See Fig. 3-22)

```
Flour
AMTREQ      225.00 LB
CYCLES        6
GROSSWT    100.00      REFILL
```

FIG. 3-22 REFILL DISPLAY

NOTE: *The Autozero function is selectable and can be turned ON or OFF. If Autozero is turned OFF during setup, than the instrument checks for motion and autotares the scale before filling.*

```
Flour
AMT         0.00/225.00
CYCLES       1/56
            WAITING       ON
```

FIG. 3-23   WAITING ON DISPLAY

NOTE: *From this point on the filling process is automatic and under normal conditions does not require operator intervention. The displays provided are to illustrate the procedures the instrument goes through and the displays associated with these procedures. It is highly unlikely that you will be required to manually intervene except where the Alarm conditions might occur. A list of the Alarm conditions and remedies are provided after this section.*

Step 8. If the "OK to Fill" function is turned ON, in addition to the motion, autozero, and autotare, the instrument checks to see that the system is ready to fill. This means that the instrument can check a proximity switch for container positioning, a sensor detecting that a valve is open or closed, an OK to Fill instruction sent from a PLC or DCS and so on.

   • If it is OK to Fill, the Filler/Dispenser starts filling and returns to the fill Display. (See Fig. 3-24)
   • If it is NOT OK to Fill, an alarm appears in the display. (See List of Alarms Not OK to Fill Alarm)

```
Flour
AMT         9.00/225.00
CYCLES       1/56
            FAST FILL      ON
```

FIG. 3-24 FILL DISPLAY FAST FILL ON

NOTE: *The "Fast Fill" appears for both Single or Dual Speed Filling.*

   • Ingredient = flour
   • Current filled amount = 9 lbs out of 225 lbs. gain in weight for cycle number 1.
   • Cycle = 1 out of 56 cycles.
   • Filler Status = FAST FILL ON

Step 9. When the weight reaches the Target Window, the Filler/Dispenser goes into a wait sequence to allow the material to settle before checking to see if the fill weight is correct. (See Fig. 3-25)

NOTE: *The Target Window is reached when the net weight on the scale is equal to or greater than the target weight minus the preact value.*

```
Flour
AMT        225.00/225.00
CYCLES       1/56
WAITTIMER   23.05
```

FIG. 3-25 WAIT DISPLAY

Step 10. The Filler/Dispenser automatically checks to see if the fill is within the target window.

   • If the fill is within the target window and you do not have the Discharge Function turned ON (See Discharge Function below), the instrument returns to the Waiting On Display, repeats the motion check, autozeros, autotares and/or checks the OK to Fill processes and begins fill cycle number 2, then 3, 4 and so on. (See Fig. 3-26)

NOTE: *It is important to note that if Auto Preact is ON, the Filler/Dispenser will automatically adjust the Ingredient Pre-Act parameter insuring that "UNDERFILL" and "OVERFILL" conditions do not occur. The new Pre Act value is saved for the*

ingredient being filled and becomes part of the Ingredient Parameter. It is highly recommended that you turn the Auto Pre-Act function ON. (For configuration information see the HI 3010 Service Manual for instructions)

```
┌─────────────────────────────────┐
│                                 │
│    Flour                        │
│    AMT        0.00/225.00       │
│    CYCLES      2/56             │
│           WAITING        ON     │
│                                 │
└─────────────────────────────────┘
```

FIG. 3-26 BEGINNING FILL CYCLE #2

Step 11. The Filler Continues going through the fill cycles until all the fill cycles are completed. (See Fig. 3-27)

```
┌─────────────────────────────────┐
│                                 │
│    Flour                        │
│    AMT        225.00/225.00     │
│    CYCLES      56/56            │
│           FAST FILL      ON     │
│                                 │
└─────────────────────────────────┘
```
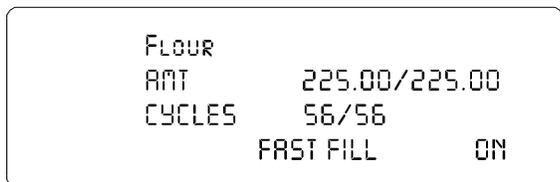
FIG. 3-27 LAST FILL CYCLE

Step 12. After completion of all the cycles, the Filler/Dispenser goes back to the Standby Menu. (See Fig. 3-28)

```
┌─────────────────────────────────┐
│                                 │
│    Flour                        │
│    AMT REQ     225.00 LB        │
│    CYCLES         56            │
│    GROSS WT  00.00       OFF    │
│                                 │
└─────────────────────────────────┘
```
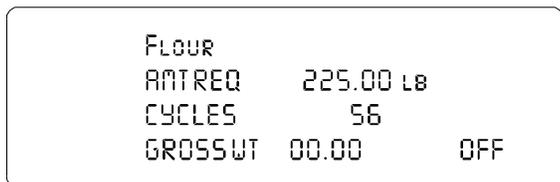
FIG. 3-28 STANDBY MENU

Step 13. The Standby Menu enables you to select another ingredient, Target Weight, Number of Cycles, and User to begin a new filling process.

Jog Function

Step 1. If the gain-in-weight detected in the wait timer/state is below the target window and the Jog Function is turned on, the Jog function automatically comes on. (See Fig. 29)

NOTE: *To prevent excessive Jogging make sure you have turned the Auto Pre-Act ON.*

```
┌─────────────────────────────────┐
│                                 │
│    Flour                        │
│    AMT        224.15/225.00     │
│    CYCLES      25/56            │
│                 JOG1     ON     │
│                                 │
└─────────────────────────────────┘
```
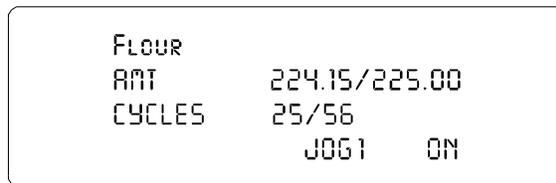
FIG. 3-29 JOG ON DISPLAY

• The Filler/Dispenser goes through one JOG sequence that was previously set up for this ingredient. (See Figs. 3-30 & 3-31)

• To set up the JOG Parameters see the HI 3010 Installation and Service Manual.

```
┌─────────────────────────────────┐
│                                 │
│    Flour                        │
│    AMT        224.15/225.00     │
│    CYCLES      25/56            │
│    TIME 0.0s    JOG1     ON     │
│                                 │
└─────────────────────────────────┘
```

FIG. 3-30 JOG 1 DISPLAY

```
┌─────────────────────────────────┐
│                                 │
│    Flour                        │
│    AMT        224.55/225.00     │
│    CYCLES      25/56            │
│    TIME 2.0s    JOG1     ON     │
│                                 │
└─────────────────────────────────┘
```
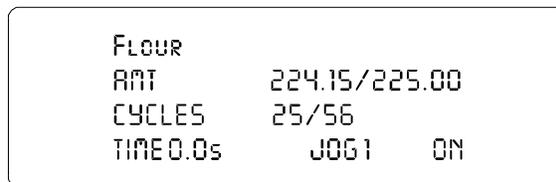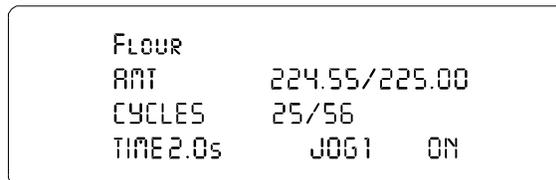
FIG. 3-31 JOG DISPLAY/JOG 1 2.0 SECONDS

1. The instrument goes to the Jog Off state where it checks to see if the gain in weight is within the target window. A timer is displayed counting the time the instrument is in the Jog Off state. (See Fig. 3-32)
2. If the gain in weight is still NOT within the target window, the instrument automatically continues through the preset JOG sequences until the target window is reached and then continues on to another procedure.
3. If gain in weight is within the target window, the fill process continues to another function.

Pausing the Jog Function

- You can pause the JOG cycle by pushing the Stop button once at any time during the JOG cycle.

  1. If you pause the Jog On cycle the JOG Hold display appears. (See Fig. 3-32)

```
Flour
AMT       224.20/225.00
CYCLES    25/56
               JOG1   HLD
```

FIG. 3-32 PAUSING JOG IN THE JOG ON CYCLE

  2. If you pause the Jog Off cycle the JOG Hold display appears. (See Fig. 3-33)

```
Flour
AMT       224.20/225.00
CYCLES    25/56
TIME1.0s     JOG1   HLD
```

FIG. 3-33 JOG PAUSED 1.0 SECOND INTO THE JOG OFF SEQUENCE

Discharge Function

After a fill completes, which may include a JOG if necessary, you have the option to Discharge the Fill. Once the instrument has determined that the fill is within the target window, it discharges the fill before returning to the Fill ON Display or the Fill Standby Display depending on which fill cycle you just finished.

The Discharge and Auto Discharge Function are user selectable and must be turned ON during Setup. (To turn the Discharge Functions ON, see the HI 3010 Installation and Service Manual for instructions)

Step 1. The Filler/Dispenser then gets set to Discharge the current fill. The Awaiting Command to Discharge display appears if Auto Discharge is Off and Discharge is On. (See Fig. 3-34) To start the discharge push the Start button. The Command to discharge can also come from a PLC or other controller.

```
Flour
AMT       225.00/225.00
!AWAITNG COMMAND!
  TODISCHARGE!       HLD
```

FIG. 3-34 AWAITING COMMAND TO DISCHARGE DISPLAY

Step 2. If the OK to Discharge is ON, the instrument checks to see if it is OK to discharge. The instrument also checks to see if the discharge gate is open.

- If it is OK to discharge and no DISCHARGE GATE NOT OPEN alarms appear. The instrument opens the discharge gate and discharges the current fill.

Step 3. The system discharges the current fill. The Discharge display appears showing a steady loss in weight. If there is no loss in weight and you have enabled the Auto Auxiliary function the instrument turns on the auxiliary timer at the same time. (See Fig. 3-35)

```
Flour
AMT       50.20/225.00
AUXILIARY          ON
 DISCHARGE         ON
```

FIG. 3-35 AUTO AUXILIARY ON DISPLAY

- If you want to pause the Auxiliary function. Press the Stop button once. The Actuate for Discharge Display changes from ON to HLD. (See Fig. 3-36)
- To restart the actuate Auxiliary function press the Start button.

```
Flour
AMT       50.20/225.00
AUXILIARY          HLD
 DISCHARGE         HLD
```

FIG. 3-36 PAUSING THE ACTUATE FUNCTION

NOTE: If you want to Stop the auxiliary function press the Stop button two times.

Filling - Dual Speed

About Dual Speed Filling

Dual speed filling involves two fill rates, Fast and Slow Sequential and Fast and Slow Simultaneous.

- For Sequential filling the Fast fill rate rapidly fills material into a vessel up to a pre set weight set point. At that point the slow fill rate begins to slowly fill the container to the target weight.
- For Simultaneous filling the Fast and Slow fill rates start simultaneously until the fill material reaches a preset weight set point for fast fill, at which time the Fast fill stops. The Slow fill continues to slowly fill the vessel to the target weight.

Most of the Steps and alarms for the Dual Speed Filler are the same as the Single Speed Filler except for the following:

Dual Speed (Simultaneous)

- Once filling begins, the Fast Fill Display appears. (See Fig. 3-37)

```
 Flour
 AMT        9.00/225.00
 CYCLES      1/56
           FAST FILL      ON
```

FIG. 3-37 FILL DISPLAY FAST FILL ON

- Even though only Fast Fill is displayed the slow fill is operating.
- When Fast Fill reaches the Fast Fill Set Point, it shuts off.

NOTE: The "Fast Fill" appears for both Single or Dual Speed Filling.

```
 Flour
 AMT       223.90/225.00
 CYCLES      1/56
           SLOW FILL      ON
```

FIG. 3-38 SLOW FILL DISPLAY

- The slow fill continues until the gain in weight reaches the Target Window. (See Fig. 3-38)

Dual Speed Sequential

- Once filling begins, the Fast Fill Display appears. (See Fig. 3-39)

```
 Flour
 AMT        9.00/225.00
 CYCLES      1/56
           FAST FILL      ON
```

FIG. 3-39 FILL DISPLAY FAST FILL ON

- When the Fast Fill reaches the Fast Fill Set Point, it shuts off.

NOTE: The "Fast Fill" appears for both Single or Dual Speed Filling.

```
 Flour
 AMT       223.90/225.00
 CYCLES      1/56
           SLOW FILL      ON
```

FIG. 3-40 SLOW FILL DISPLAY

- The slow fill starts and operates until the gain in weight reaches the Target Window. (See Fig. 3-40)

Pausing Fast Fill

- To pause the Fast Fill, press the Stop button once. (See Fig. 3-41)

```
 Flour
 AMT        9.00/225.00
 CYCLES      1/56
           FAST FILL      HLD
```

FIG. 3-41 FAST FILL HOLD

- To resume Fast fill press the Start button.

Pausing Slow Fill

• To pause the Slow Fill, press the Stop button once. (See Fig. 3-42)

```
┌─────────────────────────────────┐
│  FLOUR                          │
│  AMT         9.00/225.00        │
│  CYCLES      1/56               │
│              SLOW FILL    HLD   │
└─────────────────────────────────┘
```
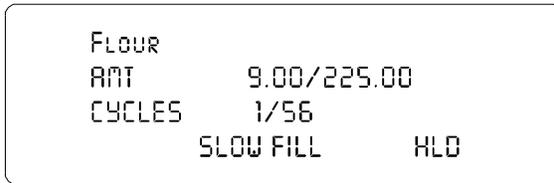
FIG. 3-42 SLOW FILL HOLD

• To resume Slow fill press the Start button.

List of Fill Alarms

Not OK to FILL Alarm

- - - - - ALARM CONDITION - - - - -

• If the function is turned on and it is NOT OK TO FILL, an alarm appears in the display. (See Fig. 3-43)

```
┌─────────────────────────────────┐
│  FLOUR                          │
│  AMT         0.00/225.00        │
│  !NOT OK TO FILL!               │
│  !ALARM!         FILL  HLD      │
└─────────────────────────────────┘
```
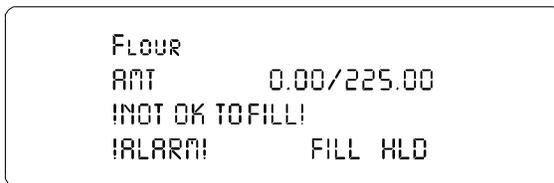
FIG. 3-43 NOT OK TO FILL

1. The Operator needs to determine why it is NOT OK to FILL by checking for problems with the electrical and /or mechanical systems.
2. Once the problem has been fixed, push the Clear button to clear the Alarm. The Filler/Dispenser returns to the standby mode awaiting a Start Command.

NOTE: *The OK to Fill Timer has a preset time to determine if it is OK to Fill. If the OK to Fill times out, it means that the preset time may be too short for the process and the NOT OK to FILL Alarm appears with no real alarm conditions. You may need to reset the timer if it appears that no electrical or mechanical reason for the alarm is determined. The OK to FILL timer may be set incorrectly for your process. See the HI 3010 Service Manual for Instructions on setting the OK to FILL Timer.*

Lost OK to Fill Alarm

- - - - - ALARM CONDITION - - - - -

During the filling process, conditions may develop that cause the Filler/Dispenser to lose the OK to FILL during Fast Fill or Slow Fill. When this occurs an alarm appears that says LOST OK TO FILL. (See Figs. 3-44 & 3-45)

```
┌─────────────────────────────────┐
│  FLOUR                          │
│  AMT         0.00/225.00        │
│  !LOST OK TO FILL!              │
│  !ALARM!    FAST FILL  HLD      │
└─────────────────────────────────┘
```
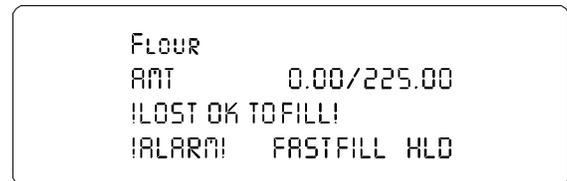
FIG. 3-44 LOST OK TO FILL ALARM/FAST FILL

```
┌─────────────────────────────────┐
│  FLOUR                          │
│  AMT         0.00/225.00        │
│  !LOST OK TO FILL!              │
│  !ALARM!---- SLOW FILL  HLD     │
└─────────────────────────────────┘
```
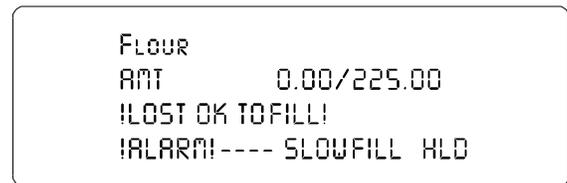
FIG. 3-45 LOST OK TO FILL ALARM/SLOW FILL

1. The Operator needs to determine why the system LOST OK to FILL by checking for problems with the electrical and /or mechanical systems.
2. Once the problem has been fixed, push the Clear button to clear the Alarm.
3. If the OK to FILL was lost while in the fast or slow fill mode a display asking if you want to Resume the Fast Fill (See Fig. 3-46) or the Slow Fill (See Fig. 3-47). If you want to resume the Fast or Slow fill press the Start button. If you do not want to resume the fill press the Stop button which takes you back to the Standby mode and does not complete any more cycles.

```
┌─────────────────────────────────┐
│  FLOUR                          │
│  AMT         110.20/225.00      │
│   RESUME FILLING FAST           │
│    PRESS START         HLD      │
└─────────────────────────────────┘
```

FIG. 3-46 RESUME FILLING FAST

```
 FLOUR
 AMT        110.20/225.00
  RESUME FILLING SLOW
   PRESS START        HLD
```
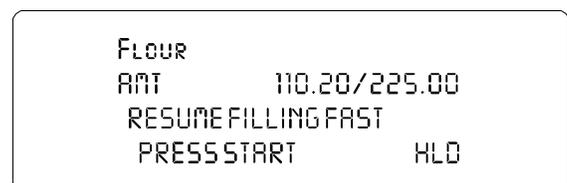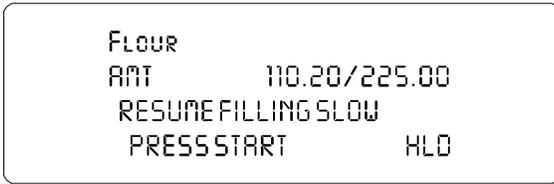
FIG. 3-47 RESUME FILLING SLOW

No Fast Feed Alarm

- - - - - ALARM CONDITION - - - - -

• If the Fast Fill Gate valve or feeder is not open or on at the time you want to fill, the NO FAST FEED alarm appears on the display. (See Fig. 3-48)

```
 FLOUR
 AMT        224.20/225.00
 !NO FAST FEED!
  !ALARM!              HLD
```
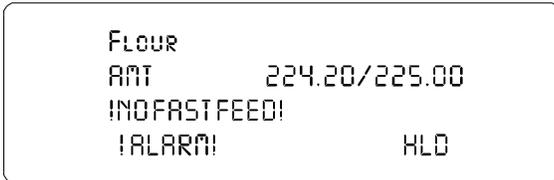
FIG. 3-48 NO FAST FEED ALARM

1. Determine why you do not have fast feed and correct the problem.
2. Press the Clear button to clear the alarm. The RESUME FILLING FAST display appears for single speed/sequential filling. (See Fig. 3-49)

```
 FLOUR
 AMT          0.00/225.00
  RESUME FILLING FAST
  PRESS START         HLD
```
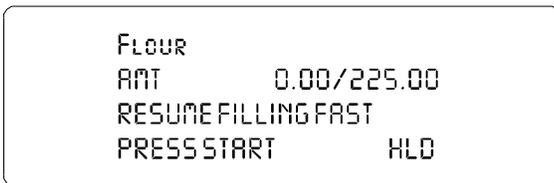
FIG. 3-49 RESUME FILLING FAST DISPLAY

3. Press the Start button to resume fast fill.
4. In dual speed simultaneous operation press the Clear key to clear the alarm. The RESUME FILLING SLOW display appears.

NOTE: This gives you the option to do the fill at the slow speed only, which takes much longer.

Feed On Alarm

- - - - - ALARM CONDITION - - - - -

• If the Fast Fill Gate valve or feeder does not close or stop at the end of a fill, the FEED ON alarm appears on the display. (See Fig. 3-50)

```
 FLOUR
 AMT        225.36/225.00
 !FAST FEED ON!
  !ALARM!             HLD
```
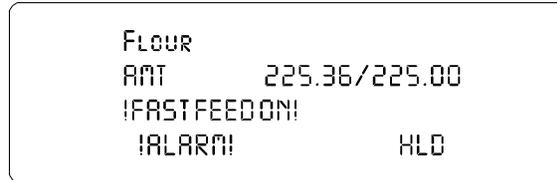
FIG. 3-50 FAST FEED ON ALARM

1. Determine why the Fast Feed is on and correct the problem.
2. Press the Clear button to clear the alarm.
3. If the target weight is NOT within the target window and you do not have the JOG function turned ON, the fill is not accepted and an UNDER FILL! or OVER FILL alarm appears depending on the weight filled.

No Slow Feed Alarm

- - - - - ALARM CONDITION - - - - -

• If the Slow Fill Gate valve or feeder is not on or open at the time you want to slow fill, the NO SLOW FEED alarm appears on the display. (See Fig. 3-51)

```
 FLOUR
 AMT          0.00/225.00
 !NO SLOW FEED!
  !ALARM!             HLD
```
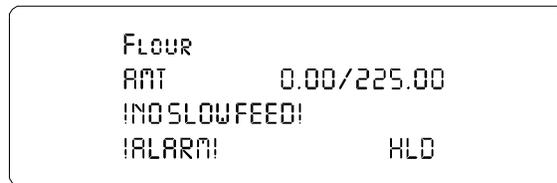
FIG. 3-51 NO SLOW FEED ALARM

1. Determine why there is No Slow Feed and correct the problem.
2. Press the Clear button to clear the alarm. The "RESUME FILLING SLOW" display appears for dual speed sequential filling application (See Fig. 3-52)

```
    Flour
    AMT        222.00/225.00
    RESUME FILLING SLOW
    PRESS START        HLD
```
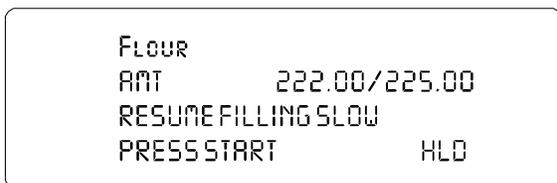
FIG. 3-52 RESUME FILLING SLOW

3. Press the Start button to resume slow filling.

NOTE: At the beginning of a fill in Dual Speed Simultaneous filing, the instrument checks to be sure there is a slow fill before starting the fast fill. If there is no Slow Fill the NO SLOW FEED ALARM is displayed. Clearing the alarm takes the system back to the Standby state. Any further fills are not completed.

Slow Feed On Alarm

- - - - - ALARM CONDITION - - - - -

•   If the Slow Fill Gate valve or feeder does NOT close or turn off, the SLOW FEED ON alarm appears on the display. (See Fig. 3-53)

```
    Flour
    AMT        225.36/225.00
    !SLOW FEED ON!
     !ALARM!           HLD
```
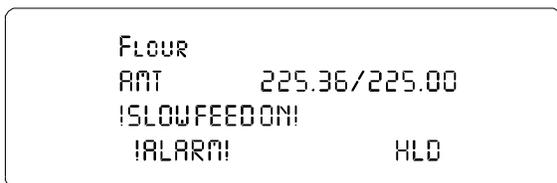
FIG. 3-53 SLOW FEED ON ALARM

1. Determine why the slow feed is on and correct the problem.
2. Press the Clear button to clear the alarm. The wait timer display appears. (See Fig. 3-54)

```
    Flour
    AMT        225.00/225.00
    CYCLES     53/56
    WAIT TIMER   23.0 S
```
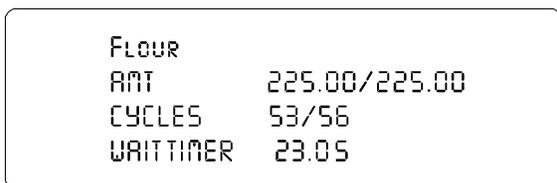
FIG. 3-54 WAIT DISPLAY

3. If the fill weight is NOT within the target window and the Jog Function is not turned on, the fill is not accepted and an UNDER FILL or OVER FILL ALARM appears depending on the weight filled.

Fill Timeout Alarm

•   If the Fill Timeout function is turned on it times the fill cycle between the ON and WAIT modes. If this time is exceeded the TIMOUT ALARM displays. (See Fig. 3-55)

```
    Flour
    AMT        110.20/225.00
       !TIMEOUT!
       !ALARM!
```
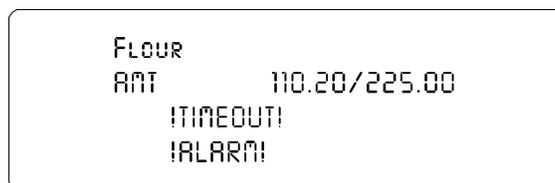
FIG. 3-55 TIMEOUT ALARM

1. Do a physical check of your system looking for blockages or breaks and make corrections as necessary.
2. Press the Clear button to clear the alarm. Depending on whether you are operating in single or dual speed and when the timeout occurred one of the following displays will appear. (See Figs. 3-56 or 3-57)

```
    Flour
    AMT        110.20/225.00
     RESUME FILLING FAST
      PRESS START        HLD
```

FIG. 3-56 RESUME FILLING FAST

```
    Flour
    AMT        110.20/225.00
     RESUME FILLING SLOW
      PRESS START        HLD
```
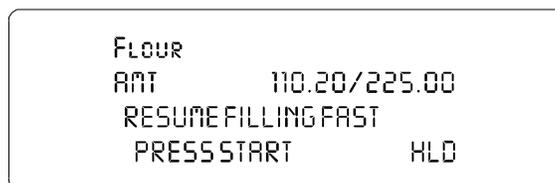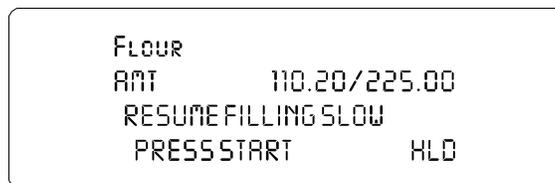
FIG. 3-57 RESUME FILLING SLOW

3. Press the Start key to resume the fast or slow fill.

4. If the Stop button is pressed the instrument will go to Standby mode and does not complete any more requested cycles.

Underfill /Overfill Alarm

- - - - - ALARM CONDITION - - - - -

```
Flour
AMT        223.00/225.00
!UNDERFILL!           LB
!ALARM!              HLD
```
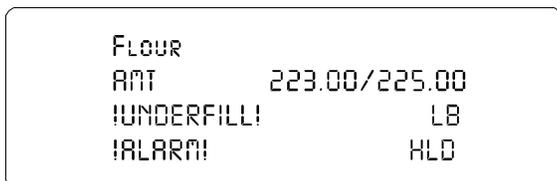
FIG. 3-58 UNDERFILL ALARM

```
Flour
AMT        227.00/225.00
!OVERFILL!            LB
!ALARM!              HLD
```
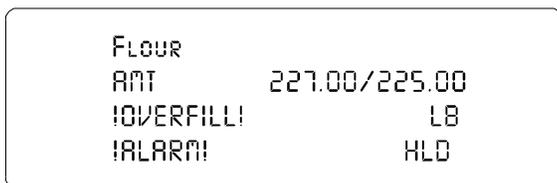
FIG. 3-59 OVERFILL ALARM

• OVERFILL ALARM, press the Clear button to clear the alarm. The Accept the Fill display appears. (See Fig. 3-60) At this time you can:

1. Accept the fill by pressing the START button.
2. If your system allows, physically remove some of the material until it meets the target window requirements and then press the START button.
3. The instrument returns to the Waiting On Display, repeats the motion check, autozeros, autotares and/or checks the OK to Fill processes and begins the next fill cycle.

```
Flour
AMT        224.80/225.00
TO ACCEPT FILL        LB
PRESS START          HLD
```
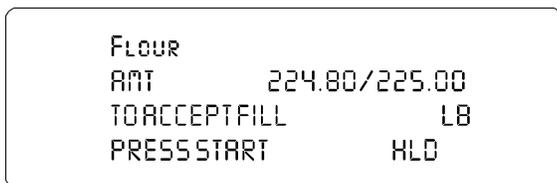
FIG. 3-60 ACCEPT FILL DISPLAY

• UNDERFILL ALARM, press the Clear button to clear the alarm, the Accept the Fill display appears. At this time you can:

1. Accept the fill by pressing the START button.
2. I your system allows, physically add some of the material until it meets the target window requirements and then press the START button.
3. The instrument returns to the Waiting On Display, repeats the motion check, autozeros, autotares and/or checks the OK to Fill processes and begins the next fill cycle.

• If the gain in weight is NOT within the target window and the JOG function is turned ON the Filler/Dispenser automatically does the following:

1. If the out of target window is an OVERFILL the OVERFILL alarm appears. Clear the alarm using the same procedures for the OVERFILL Alarm in the previous section.
2. If the out of target window is an UNDERFILL, the Jog ON display appears.

Filler Jog Alarms

Did Not Jog Alarm

- - - - - ALARM CONDITION - - - - -

• The instrument checks to see if the gate valve or feeder of the vessel opens or comes on. If the DID NOT JOG ALARM appears on the display, the Filler/Dispenser is placed in a hold state. (See Fig. 3-61)

```
Flour
AMT        224.20/225.00
!DID NOT JOG!
!ALARM!   JOG1   HLD
```
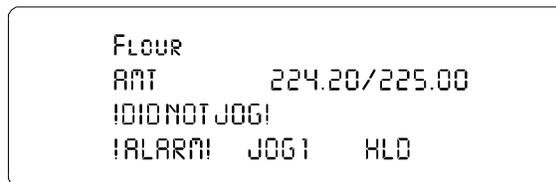
FIG. 3-61 DID NOT JOG ALARM

1. Check to see why there was no Jog. Correct the problem. Press on the Clear button to clear the alarm. (See Fig. 3-62)

```
FLOUR
AMT        224.99/225.00
TO JOG AGAIN
PRESS START        HLD
```
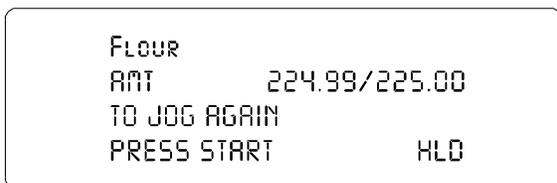
FIG. 3-62 TO JOG AGAIN PRESS START DISPLAY

2. The Jog sequence resumes from where the Jog left off when it was paused.

Jog Stuck On Alarm

- - - - - ALARM CONDITION - - - - -

• After each jog the instrument goes to a pause state (Jog OFF) for a pre-determined period of time if the jog stops. In this state it checks the weight to see if it is within the target window. If it is the instrument moves on to the next cycle. If it is not it jogs again as long as the allowable number of jogs has not been exceeded. If the Jog does not stop the JOG STUCK ON ALARM appears. (See Fig. 3-63)

```
FLOUR
AMT        224.20/225.00
!JOG STUCK ON!
!ALARM!      JOG 1    HLD
```
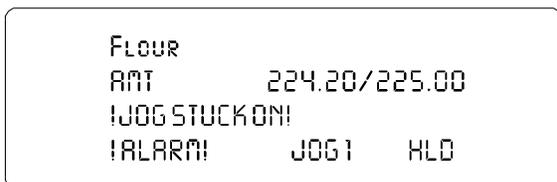
FIG. 3-63 JOG STUCK ON ALARM

1. Check to see why the gate valve or feeder did not close or stop. Correct the problem. Press on the Clear button to clear the alarm.
2. The instrument goes back to the WAIT mode where it checks if the weight is within the target window. If it is still under the target window the instrument begins another job cycle.

Jog Count Alarm

- - - - - ALARM CONDITION - - - - -

• If the configured JOG sequences are completed and an UNDERFILL condition still exists, a JOG count alarm appears telling

you that you have used up the JOGs for this sequence. (See Fig. 3-64)

```
FLOUR
AMT        224.35/225.00
!JOG COUNT!
!ALARM!      JOG 9    ON
```
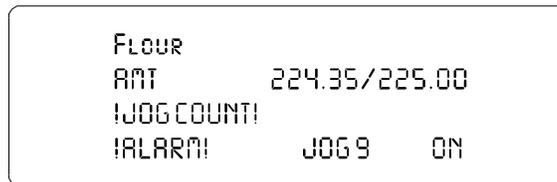
FIG. 3-64 JOG COUNT ALARM

1. Press the Clear button to clear the alarm.
2. The JOG display reappears asking you if you want to start the JOG sequence again. (See Fig. 3-65)

```
FLOUR
AMT        224.35/225.00
JOG 9 CONTINUE?        LB
PRESS START   JOG 9   HLD
```
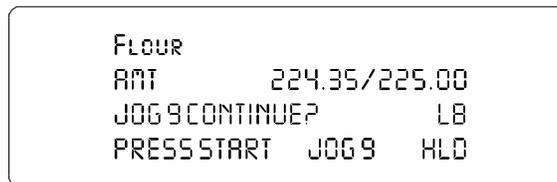
FIG. 3-65 JOG DISPLAY/JOG AGAIN

3. If you want the instrument to JOG again, press the Start button to repeat the JOG sequence.
4. If you DO NOT want the instrument to JOG again, press the Stop button. The instrument goes to the Standby Menu and does NOT complete any more cycles.

Filler Discharge Alarms

Not OK to Discharge Alarm

- - - - - ALARM CONDITION - - - - -

• If the OK to Discharge function is turned on and the instrument does not see an OK to Discharge, a Not OK to discharge alarm appears. (See Fig. 3-66)

```
FLOUR
AMT        225.00/225.00
!NOT OK TO DISCHARGE
!ALARM!            HLD
```
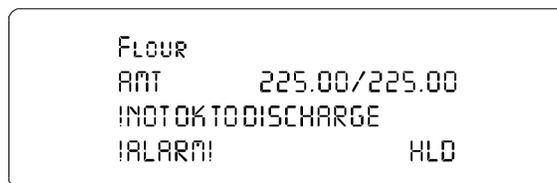
FIG. 3-66 NOT OK TO DISCHARGE ALARM

1. Check to see what is causing the Not OK to discharge alarm to appear.
2. Correct the problem.
3. Press the Clear button to clear the alarm. If Auto Discharge is On, the instrument looks for an OK to Discharge signal. If Auto Discharge is Off the Awaiting Command to Discharge display appears. (See Fig. 3-67)

```
┌─────────────────────────────────┐
│  FLOUR                          │
│  AMT        225.00/225.00       │
│  !AWAITNG COMMAND!              │
│   TO DISCHARGE!         HLD     │
└─────────────────────────────────┘
```
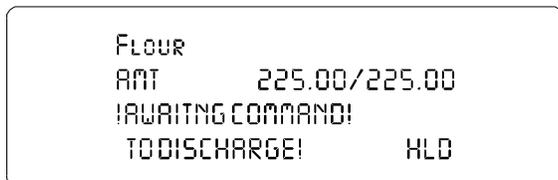
FIG. 3-67 AWAITING COMMAND TO DISCHARGE

No Discharge Alarm

- - - - - ALARM CONDITION - - - - -

•   If the instrument determines that the discharge did not occur, the NO DISCHARGE alarm appears. (See Fig. 3-68)

```
┌─────────────────────────────────┐
│  FLOUR                          │
│  AMT        225.00/225.00       │
│  !NO DISCHARGE                  │
│  !ALARM!               HLD      │
└─────────────────────────────────┘
```
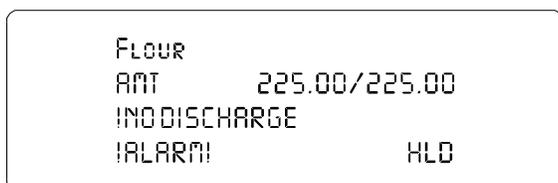
FIG. 3-68 NO DISCHARGE ALARM

1. Check to see what is preventing the discharge.
2. Correct the problem.
3. Press the Clear button to clear the alarm. If Auto Discharge is On the instrument starts monitoring the loss-in-weight. If the Auto Discharge is Off the Awaiting Command to Discharge display appears. (See Fig. 3-69)

```
┌─────────────────────────────────┐
│  FLOUR                          │
│  AMT        225.00/225.00       │
│  !AWAITNG COMMAND!              │
│   TO DISCHARGE!         HLD     │
└─────────────────────────────────┘
```
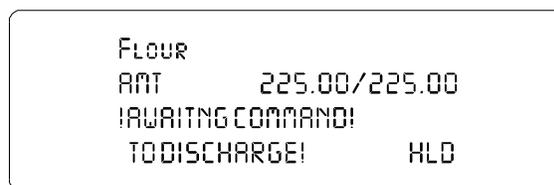
FIG. 3-69 AWAITING COMMAND TO DISCHARGE

Discharge Clogged Alarm

- - - - - ALARM CONDITION - - - - -

•   If during the discharge the discharge gate becomes clogged, and the Auxiliary is turned OFF, the DISCHARGE CLOGGED ALARM appears. (See Fig. 3-70)

```
┌─────────────────────────────────┐
│  FLOUR                          │
│  AMT        122.80/225.00       │
│  !DISCHARGE CLOGGED!            │
│   !ALARM!              HLD      │
└─────────────────────────────────┘
```
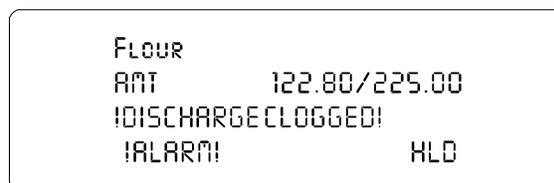
FIG. 3-70 DISCHARGE CLOGGED ALARM

•   If the Auxiliary is turned ON, the clogged gate alarm appears if the Auxiliary time elapses and there is no indication of any weight change. The DISCHARGE-CLOGGED ALARM appears. (See Fig. 3-70)

Step 4.   When the discharge is complete, the instrument closes the discharge gate and returns to the Fill On display or the Standby Display depending on the filling cycle.

Discharge On Alarm

- - - - - ALARM CONDITION - - - - -

•   If the Discharge gate valve or feeder does not close or stop, a DISCHARGE ON ALARM appears. (See Fig. 3-71)

FIG. 3-71 DISCHARGE ON ALARM

1. Check to see what is causing the problem.
2. Correct the problem.
3. Press the Clear button to clear the alarm.
4. The CLOSE DISCHARE MANU-ALLY display appears. After you manually close the discharge, press the Start button. (See Fig. 3-72)

FIG. 3-72 CLOSE DISCHARGE MANUALLY

5. The instrument returns to the Fill On display or the Standby Display depending on the filling cycle.

Operating the Filler from the Ethernet (Web Site)

Getting Started

Step 1.   Make sure you have installed the Ethernet cable between your computer and the instrument.
Step 2.   Open the browser on your computer.
Step 3.   In the URL Address field type the IP Address of the HI 3010 you want to operate (For complete instructions see the Cabling/Installation section of this manual). The Filler/Dispenser Home Page appears. (See Fig. 3-96)

FIG. 3-73 FILLER/DISPENSER HOME PAGE/ SELECTING OPERATIONS

Step 4.   Click on "Operations". When entering Operations for the first time after cycling the power off/on, an Alert asking for a User Name and Password appears. (See Fig. 3-97)

FIG. 3-74 ENTERING USER NAME AND PASSWORD

Step 5.   Enter the User Name and Password and click OK. The Operation Page appears. (See Fig. 3-98)

NOTE: When you enter the user name and password at the beginning of each session, you won't have to enter it again for the session.

Operation - Choose One

Diagnostics

Monitor

Totalizers

FIG. 3-75 OPERATION PAGE

Diagnostics - See The HI 3010 Technical Service Manual, Chapter 7 - System Integrity Check and Fault Determination From the Web Browser

Monitoring the HI 3010

The monitoring page displays the Standby and run Displays. This information is automatically updated every 3 seconds. To update it more often press on the Refresh button in your browser.

Step 1.   Click on "Monitor". The Monitor Page Appears. (See Fig. 3-99)

INGREDIENT: INGREDIENT 1
INSTRUMENT ID: Filler 31

	AMOUNT		CYCLES
ACTUAL:	-15.48 lb	PRESENT:	0
REQUESTED:	5.00 lb	REQUESTED:	1
LATEST USER:		ALARM:	No Alarms
FILL TIMER:	0.0 s	STATUS:	OFF........STANDBY

Back

FIG. 3-76 MONITORING THE INSTRUMENT

Step 2.   Click on "Back" to return to the Operation page.

View and Clear Totalized Weight

This page provides the Totalized Weight for each ingredient that has been selected. It reads the totalized weight for Ingredient 1-12 from the last time the totalized ingredient weight was cleared. The page also allows you to clear an ingredients totalized weight.

Step 1.   Click on "Totalizers". The Totalizer page appears. (See Fig. 3-100)

Operation - Totalizers

Instrument ID: Hardy Dispenser
Units: lb

Ingr. #	Ingr. Name	Totalized Weight	Cycles
1	INGREDIENT 1	0	0
2	INGREDIENT 2	0	0
3	INGREDIENT 3	0	0
4	INGREDIENT 4	0	0
5	INGREDIENT 5	0	0
6	INGREDIENT 6	0	0
7	INGREDIENT 7	0	0
8	INGREDIENT 8	0	0
9	INGREDIENT 9	0	0
10	INGREDIENT 10	0	0
11	INGREDIENT 11	0	0
12	INGREDIENT 12	0	0

Clear Totalizer [None ▾]

Clear Totalizer

Caution: pressing the Clear Totalizer button will set the selected totalizer value to zero.

FIG. 3-77 OPERATION - TOTALIZERS PAGE

Step 2.   Click on the Clear Totalizer Pull Down menu to select an ingredient whose totalized weight you want to clear. (See Fig. 3-101)

9	INGREDIENT 9	0
10	INGREDIENT 10	0
11	INGREDIENT 11	0
12	INGREDIENT 12	0

Clear Totalizer [Ing. #5 ▾]

Clear Totali   ion: pressing the Clear Totalizer
value to zero.

Ing. #3
Ing. #4
Ing. #5
Ing. #6
Ing. #7
Ing. #8
Ing. #9
Ing. #10
Ing. #11
Ing. #12
ALL

Home - Operation - Configuration

HI 3000 Series Online Support Site

FIG. 3-78 CLEAR TOTALIZER LIST/SELECTING INGREDIENT TO CLEAR

Step 3.   Click on the Ingredient # you want to clear.
Step 4.   Click on the Clear Totalizer button to clear the totalized weight for the selected ingredient.

CAUTION: PRESSING THE CLEAR TOTALIZER BUTTON WILL SET THE SELECTED TOTALIZER TO ZERO.

Step 5.   Click on "Home" to return to the Filler/Dispenser Home Page.

NOTE: *The ability to operate the instrument from a Web Page will be available in future iterations of the Web Site.*

Operating in Manual Mode from the Front Panel

The HI 3010 allows the user to perform some of the operations in manual mode. The following Filling Functions can operate Manually:

- Tare Scale
- Discharge
- Refill
- Auxiliary Device (Output Relay)
- Fast Fill
- Slow Fill

Step 1.   Press the Manual button. The Manual Mode display appears with the cursor in front of Tare Scale. (See fig. 3-102)

```
MANUAL MODE
>TARE SCALE          ->
 DISCHARGE           ->
 REFILL              ->
```
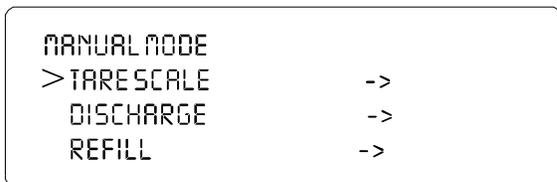
FIG. 3-79 MANUAL MODE DISPLAY/SELECTING TARE SCALE

Step 2.   Press the Enter button. The Tare Mode display appears. (See Fig. 3-103)

```
TARE MODE
PRESS CLEAR KEY
NOW
```
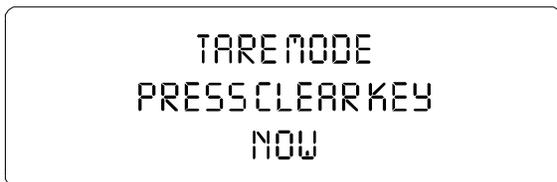
FIG. 3-80 TARE MODE DISPLAY

Step 3.   Follow the instruction on the screen. To Tare the scale press the Clr. (Clear) button. A display appears momentarily that says Tare Complete.

Step 4.   Press the Exit button to return to the Manual Mode Display.

NOTE: *Each one of the displays will have a little different instructions.*

Step 5.   Press the down arrow until the cursor is in front of Discharge

Step 6.   Press the Enter button. The Discharge Mode display appears. (See Fig. 3-104)

```
DISCHARGE MODE
PRESS START KEY NOW
TO START DISCHARGE
```
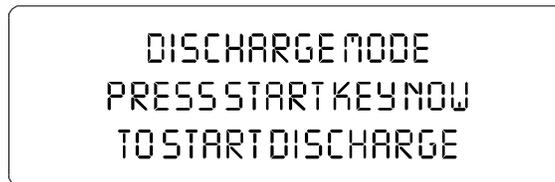
FIG. 3-81 DISCHARGE MODE DISPLAY/STARTING DISCHARGE

Step 7.   Press the Start button. To stop the discharge you will have to manually press the stop button. (See Fig. 3-105)

```
DISCHARGE MODE
PRESS STOP KEY NOW
TO STOP DISCHARGE
```
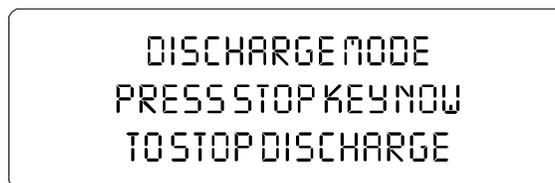
FIG. 3-82 DISCHARGE MODE DISPLAY/STOPPING DISCHARGE

Step 8.   To select another function, press the up or down button to move the cursor in front of the function that you want to perform.

Step 9.   Press Exit to return to the Manual Mode display.

Step 10.   Press Exit to return to the Standby display.

Operating in Manual Mode from the Web Browser

You currently cannot operate the instrument from the Web Browser.

CHAPTER 4: OPERATING PROCEDURES/DISPENSER

Dispensing Procedures

About Dispensing

The Dispenser is a Loss-in-Weight instrument. The Dispenser controller measures the weight loss out of a vessel, until the pre-set, Target Weight has been reached. The Dispenser controller then stops dispensing and automatically goes to a wait condition, waiting for the next container to be positioned. Once the new container is in the correct position the Dispenser begins the process over again. The Hardy Filler/Dispenser enables both single speed and dual speed dispensing and simultaneous and sequential modes of operation.

Getting Started

Before operating the Hardy HI 3010 Filler/Dispenser, check to make sure the following procedures have been performed:

- Power and Load Point cables properly installed.
- Communication cables properly installed.
- Calibration Performed.

All the features of the Filler/Dispenser operate the same no matter what the interface. First let's get familiar with operating the Filler/Dispenser from the front panel of the instrument. (See Fig. 4-1)

Help

About Help

As you move through the setup/configuration menus you may on occasion need assistance. If you need help, do the following:

Step 1. Use the up and down arrows and move the cursor in front of the Menu Item you want help on.
Step 2. Click the Help button either on the front Panel, or Web Page and a Help Dialog appears. The help dialog tells you what the Menu Item is used for or other descriptive information to help you enter the right parameters for the current menu item.
Step 3. Push the Exit button to return to the current menu.

Operating the Dispenser from the Front Panel

FIG. 4-1 FRONT PANEL

Front Panel Display

The Front Panel Display is a 4 line x 20 Alphanumeric character LCD. The screen displays all the menus for Configuring, Calibrating and Operating the HI 3010 Filler/Dispenser.

Button Functions

Start Button
The Start Button starts or restarts the filling or dispensing process.

Stop Button
The Stop button if pressed once will pause the filling or dispensing process. If the Stop Button is pressed twice it stops the process and puts the Filler/Dispenser in a standby mode.

Help Button

The Help button displays a Help message for the current Menu item (the Menu item in front of the cursor) that is displayed. In Standby the Help button does not display a Help message.

Manual Button

Enables you to enter the manual mode of operation

Print Button

The Print Button when pressed brings up a series of screens and allows the user to Print the following:

- Current Dispense
- Current Cycle
- Totals
- Setup Data
- Self Test

Press the Print button, the following screen appears:

```
PRINT KEY MENU
> Print current Disp
  Print Current Cycle
  Print Totals
```
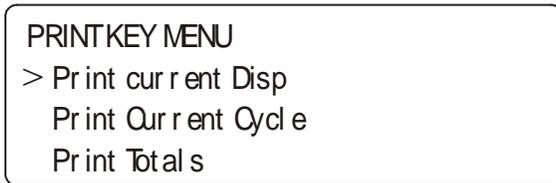
FIG. 4-2 PRINT SCREEN DEFAULT FOR DISPENSER

Note that the cursor is in front of the Print Current Dispense menu. That is the default setting. The print button will only print the menu with a cursor in front of it. To move to another menu press the up or down arrow until the cursor is in front of the menu you want to print.

Up/Down - Left/Right Buttons
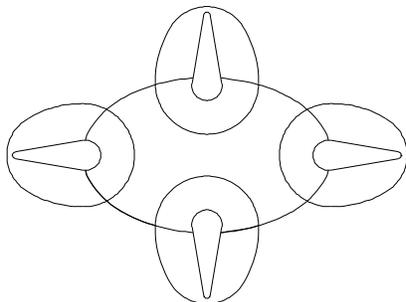
FIG. 4-3 DIRECTIONAL BUTTONS

The Up/Down arrow buttons move the cursor vertically allowing the user to scroll through each item of a menu. The Left/Right arrow buttons move the cursor horizontally left and right. The Left arrow button has an added backspace function. For example if there are Alpha/Numeric characters that appear in the display, as you press the left button it erases the characters. The Right arrow button moves the cursor to the right in the display and does not erase an alphanumeric entry. The Left/Right arrow buttons also move the cursor through a pick list. (See Fig. 4-3)

Enter Button

The Enter button enters the Alpha/Numeric value entered for a menu item in the display. The Enter button also enters the selections from a pick list. (See Fig. 4-4)

```
SELECT UNITS USING
LEFT & RIGHT BUTTONS
THEN PRESS ENTER    LB  POUNDS
                 >  KG  KILOGRAMS
                    OZ  OUNCES
                    G   GRAMS
```

FIG. 4-4 LIST SELECTION/ENTER BUTTON

For example, when selecting units from a pick list, use the left and right arrows to move the cursor in front of the unit you want and press the Enter button.

Exit Button

The Exit button disregards the current value entry, restores the previous value and moves the cursor to the last menu.

Clear Button

The Clear button clears the total Alpha/Numeric Entry and repositions the cursor for the first entry.

Ingr./1 Button

Enables you to change the pre programmed ingredient (1-12) while in the Standby Mode. Also enters the integer 1 in the display.

2/ABC Button

Enters the integer 2 in the display. Also enters the characters A, B, C. Pushing the button once enters the integer 2.

NOTE: For numeric entries only: Push the button and the number on the button is entered.

NOTE: For Alphanumeric entries only: Pushing the button once, the first letter on the button is entered in uppercase, A, D, G, and so on. Push the button a second time, the second letter is entered in uppercase, B, E, H, K and so on. Push the button a third time, the third letter is entered in uppercase, C, F, I, L, and so on. Push the button a fourth time, the fourth letter is entered in uppercase, S, Z. Push the button a fifth time the first letter is entered in lowercase, a, d, g, and so on. After you go through the lowercase letters, you can push the button again for the number. You need to push the buttons rapidly. If you delay too long the instrument will accept the alphanumeric character and move the cursor to the left preparing for the next alphanumeric entry. This is true for all the Alphanumeric buttons. If this occurs use the left arrow button to erase the current entry and enter another.Setup/3/DEF Button

This enables you to access the configuration and setup menus. Also enters the number 3 and the letters D, E, F.

Amount/4/GHI

Enables you to change the amount of the ingredient while in the standby mode. Also enters the number 4 and the letters C, H, I.

Units/5/JKL Button

Enables you to change the units of measure (Lbs/Kg/oz/g) while in the standby mode of operation. Also enters the integer 5 and the letters J, K, L.

6/MNO Button

Enters the integer 6 and the letters M, N, O.

Cycle/7/PQRS Button

Enables you to change the number of cycles (fills or dispenses) while in the standby mode. Also enters the integer 7 and letters P, Q, R, S.

8/TUV Button

Enters the integer 8 and the letters T, U, V.

Test/9/WXYZ Button

Enables you to enter the selftest or diagnostics mode. Also enters the inter 9 and letters W, X, Y, Z.

User/./_/@ Button

Enables you to change the 3 digit user code while in the standby mode. Also enters the period (.), underscore (_) and @ symbols.

0/Char. Button

Enters the integer 0 in the display. When you push the button the second time a set of characters appears in the display.

Step 1. Using the up and down arrow buttons move the cursor in front of the character you want to display.
Step 2. Press the Enter Button to select the character.
Step 3. Press the Exit Button to return to the display. The character should now appear next to the cursor.

Starting Up for the First Time

When the HI 3010 Filler/Dispenser powers up after delivery from the factory, a display appears asking you to choose the application you want to use. The Display appears in the Front Panel Display and Web Site.

Step 1. The First display you will see on a product right from the factory or when changing from a Filler to a Dispenser, is the "How Will I Be Used?" Display asking you what you how to use the Filler/Dispenser. (See Fig. 4-5)

How Will I Be Used?
Press Enter Key to
Choose.
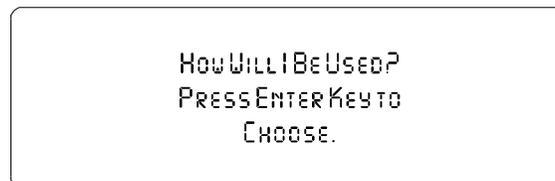
FIG. 4-5 FIRST DISPLAY

Step 2. Press the Enter Button from the Front Panel, or left click on OK in the Web Dialog Box. The "Choose One" Screen appears. (See Fig.4-6)

Choose One
FILLER
> DISPENSER
IBC DISPENSER
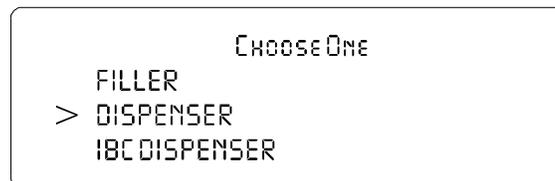
FIG. 4-6 INSTRUMENT SELECTION DISPLAY

Step 3. Use the up and down arrows to move the cursor in front of the instrument you want to use. The Filler Instrument is the default selection.
Step 4. Press on the Enter button. The Selection Alert display appears asking if you are sure you want this instrument. (See Fig. 4-7)

• If you are sure you want the Instrument Selected, press the Enter Key from the Front Panel; left click OK in the Web Page. The Standby Display appears. (See Fig.4-8)
• If you are sure you DO NOT want this instrument, or are uncertain about what selection you have made, press the Exit Key or left click on Cancel in the Web Page. The Instrument Selection Display reappears. Repeat Steps 2 and 3.

```
If you are sure you
want this instrument to
be a dispenser
Press the Enter Key
```
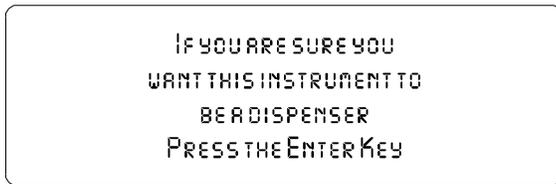
FIG. 4-7 SELECTION ALERT DISPLAY
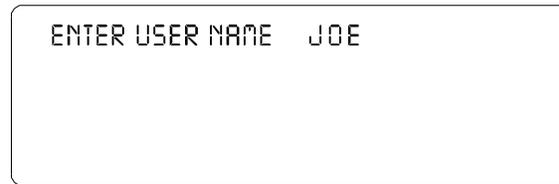
Predispense Procedures

Step 1.   Check to be sure that the first container you are going to dispense into is in the correct position.

Step 2.   Check to see if the Dispenser is configured for your specific dispensing application. If it is not you will have to configure the instrument. For configuration procedures please refer to the HI 3000 Service/ Installation Manual for instructions.

Step 3.   Check to see if the instrument is in the Standby mode. The Standby menu should appear in the display with an ingredient listed. (See Fig. 4-8)

```
INGREDIENT NAME
AMT REQ          200.00 LB
CYCLES      1203
GROSS WT  100.00      OFF
```
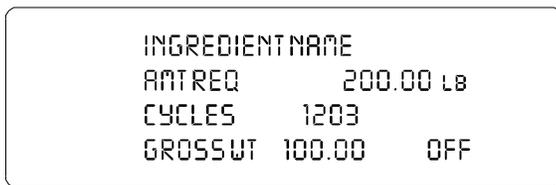
FIG. 4-8 STANDBY DISPLAY

Enter The User ID

Step 1.   Press the User button. The User Menu appears. (See Fig. 4-9)

```
ENTER USER NAME    ___
```

FIG. 4-9 USER MENU

Step 2.   Press the Clear button to erase the current entry.

Step 3.   Use the Alphanumeric buttons to enter your user number. A user number is three (3) characters long and can consist of Alphanumeric characters. (See Fig. 4-10)

```
ENTER USER NAME    JOE
```

FIG. 4-10 USER NAME/JOE

Some examples:

- Joe
- 312
- J15
- JD7

Step 4.   Press the Enter button to set the entry.

Dispensing - Single Speed

NOTE: *The values are used for illustration purposes only, your requirements may vary.*

Step 1.   If the ingredient is the ingredient you want. Go to Step 3.

Step 2.   If the ingredient that appears in the Standby Menu is NOT the ingredient you want, do the following:

- Press the Ingr./1 button once. The Ingredient Menu appears with the ingredient number that appears on the Standby Display. (See Fig. 4-11)

```
>  INGREDIENT   1
```
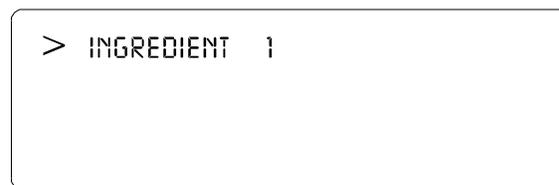
FIG. 4-11 INGREDIENT MENU

- You can change the ingredient number two ways.

  1.   Press the left or right arrow buttons to select the ingredient number you want.
  2.   Press the Clear button to remove the current ingredient number. Use the Alphanumeric buttons to enter the new Ingredient number. For example enter the number 4 for the berries ingredient (See Fig. 4-12)

```
> INGREDIENT  4
```
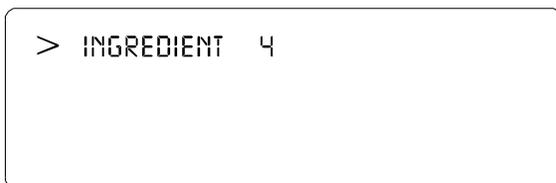
FIG. 4-12 NEW INGREDIENT NUMBER/4

NOTE: *The ingredient number listed usually will have an ingredient name, which is created during the Dispenser setup process.*

- Press the Enter button. The Standby Menu appears with the chosen ingredient name, cycle number, amount required and user name. In our example Ingredient 4 is Berries. (See Fig. 4-13)

```
      BERRIES
      AMT REQ    150.00 LB
      CYCLES     23
      GROSS WT  100.00      OFF
```
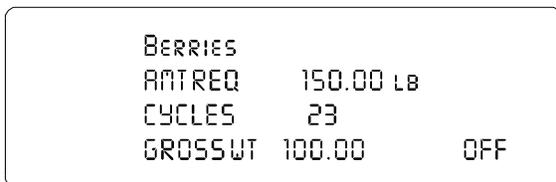
FIG. 4-13 STANDBY MENU/SELECTED INGREDIENT - BERRIES

Step 3.   If the Amount Required is the amount that you want to dispense per cycle, go to Step 5.

Step 4.   If you want to change the Amount Required, do the following:

NOTE: *The values entered here do not change the setup values for this ingredient. The changes made here are for this session of filling/dispensing only and are not saved when the instrument is powered down. The ingredient parameters that are configured in setup are the only parameters that are saved. If you want to permanently change the parameters for this ingredient you must go through the configuration process. For configuration information see the HI 3010 Service Manual for instructions.*

- Press on the Amount/4 button once. The Target WT. Menu appears. (See Fig. 4-14)

```
> TARGET WT    100.00
```

FIG. 4-14 TARGET WEIGHT

- Press the Clear button to erase the values displayed. (See Fig. 4-15)

```
> TARGET WT      ___
```
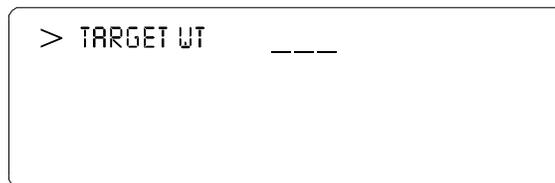
FIG. 4-15 TARGET WEIGHT/ERASED VALUES

- Use the Alphanumeric keypad and enter the new Target Weight. (See Fig. 4-16)

NOTE: *You can enter values from .000001-999999 based on the location of the decimal point configured during setup.*

```
> TARGET WT     20.00
```
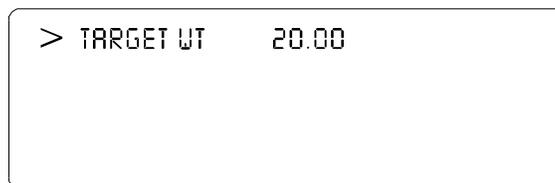
FIG. 4-16 TARGET WT/NEW VALUE

- Press the Enter button. The Standby Menu appears with the new Amount Required. In our example we used 20.00 lbs. (See Fig. 4-17)

```
      BERRIES
      AMT REQ     20.00 LB
      CYCLES      1305
      GROSS WT   5.00       OFF
```
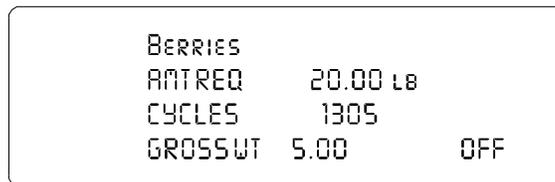
FIG. 4-17 STANDBY MENU/NEW AMOUNT REQUIRED

Step 5. If the number of dispenses is the number you want, go to Step 7.
Step 6. If you want to change the number of dispenses, do the following:

NOTE: *1Dispense = 1 Cycle. Dispenses and Cycles are used interchangeably.*

• Press the Cycle/7 button. The Choose Dispense Menu appears. (See Fig. 4-18)

```
>  CHOOSE CYCLES:      1305
```
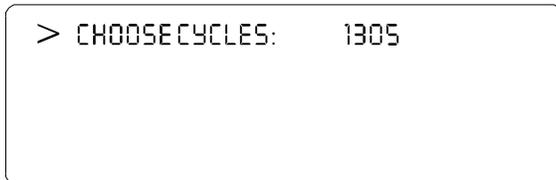
FIG. 4-18 CHOOSE DISPENSE MENU

• You can change the Dispense number two ways.

1. Do not Press the Clear button and press on the Alphanumeric keypad number buttons which will replace the existing values.
2. Press the Clear button to remove the current Dispense number. (See Fig. 4-19) Use the Alphanumeric buttons to enter the new Dispense number. For example enter the number 23 for the berries ingredient (See Fig. 4-20)

```
>  CHOOSE CYCLES:      _____
```
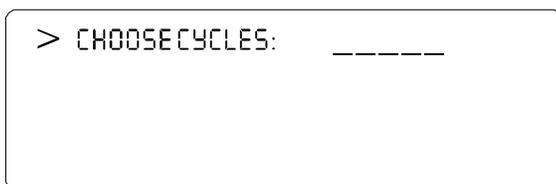
FIG. 4-19 DISPENSE MENU/ERASED VALUES

NOTE: You can enter values from 1 - 9999.

```
>  CHOOSE CYCLES:       23
```

FIG. 4-20 DISPENSE MENU/NEW DISPENSES NUMBER

• Press the Enter button. The Standby Menu appears with the new cycles value. (See Fig. 4-21)

```
Berries
AMT REQ      20.00 LB
CYCLES        23
GROSS WT  5.00          OFF
```
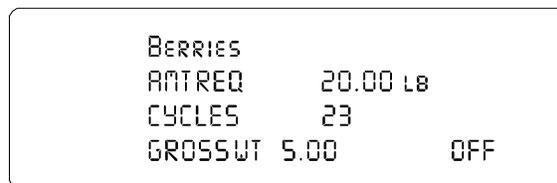
FIG. 4-21 STANDBY DISPLAY/NEW DISPENSES NUMBER

Step 7. Press the Start button.

• When you Press the Start button to begin the dispensing process, the Standby Display changes and shows that the instrument is on and waiting to dispense. (See Fig. 4-22)

```
Berries
AMT      0.00/20.00
CYCLES    1/23   LB
         WAITING    ON
```
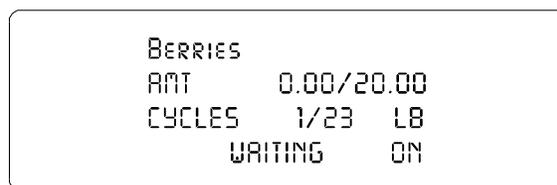
FIG. 4-22 DISPENSE WAITING/ON

Auto Refill Sub-Routine

The Dispenser has two refill conditions:

Initial Refill - When you configure the Dispenser (See The HI 3010 Service Manual) you set a Refill High set point. The Dispenser checks at the beginning of the first cycle if the Dispenser vessel has enough material to complete all the cycles for this ingredient. If not it refills the Dispenser vessel to the Refill High set point and does not check the refill again until the material level is less than the required dispense weight.

Auto Refill ON - The configuration is the same with a Refill High set point and Refill Low set point. The Refill Low set point is based on the required dispense weight. However the Dispenser checks the Refill level before each cycle and if there is not enough material it refills to the Refill High set point for the ingredient selected.

- If the Auto Refill function is turned ON, the instrument begins checking to see if there is enough material in the vessel for the current cycle. The Auto Refill is user selectable. For configuration information see the HI 3010 Service Manual for instructions.
- If the material in the vessel is below the high level mark or is not equal to the target weight for this ingredient, the instrument begins the refill sub-routine.

1. The Refill On display appears. Unlike the Filler, the refill function is only activated at the beginning of a cycle. (See Fig. 4-23)

```
 ┌────────────────────────────────┐
 │   Berries                      │
 │   AMT      0.00/20.00          │
 │                       LB       │
 │            REFILL    ON        │
 └────────────────────────────────┘
```

FIG. 4-23 REFILL ON DISPLAY

2. Refill begins.
3. When the Refill reaches the high level mark it shuts off.
4. Press the Start button. The dispense is restarted

NOTE: *From this point on the dispensing process is automatic and under normal conditions does not require operator intervention. The displays provided are to illustrate the procedures the instrument goes through and the displays associated with these procedures. It is highly unlikely that you will be required to manually intervene except when an Alarm condition occurs. A list of the Alarm conditions and remedies are provided after this section.*

Step 8. If the "OK to Dispense" function is turned ON, in addition to the motion and autotare, the instrument checks to see that the system is ready to dispense. This means that the instrument can check a proximity switch for container positioning, a sensor detecting that a valve is open or closed, an OK to

Dispense instruction sent from a PLC or DCS and so on.

- If it is OK to Dispense, the Filler/Dispenser starts dispensing and returns to the Dispense Display. (See Fig. 4-24)

NOTE: *The "Fast Dispense" appears for both Single or Dual Speed Dispensing.*

- Ingredient = Berries
- Current dispensed amount = 0.00 lbs out of 20 lbs. loss in weight for cycle number 1.
- Cycle = 1 out of 23 cycles.
- Dispenser Status = FAST DISPENSE ON

```
 ┌────────────────────────────────┐
 │     Berries                    │
 │     AMT      0.00/20.00        │
 │     CYCLES   1/23   LB         │
 │             FAST DISP ON       │
 └────────────────────────────────┘
```

FIG. 4-24 FAST DISPENSE ON DISPLAY

Step 9. When the net weight on the scale is equal to or greater than the target weight minus its preact value, the Filler/Dispenser goes into a wait sequence to allow the things to settle before checking to see if the dispensed (loss-in-weight) material is correct. (See Fig. 4-25)

```
 ┌────────────────────────────────┐
 │     Berries                    │
 │     AMT     19.50/20.00        │
 │     CYCLES   1/23   LB         │
 │     WAIT TIMER      60.0s      │
 └────────────────────────────────┘
```

FIG. 4-25 DISPENSE WAIT TIMER DISPLAY

Step 10. The Filler/Dispenser automatically checks to see if the dispense is within the target window.

- If the dispense is within the target window and you do not have the Discharge Function turned ON (See Discharge Function below), the instrument returns to the Standby Display, repeats the motion check, autotares and/or checks the OK to Dispense processes and begins to dispense cycle number 2, then 3, 4 and so on.

• If the Dispense (loss in weight) is below the Target Window the Jog Function Automatically starts. (See Jog Function)

Step 11. The Dispenser Continues going through the dispense cycles until all the dispense cycles are completed. (See Fig. 4-26)

```
BERRIES
AMT      20.00/20.00
CYCLES   23/23   LB
         FASTDISP    ON
```

FIG. 4-26 LAST DISPENSE CYCLE

Step 12. After completion of all the cycles, the Filler/Dispenser goes back to the Standby Menu. (See Fig. 4-27)

```
BERRIES
AMTREQ      20.00 LB
CYCLES      23
GROSSWT     00.00 OFF
```
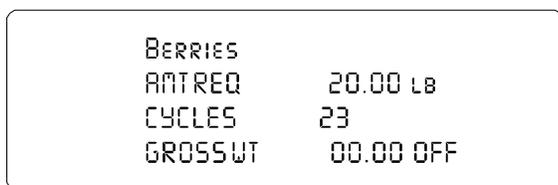
FIG. 4-27 STANDBY MENU

Step 13. The Standby Menu enables you to select another ingredient, Target Weight, Number of Cycles, and User to begin a new dispensing process.

Discharge Function

After a dispense completes, which may include a JOG if necessary, you have the option to Discharge the Dispense. Once the instrument has determined that the dispense is within the target window, it discharges the dispense before returning to the Dispense ON Display or the Dispense Standby Display depending on which dispense cycle you just finished.

NOTE: You are not discharging the Dispenser vessel but the receiving container.   (See Fig. 4-28)
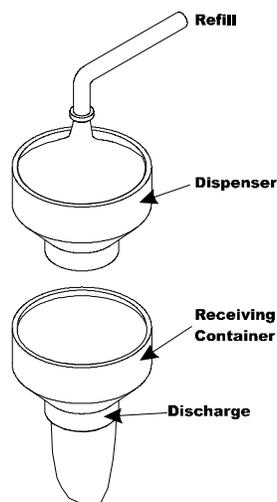
FIG. 4-28 DISCHARGE DIAGRAM

The Auto Discharge Function is user selectable and must be turned ON during Setup. (To turn the Discharge Function ON, see the HI 3010 Installation and Service Manual for instructions)

Step 1. The Filler/Dispenser then gets set to Discharge the material in the receiving container. The Awaiting Command to Discharge display appears if the Auto Discharge is Off but discharge is on. (See Fig. 4-29) To start the discharge push the Start button. The Command to discharge can also come from a PLC or other controller.

```
BERRIES
AMT      20.00/20.00
!AWAITING COMMAND   LB
  TO DISCHARGE!    HLD
```
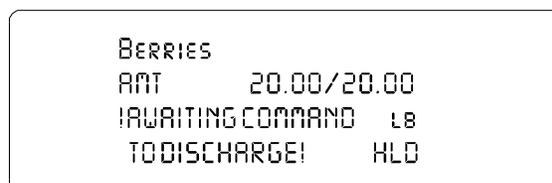
FIG. 4-29 AWAITING COMMAND TO DISCHARGE DISPLAY

Step 2. If the OK to Discharge is ON, the instrument checks to see if it is OK to discharge. The instrument also checks to see if the discharge gate is open.

Step 3. The system discharges the current dispensed material from the receiving container. (See Fig. 4-30)

```
┌─────────────────────────────┐
│   Berries                   │
│   AMT      20.00/20.00      │
│                       LB    │
│      DISCHARGING     ON     │
└─────────────────────────────┘
```
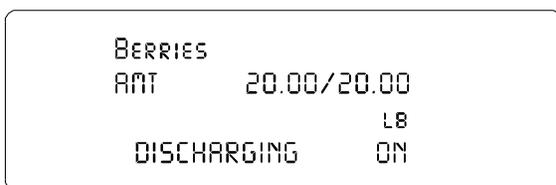
FIG. 4-30 DISCHARGING ON

Step 4.   When the discharge is complete, the instrument closes the discharge gate and returns to the Dispense On display or the Standby Display depending on the dispensing cycle.

Pausing the Discharge

- To pause the discharge, press the Stop button once. (See Fig. 4-31)
- To resume discharging, press the Start button.

```
┌─────────────────────────────┐
│   Berries                   │
│   AMT      20.00/20.00      │
│                       LB    │
│      DISCHARGING     HLD    │
└─────────────────────────────┘
```
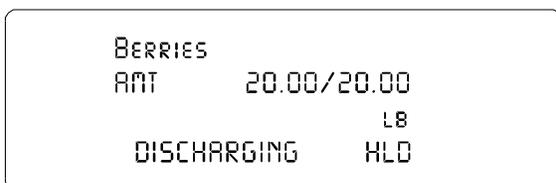
FIG. 4-31 DISCHARGING PAUSED

Jog Function

Step 1.   If the loss-in-weight detected in the wait timer state (See Fig. 4-25) is below the target window and the Jog Function is turned ON, the Jog function automatically comes on. (See Fig.4- 32)

```
┌─────────────────────────────┐
│   Berries                   │
│   AMT      19.25/20.00      │
│   CYCLES   1/23     LB      │
│         JOG1       ON       │
└─────────────────────────────┘
```
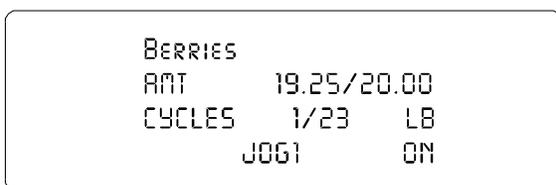
FIG. 4-32 JOG ON DISPLAY

Step 2.   The Filler/Dispenser goes through one JOG sequence that was previously set up.   (See Fig. 4-33 & 4-34) To set up the JOG Parameters see the HI 3010 Installation and Service Manual.

```
┌─────────────────────────────┐
│   Berries                   │
│   AMT      19.38/20.00      │
│   CYCLES   1/23     LB      │
│   TIME0.00s  JOG1  OFF      │
└─────────────────────────────┘
```
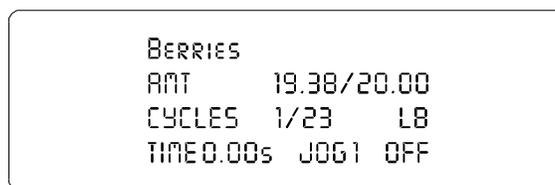
FIG. 4-33 JOG OFF DISPLAY

Step 3.   The instrument goes to the Jog Off state where it checks to see if the loss in weight is within the target window. A timer is displayed counting down the time the instrument is in the Jog Off state. If the weight is within the target window the dispense process continues going through the dispense cycles until all cycles are complete.

```
┌─────────────────────────────┐
│   Berries                   │
│   AMT      20.00/20.00      │
│   CYCLES   1/23     LB      │
│   TIME3.00s  JOG4  OFF      │
└─────────────────────────────┘
```
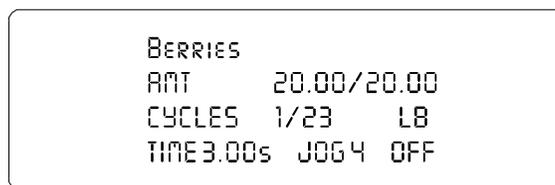
FIG. 4-34 JOG DISPLAY/COMPLETED FOUR JOG SEQUENCES/CHECKING WEIGHT

Pausing the Jog Cycle

- You can pause the JOG cycle by pushing the Stop button once at any time during the JOG cycle. The JOG Hold display appears. (See Fig. 4-35)

```
┌─────────────────────────────┐
│   Berries                   │
│   AMT      19.38/20.00      │
│   CYCLES   1/23     LB      │
│   TIME1.50s  JOG1  HLD      │
└─────────────────────────────┘
```
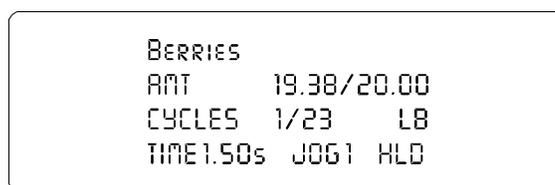
FIG. 4-35 JOG PAUSED 1.50 SECONDS INTO THE JOG SEQUENCE

Step 4.   If the loss in weight is still NOT within the target window, the instrument automatically continues through the preset JOG sequences until the target window is reached and then continues to another dispense cycle. (See Fig. 4-36)

NOTE: *To prevent Jogging make sure you turn the Auto Pre-Act ON. It is important to note that if Auto Preact is ON, the Filler/Dispenser will automatically adjust the Ingredient Pre-Act parameter*

insuring that "UNDERDISPENSE" and "OVER-DISPENSE" conditions do not occur. The new Pre Act value is saved for the ingredient being dispensed and becomes part of the Ingredient Parameter. It is highly recommended that you turn the Auto Pre-Act function ON. (For configuration information see the HI 3010 Service Manual for instructions)

```
  Berries
  AMT      0.00/20.00
  CYCLES   2/23   LB
           WAITING    ON
```
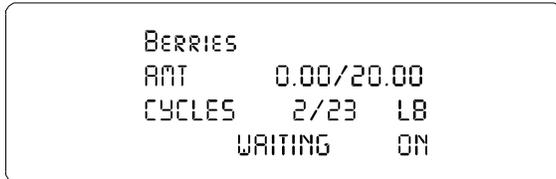
FIG. 4-36 BEGINNING DISPENSE CYCLE #2

Dispensing - Dual Speed

About Dual Speed Dispensing

Dual speed dispensing involves two dispense rates, Fast and Slow. The Fast dispense rate rapidly dispenses material into a vessel up to a pre set loss-in-weight set point. At that point the slow dispense rate begins to slowly dispense from the dispenser vessel until the target loss-in-weight is reached.

Most of the Steps and alarms for the Dual Speed Dispenser are the same as the Single Speed Dispenser except for the following:

Fast Dispense Sequential

• Once dispensing begins, the Fast Dispense Display appears. (See Fig. 4-37)

```
  Berries
  AMT      0.00/20.00
  CYCLES   1/23   LB
           FAST DISP ON
```
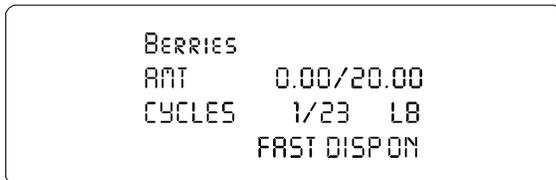
FIG. 4-37 DISPENSE DISPLAY/FAST DISPENSE ON

NOTE: The "Fast Dispense" appears for both Single or Dual Speed Dispensing.

• Once the Fast Dispense reaches a set point it stops.
• The Slow Dispense Gate opens and continues to dispense until the loss-in-weight target window is reached. (See Fig. 4-38)

```
  Berries
  AMT      19.0/20.00
  CYCLES   1/23   LB
           SLOW DISP ON
```
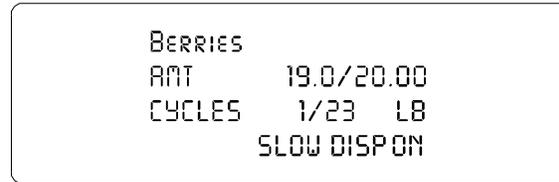
FIG. 4-38 SLOW DISPENSE ON DISPLAY

Pause Slow Dispense

• To pause the Slow Dispense, press the Stop button once. (See Fig. 4-39)

```
  Berries
  AMT      19.23/20.00
  CYCLES   1/23   LB
           SLOW DISP HLD
```
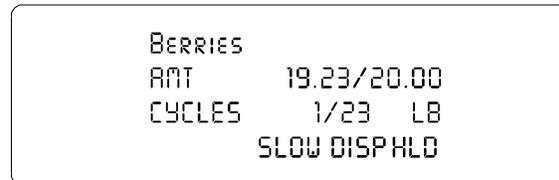
FIG. 4-39 SLOW DISPENSE HOLD

• To resume Slow dispense press the Start button.

Fast Dispense Simultaneous

• Once dispensing begins, the Fast Dispense Display appears, however both Fast and Slow dispense operate at the same time. (See Fig. 4-40)

```
  Berries
  AMT      0.00/20.00
  CYCLES   1/23   LB
           FAST DISP ON
```
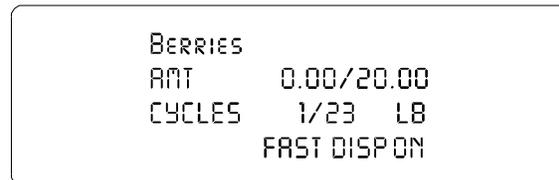
FIG. 4-40 DISPENSE DISPLAY/FAST DISPENSE ON

NOTE: The "Fast Dispense" appears for both Single or Dual Speed Dispensing.

1. Once the Fast Dispense reaches a set point it stops.
2. The Slow Dispense Gate continues to dispense until the loss-in-weight target window is reached. (See Fig. 4-41)

```
┌─────────────────────────────┐
│  Berries                    │
│  AMT        19.0/20.00      │
│  CYCLES      1/23   LB      │
│            SLOW DISP ON     │
└─────────────────────────────┘
```

FIG. 4-41 SLOW DISPENSE DISPLAY

3. If the dispense is within the target window and you do not have the Discharge Function turned ON (See Discharge Function above), the instrument returns to the Waiting On Display, repeats the motion check, autotares and/or checks the OK to Dispense processes and begins dispense cycle number 2, then 3, 4 and so on. (See Fig. 4-42)

4. If the dispense is within the target window and it is the last dispense cycle (See Fig. 4-43) of a dispense sequence, the instrument goes to Standby and the Standby Display appears. (See Fig. 4-43)

```
┌─────────────────────────────┐
│  Berries                    │
│  AMT        20.00/20.00     │
│  CYCLES      23/23   LB     │
│  WAIT TIMER       60.0s     │
└─────────────────────────────┘
```

FIG. 4-42 LAST CYCLE IN BERRIES SEQUENCE

```
┌─────────────────────────────┐
│  Berries                    │
│  AMT REQ     20.00 LB       │
│  CYCLES      23             │
│  GROSS WT 5.00       OFF    │
└─────────────────────────────┘
```

FIG. 4-43 STANDBY DISPLAY

Dispense Alarms

Over Refill Alarm

- - - - - **ALARM CONDITION** - - - - -

```
┌─────────────────────────────┐
│  Berries                    │
│  AMT        0.00/20.00      │
│  !OVER REFILL       LB      │
│   ALARM! REFILL   HLD       │
└─────────────────────────────┘
```

FIG. 4-44 OVER REFILL ALARM

- If the Refill exceeds the Refill High set point or exceeds the capacity of the vessel and the refill has stopped, the OVER REFILL ALARM appears. (See Fig. 44)

  1. Correct the Over Refill condition.
  2. Press the Clear button to clear the alarm. The Dispense Standby display appears.

Refill Timeout Alarm

- - - - - **ALARM CONDITION** - - - - -

```
┌─────────────────────────────┐
│  Berries                    │
│  AMT        0.00/20.00      │
│  !REFILL TIMEOUT    LB      │
│   ALARM! REFILL   HLD       │
└─────────────────────────────┘
```

FIG. 4-45 REFILL TIME-OUT ALARM

- If the time taken to Refill exceeds the Refill Time-out parameter which is set during configuration, the Refill Time-out Alarm appears. (See Fig. 4-45) For setup information check the HI 3010 Installation and Service Manual.

  1. Check to see why the refill took too long. If there is an obstruction, or excessive material bridging, etc. correct the problem.
  2. If the Refill Time-out was set incorrectly. Use your HI 3010 Installation and Service Manual and reset the Refill Time-out parameter.
  3. Press the Clear button to clear the alarm. The Dispense Standby display appears.

Refill Off Alarm

- - - - - ALARM CONDITION - - - - -

• If the Refill gate, valve or feeder does not open or start within a preset time period when the refill is detected the REFILL OFF ALARM appears. (See Fig. 4-46)

```
   Berries
   AMT      0.00/20.00
    !REFILL OFF!      LB
      !ALARM!         HLD
```
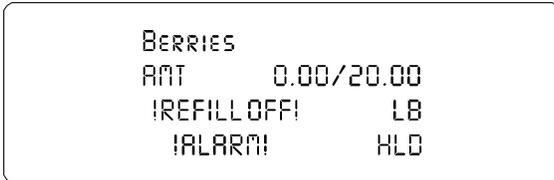
FIG. 4-46 REFILL OFF ALARM DISPLAY

1. Determine why refill started and correct the problem.
2. Press the clear button to the clear the alarm. The dispenser returns to the Standby or On display depending on whether the refill was an initial or start of cycle refill.

NOTE: If the dispenser returns to the standby display you must press start again.

Refill On Alarm

- - - - - ALARM CONDITION - - - - -

• If the Refill gate, valve or feeder does not close or stop within its programmed time period, when the refill high weight is detected or the refill exceeds the refill timeout parameter the REFILL ON ALARM appears. (See Fig. 4-47)

```
   Berries
   AMT      0.00/20.00
    !REFILL ON!       LB
      !ALARM!         HLD
```
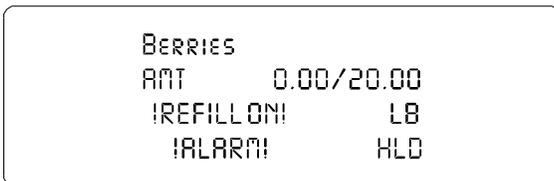
FIG. 4-47 REFILL ON ALARM DISPLAY

1. Quickly determine why refill stopped and correct the problem.
2. Press the clear button to clear the alarm. The dispenser returns to the Standby or On display depending on whether the refill was an initial or start of cycle refill.

NOTE: If the dispenser returns to the standby display you must press start again.

Not OK to Dispense Alarm

- - - - - ALARM CONDITION - - - - -

• If the function is turned on and it is NOT OK TO DISPENSE, an alarm appears in the display. (See Fig. 4-48)

```
   Berries
   AMT      0.00/20.00
   !LOST OK TO DISP!    LB
     ALARM       DISP HLD
```

FIG. 4-48 NOT OK TO DISPENSE

1. The Operator needs to determine why it is NOT OK TO DISPENSE by checking for problems with the electrical and /or mechanical systems.
2. Once the problem has been fixed, push the Clear button to clear the Alarm. The Filler/Dispenser returns to the standby mode waiting a Start command.

NOTE: The OK to DISPENSE Timer has a preset time to determine if it is OK to Dispense. If the OK to Dispense times out, it means that the preset time maybe too short for the process and the NOT OK to DISPENSE Alarm appears with no real alarm condition. You may need to reset the timer if it appears that no electrical or mechanical reason for the alarm is determined. The OK to DISPENSE timer may be set incorrectly for your process. See the HI 3010 Service Manual for Instructions on setting the OK to DISPENSE Timer

Lost OK to Dispense Alarm

- - - - - ALARM CONDITION - - - - -

• During the dispensing process, conditions may develop that cause the Filler/Dispenser to lose the OK to DISPENSE during Fast Dispense or Slow Dispense. When this occurs an alarm appears that says LOST OK TO DISPENSE. (See Figs. 4-49 & 4-50)

```
┌─────────────────────────────┐
│   Berries                   │
│   Amt       0.00/20.00      │
│   !LOSTOKTODISP!      L8    │
│     ALARM FASTDISP HLD      │
└─────────────────────────────┘
```

FIG. 4-49 LOST OK TO DISPENSE ALARM/FAST DISPENSE

```
┌─────────────────────────────┐
│   Berries                   │
│   Amt       0.00/20.00      │
│   !LOSTOKTODISP!      L8    │
│     ALARM SLOWDISP HLD      │
└─────────────────────────────┘
```

FIG. 4-50 LOST OK TO DISPENSE ALARM/SLOW DISPENSE

1. The Operator needs to determine why the system LOST OK to DISPENSE by checking for problems with the electrical and /or mechanical systems.
2. Once the problem has been fixed, push the Clear button to clear the Alarm.
3. If the OK to dispense was lost while in the fast or slow dispense mode the instrument asks if you want to Resume the fast dispense (See Fig. 4-51) or slow dispense (See Fig. 4-52). To resume the dispense press the Start button. If you do not want to resume a fast or slow dispense press the Stop button. This takes you back to the Standby mode and does not complete any more cycles.

```
┌─────────────────────────────┐
│   Berries                   │
│   Amt      19.53/20.00      │
│   RESUME DISPENSE FAST      │
│     PRESS START      HLD    │
└─────────────────────────────┘
```

FIG. 4-51 RESUME DISPENSE FAST

```
┌─────────────────────────────┐
│   Berries                   │
│   Amt     120.00/20.00      │
│   RESUME DISPENSE SLOW      │
│     PRESS START      HLD    │
└─────────────────────────────┘
```

FIG. 4-52 RESUME DISPENSE SLOW

No Fast Feed Alarm

- - - - - ALARM CONDITION - - - - -

- If the Fast Dispense Gate valve or feeder is not open or on at the time you want to dispense, the NO FAST FEED alarm appears on the display. (See Fig. 4-53)

```
┌─────────────────────────────┐
│   Berries                   │
│   Amt       0.00/20.00      │
│   !NOFASTFEED!              │
│   !ALARM!            HLD    │
└─────────────────────────────┘
```

FIG. 4-53 NO FAST FEED ALARM

1. Determine why you do not have Fast Feed and correct the problem.
2. Press the Clear button to clear the alarm. The RESUME DISPENSING? display appears for single speed or sequential dispensing. (See Fig. 4-54)

```
┌─────────────────────────────┐
│   Berries                   │
│   Amt       0.00/20.00      │
│   RESUME DISPENSE?    L8    │
│     PRESS START      HLD    │
└─────────────────────────────┘
```

FIG. 4-54 RESUME DISPENSING DISPLAY

3. Press the Start button to resume dispense. (See fig. 4-55)
4. In a dual speed simultaneous operation press the Clear button to clear the alarm. The RESUME DISPENSING SLOW display appears. (See Fig. 4-56)

```
  BERRIES
  AMT      3.25/20.00
  CYCLES   1/23   LB
           FAST DISP ON
```
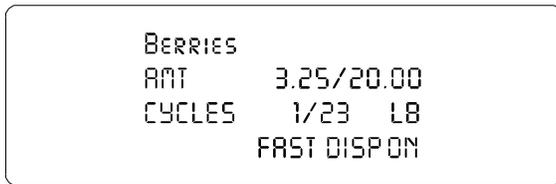
FIG. 4-55 FAST DISPENSE ON

```
  BERRIES
  AMT      19.53/20.00
  RESUME DISPENSE SLOW
    PRESS START      HLD
```

FIG. 4-56 RESUME FILLING SLOW DISPLAY

Fast Feed On Alarm

- - - - - **ALARM CONDITION** - - - - -

- If the Fast Dispense Gate valve or feeder does not open close or turn off at the end of a cycle, the FAST FEED ON alarm appears on the display. (See Fig. 4-57)

```
  BERRIES
  AMT      19.00/20.00
  !FAST FEED ON!
   !ALARM!          HLD
```
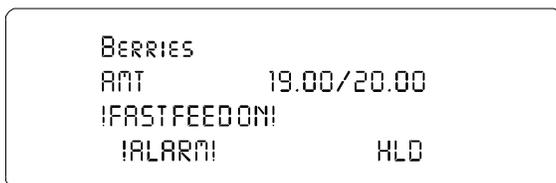
FIG. 4-57 FAST FEED ON DISPLAY

1. Determine why the Fast Feed is On and correct the problem.
2. Press the Clear button to clear the alarm.
3. If the weight is Not within the target window and you do not have the JOG function on, the dispense is not accepted and an UNDER DISPENSE alarm (See Fig. 4-58) or OVER DIS-PENSE (See Fig. 5-59) alarm appears depending on the weight dispensed.

```
  BERRIES
  AMT      19.84/20.00
  !UNDERDISPENSE!    LB
    ALARM           HLD
```

FIG. 4-58 UNDERDISPENSE ALARM

```
  BERRIES
  AMT      20.10/20.00
  !OVERDISPENSE!     LB
    ALARM           HLD
```

FIG. 4-59 OVERDISPENSE ALARM

No Slow Feed Alarm

- - - - - **ALARM CONDITION** - - - - -

- If the Slow Dispense Gate valve or feeder does NOT open or come on, the NO SLOW FEED alarm appears on the display. (See Fig. 4-60)

```
  BERRIES
  AMT      19.23/20.00
  !NO SLOW FEED!
   !ALARM!          HLD
```
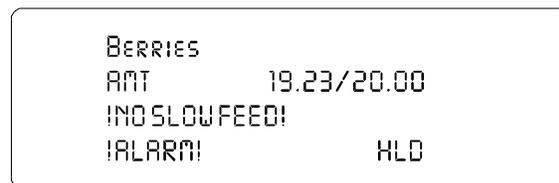
FIG. 4-60 NO SLOW FEED ALARM

1. Determine why there is no Slow Feed and correct the problem.
2. Press the Clear button to clear the alarm. The Resume Dispense Slow Press Start display appears, for dual speed, sequential dispensing applications. (See Fig. 4-61)
3. Press the Start Button to resume the slow dispense

```
BERRIES
AMT      19.53/20.00
RESUME DISPENSE SLOW
  PRESS START      HLD
```
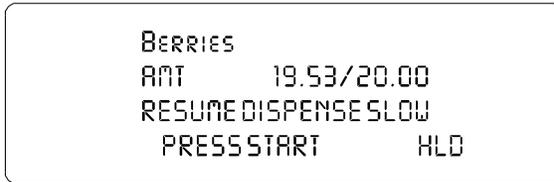
FIG. 4-61 RESUME DISPENSE SLOW DISPLAY

Slow Feed On Alarm

- - - - - ALARM CONDITION - - - - -

- If the Slow Dispense Gate valve or feeder does NOT close or shut off, the SLOW FEED ON alarm appears on the display. (See Fig. 4-62)

```
BERRIES
AMT      20.23/20.00
!SLOW FEED ON!
!ALARM!          HLD
```
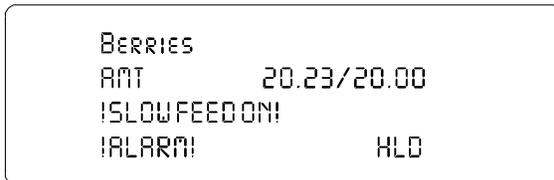
FIG. 4-62 SLOW FEED ON ALARM

1. Determine why the Slow Feed is on and correct the problem.
2. Press the Clear button to clear the alarm. The wait timer display appears. (See Fig. 4-63)

```
BERRIES
AMT      20.00/20.00
CYCLES    1/23   LB
WAIT TIMER      60.0s
```
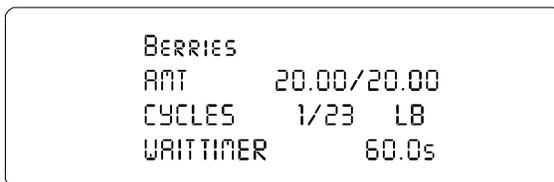
FIG. 4-63 WAIT DISPLAY

- If the weight is Not within the target window and you do not have the JOG function on, the dispense is not accepted in the wait state and an UNDER DISPENSE or OVERDISPENSE ALARM appears depending on the weight dispensed.

Under Dispense/Over Dispense Alarms

- - - - - ALARM CONDITION - - - - -

- If the target weight is NOT within the target window and you do not have the JOG function turned ON, the dispense is not accepted and an UNDERDISPENSE or OVERDISPENSE alarm appears depending on the weight dispensed. (See Fig. 4-64 & 4-65)

```
BERRIES
AMT      20.12/20.00
!UNDERDISPENSE!    LB
  ALARM          HLD
```
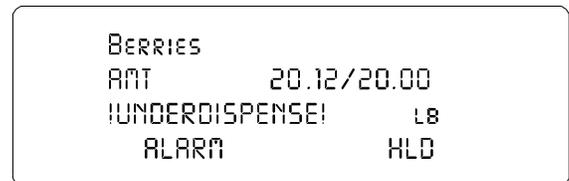
FIG. 4-64 UNDERDISPENSE ALARM

```
BERRIES
AMT      20.12/20.00
!OVERDISPENSE!     LB
  ALARM          HLD
```

FIG. 4-65 OVERDISPENSE ALARM

- OVERDISPENSE ALARM, press the Clear button to clear the alarm. The Accept the Dispense? display appears. (See Fig. 4-66) At this time you can:

1. Accept the dispense by pressing the START button.
2. If your system allows, physically remove some of the material until it meets the target window requirements and then press the START button.
3. The instrument returns to the Waiting ON display, repeats the motion check, autotares and/or checks the OK to Dispense processes and begins dispense cycle number 2.

NOTE: *Pressing the Stop button returns the display to the Standby Display. Any further cycles are not completed.*

```
┌─────────────────────────────────┐
│   Berries                       │
│   AMT      0.00/20.00           │
│   ACCEPT DISPENSE?  LB          │
│   PRESS START       HLD         │
└─────────────────────────────────┘
```
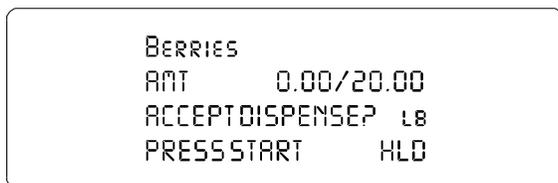
FIG. 4-66 ACCEPT DISPENSE DISPLAY

- UNDERDISPENSE ALARM, press the Clear button to clear the alarm, the Accept the Dispense display appears. At this time you can:

  1. Accept the dispense by pressing the START button.
  2. If your system allows, physically add some of the material until it meets the target window requirements and then press the START button.
  3. The instrument returns to the Waiting On Display, repeats the motion check, autotares and/or checks the OK to Dispense processes and begins dispense cycle number 2

Dispense Timeout Alarm

- - - - - ALARM CONDITION - - - - -

- If this function is turned On, it times the dispense cycle between the ON and WAIT modes. If this time is exceeded the TIME-OUT ALARM appears. (See Fig. 4-67)

```
┌─────────────────────────────────┐
│   Berries                       │
│   AMT      19.00/20.00          │
│     !TIMEOUT!                   │
│     !ALARM!                     │
└─────────────────────────────────┘
```

FIG. 4-67 TIMEOUT ALARM

1. Do a physical check of your system looking for blockages or breaks and make corrections as necessary.
2. Press the Clear button to clear the alarm. Depending on whether you are operating single or dual speed and when the Timeout occurred, one of the following displays appears. (See Figs. 4-68 & 69)

```
┌─────────────────────────────────┐
│   Berries                       │
│   AMT      19.53/20.00          │
│   RESUME DISPENSE FAST          │
│      PRESS START       HLD      │
└─────────────────────────────────┘
```
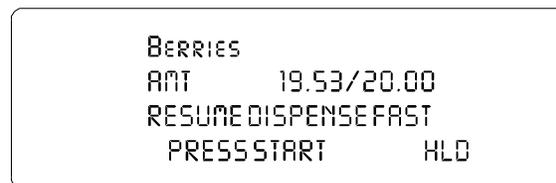
FIG. 4-68 RESUME DISPENSE FAST DISPLAY

```
┌─────────────────────────────────┐
│   Berries                       │
│   AMT      19.53/20.00          │
│   RESUME DISPENSE SLOW          │
│      PRESS START       HLD      │
└─────────────────────────────────┘
```
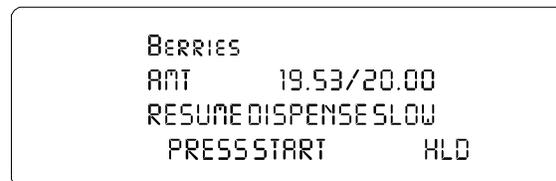
FIG. 4-69 RESUME DISPENSE SLOW DISPLAY

3. Press the Start button to resume the fast or slow dispense.
4. If the Stop button is pressed the instrument will go to the Standby Mode and not complete any more requested cycles.

Jog Alarms

Did Not Jog Alarm

- - - - - ALARM CONDITION - - - - -

- If the gate valve or feeder of the vessel or come on the DID NOT JOG ALARM appears on the display and the Filler/Dispenser is placed in a hold state. (See Fig. 4-70)

```
┌─────────────────────────────────┐
│   Berries                       │
│   AMT      19.30/20.00          │
│   !DID NOT JOG!     LB          │
│    !ALARM!    JOG1 HLD          │
└─────────────────────────────────┘
```

FIG. 4-70 DID NOT JOG ALARM

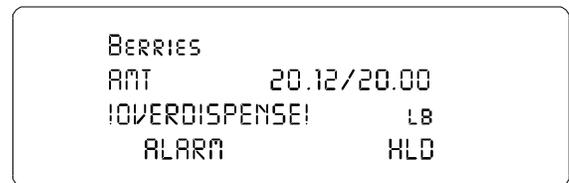1. Check to see why there was no Jog. Correct the problem. Press on the Clear button to clear the alarm. (See Fig.4-71)

```
  Berries
  AMT        19.80/20.00
  TO JOG AGAIN
  PRESS START        HLD
```

FIG. 4-71 TO JOG AGAIN PRESS START DISPLAY

2. The Jog sequence resumes from where the Jog left off when it was paused.

Jog Stuck On Alarm

- - - - - ALARM CONDITION - - - - -

• After each Jog the instrument goes to a pause state (Jog Off) for a pre-determined period of time if the Jog stops. In this state it checks the weight to see if it is within the target window. If it is the instruments moves to the next cycle. If if is not is jogs again as long as the allowable number of jogs has not been exceeded. If the Jog does not stop the JOG STUCK ON ALARM appears. (See Fig. 4-72)

```
  Berries
  AMT        20.16/20.00
  !JOG STUCK ON!     LB
   !ALARM!    JOG1 HLD
```

FIG. 4-72 JOG STUCK ON ALARM

1. Check to see why the gate valve or feeder did not close or stop. Correct the problem. Press the Clear button to clear the alarm.
2. The instrument goes back to the WAIT mode where it checks if the weight is within the target window. If it is still under the minimum target weight the instruments begins another jog cycle.

Jog Count Alarm

- - - - - ALARM CONDITION - - - - -

• If the JOG sequences are completed and an UNDERDISPENSE condition still exists, a JOG count alarm appears telling

you that you have used up the JOGs for this sequence of cycles. (See Fig. 4-73)

```
  Berries
  AMT        19.92/20.00
   !JOG COUNT!      LB
    ALARM    JOG 9 HLD
```

FIG. 4-73 JOG COUNT ALARM

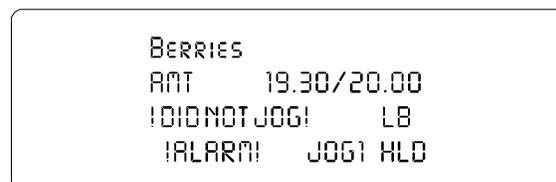1. Press the Clear button to clear the alarm.
2. The JOG display reappears asking you if you want to start the JOG sequence again. (See Fig. 4-74)

```
  Berries
  AMT        19.92/20.00
  !JOG 9 CONTINUE?!    LB
  PRESS START   JOG 9 HLD
```

FIG. 4-74 JOG DISPLAY/JOG CONTINUE

3. If you want the instrument to JOG again, press the Start button to repeat the JOG sequence.
4. If you DO NOT want the instrument to JOG again, press the Stop button. The instrument goes to the Standby Menu if the JOG and does not complete any more cycles.

Discharge Alarms

Not OK to Discharge Alarm

- - - - - ALARM CONDITION - - - - -

• If the function is on and instrument does not see an OK to Discharge, a Not OK to discharge alarm appears. (See Fig. 4-75)

```
  Berries
  AMT        20.00/20.00
  !NOT OK TO DISCHARGE  LB
    !ALARM!       HLD
```

FIG. 4-75 NOT OK TO DISCHARGE ALARM

1. Check to see what is causing the Not OK to discharge alarm to appear.
2. Correct the problem.
3. Press the Clear button to clear the alarm. If auto discharge is on the dispenser looks for an OK to Discharge signal. If the OK to Discharge is Off the awaiting Command to Discharge display appears. (See Fig. 4-76)

```
BERRIES
AMT       20.00/20.00
!AWAITING COMMAND   L8
  TO DISCHARGE!      HLD
```
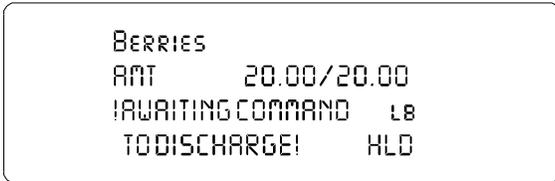
FIG. 4-76 AWAITING COMMAND TO DISCHARGE

No Discharge Alarm

- - - - - ALARM CONDITION - - - - -

• If the instrument determines that the discharge did not occur, the NO DISCHARGE alarm appears. (See Fig. 4-77)

```
BERRIES
AMT       20.00/20.00
!NO DISCHARGE!      L8
  !ALARM!           HLD
```
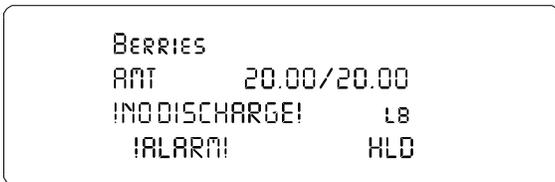
FIG. 4-77 NO DISCHARGE ALARM

1. Check to see what is causing the no discharge condition.
2. Correct the problem.
3. Press the Clear button to clear the alarm. The Awaiting Command to Discharge display appears.

Discharge On Alarm

- - - - - ALARM CONDITION - - - - -

• If the Discharge gate valve or feeder does not close or turn off, a DISCHARGE ON ALARM appears. (See Fig. 4-78)

```
BERRIES
AMT       20.00/20.00
!DISCHARGE ON!      L8
  !ALARM!           HLD
```
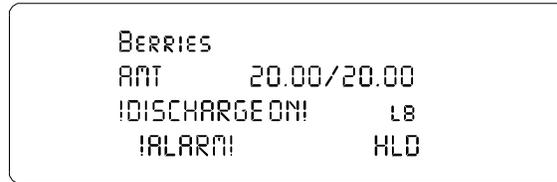
FIG. 4-78 DISCHARGE ON ALARM

1. Check to see what is causing the dis-problem.
2. Correct the problem.
3. Press the Clear button to clear the alarm.
4. The CLOSE DISCHARGE MANU-ALLY display appears. Manually close the Discharge and press the Start button.
5. The instrument returns to the Dispense On display or the Standby Display depending on the dispensing cycle.

Operating the Dispenser from the Ethernet (Web Site)

Getting Started

Step 1. Make sure you have installed the Ethernet cable between your computer and the instrument.
Step 2. Open the browser on your computer.
Step 3. In the URL Address field type the IP Address of the HI 3010 you want to operate (For complete instructions see the Cabling/Installation section of this manual). The Filler/Dispenser Home Page appears. (See Fig.4-103)

FIG. 4-79 FILLER/DISPENSER HOME PAGE/ SELECTING OPERATIONS

Step 4.   Click on "Operations". When entering Operations for the first time after cycling the power off/on, an Alert asking for a User Name and Password appears. (See Fig. 4-104)

FIG. 4-80 ENTERING USER NAME AND PASSWORD

Step 5.   Enter the User Name and Password and click OK. The Operation Page appears. (See Fig.4-105)

NOTE: When you enter the user name and password for your level of security, at the beginning of each session, you won't have to enter it again for the session.

FIG. 4-81 OPERATION PAGE

Diagnostics - See The HI 3010 Technical Service Manual, Chapter 7 - System Integrity Check and Fault Determination From the Web Browser

Monitoring the HI 3010

The monitoring page displays the Standby and run Displays. This information is automatically updated every 3 seconds. To update it more often press on the Refresh button in your browser.

Step 1.   Click on "Monitor". The Monitor Page Appears. (See Fig. 4-106)

FIG. 4-82 MONITORING THE INSTRUMENT

Step 2.   Click on "Back" to return to the Operation page.

View and Clear Totalized Weight

This page provides the Totalized Weight for each ingredient that has been selected. It reads the totalized weight for Ingredient 1-12 from the last time the totalized ingredient weight was cleared. The page also allows you to clear an ingredients totalized weight.

Step 1.   Click on "Totalizers". The Totalizer page appears. (See Fig. 4-107)

FIG. 4-83 OPERATION - TOTALIZERS PAGE

Step 2.   Click on the Clear Totalizer Pull Down menu to select an ingredient whose totalized weight you want to clear. (See Fig. 4-108)

```
9        INGREDIENT 9  0
10       INGREDIENT 10 0
11       INGREDIENT 11 0
12       INGREDIENT 12 0
Clear Totalizer  Ing. #5  ▼
    Clear Totali    Ing. #3  ▲   ion: pressing the Clear Totalizer
                    Ing. #4
value to zero.      Ing. #5
                    Ing. #6
                    Ing. #7
                    Ing. #8
                    Ing. #9
                    Ing. #10
                    Ing. #11    Home - Operation - Configuration
                    Ing. #12
                    ALL      ▼  HI 3000 Series Online Support Site
```

**FIG. 4-84 CLEAR TOTALIZER LIST/SELECTING
INGREDIENT TO CLEAR**

Step 3.   Click on the Ingredient # you want to clear.
Step 4.   Click on the Clear Totalizer button to clear the
            totalized weight for the selected ingredient.

**CAUTION: PRESSING THE CLEAR TOTALIZER BUTTON
WILL SET THE SELECTED TOTALIZER TO ZERO.**

Step 5.   Click on "Home" to return to the Filler/Dispenser
            Home Page.

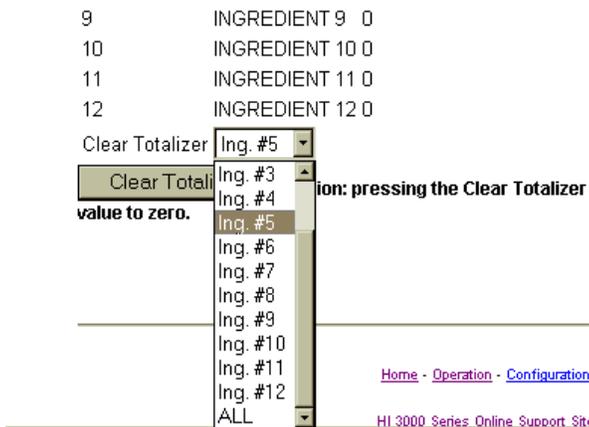*NOTE: The ability to operate the instrument from a Web
            Page will be available in future iterations of the
            Web Site.*

Operating in Manual Mode from the Front Panel

The HI 3010 allows the user to perform some of the opera-
tions in manual mode. The following Dispensing Functions
can operate Manually:

    •   Tare Scale
    •   Discharge
    •   Refill
    •   Auxiliary Device (Output Relay)
    •   Fast Dispense
    •   Slow Dispense

Step 1.   Press the Manual button. The Manual Mode dis-
            play appears with the cursor in front of Tare
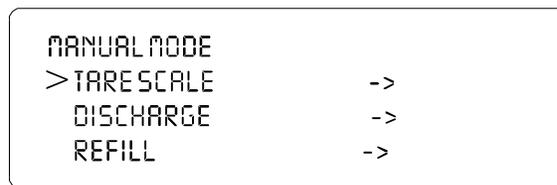   Scale. (See Fig. 3-109)


```
MANUAL MODE
> TARE SCALE          ->
  DISCHARGE           ->
  REFILL              ->
```

**FIG. 3-85 MANUAL MODE DISPLAY/SELECTING
TARE SCALE**

Step 2.   Press the Enter button. The Tare Mode display
            appears. (See Fig. 3-110)


```
TARE MODE
PRESS CLEAR KEY
NOW
```
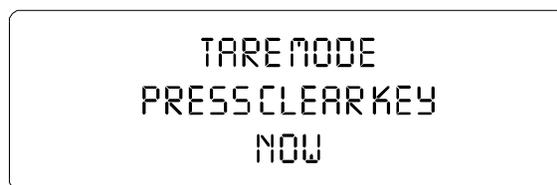
FIG. 3-86 TARE MODE DISPLAY

Step 3.   Follow the instruction on the screen. To Tare the
            scale press the Clr. (Clear) button. A display
            appears momentarily that says Tare Complete.
Step 4.   Press the Exit button to return to the Manual
            Mode Display.

*NOTE: Each one of the displays will have a different
            instructions.*

Step 5.   Press the down arrow until the cursor is in front
            of Discharge
Step 6.   Press the Enter button. The Discharge Mode dis-
            play appears. (See Fig. 3-111)


```
DISCHARGE MODE
PRESS START KEY NOW
TO START DISCHARGE
```
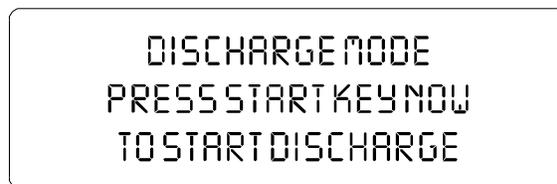
**FIG. 3-87 DISCHARGE MODE DISPLAY/STARTING
DISCHARGE**

Step 7.   Press the Start button. To stop the discharge you
            will have to manually press the stop button. (See
            Fig. 3-112)

```
DISCHARGEMODE
PRESS STOP KEY NOW
TO STOP DISCHARGE
```
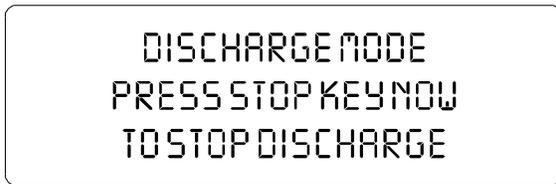
**FIG. 3-88 DISCHARGE MODE DISPLAY/STOPPING
DISCHARGE**

Step 8.   To select another function, press the up or down
            button to move the cursor in front of the function
            that you want to perform.
Step 9.   Press Exit to return to the Manual Mode display.
Step 10.   Press Exit to return to the Standby display.

Operating in Manual Mode from the Web Browser

You currently cannot operate the instrument from the Web
Browser.

CHAPTER 5: OPERATING PROCEDURES/IBC DISPENSER

Dispensing Procedures

About Dispensing

The IBC (Intermediate Bulk Container) Dispensing Operation is a Loss-in-Weight instrument. The IBC Dispenser controller measures the weight loss out of Super Bags, Drums, Totes or Gaylord Bulk Bins, until the pre-set, Target Weight has been reached. The IBC Dispenser controller then stops dispensing and automatically goes to a wait condition, waiting for the next container to be positioned. Once the new container is in the correct position the IBC Dispenser begins the process over again. The Hardy Filler/Dispenser/IBC enables both single speed and dual speed IBC dispensing modes of operation.

Getting Started

Before operating the Hardy HI 3010 Filler/Dispenser/IBC, check to make sure the following procedures have been performed:

- Power and Load Point cables properly installed.
- Communication cables properly installed.
- Calibration Performed.

All the features of the Filler/Dispenser/IBC operate the same no matter what the interface. First let's get familiar with operating the Filler/Dispenser/IBC from the front panel of the instrument. (See Fig. 5-1)

Help

About Help

As you move through the setup/configuration menus you may on occasion need assistance. If you need help, do the following:

Step 1.   Use the up and down arrows and move the cursor in front of the Menu Item you want help on.
Step 2.   Click the Help button either on the Front Panel, or Web Page and a Help Dialog appears. The help dialog tells you what the Menu Item is used for or other descriptive information to help you enter the right parameters for the current menu item.
Step 3.   Push the Exit button to return to the current menu.

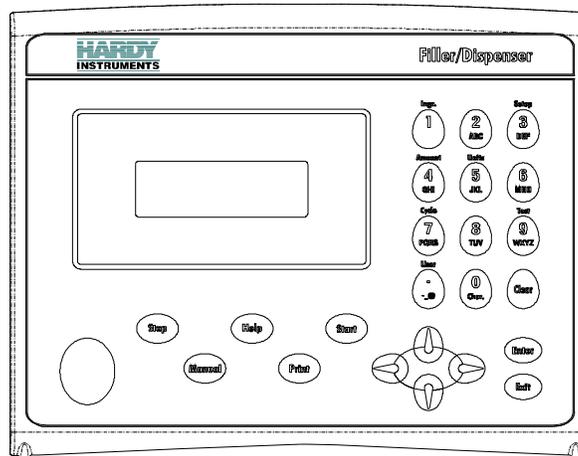## Operating the IBC Dispenser from the Front Panel

FIG. 5-1 FRONT PANEL

Front Panel Display

The Front Panel Display is a 4 line x 20 Alphanumeric character LCD. The screen displays all the menus for Configuring, Calibrating and Operating the HI 3010 Filler/Dispenser/IBC.

Button Functions

Start Button

The Start Button starts or restarts the filling or dispensing process.

Stop Button

The Stop button if pressed once will pause the filling or dispensing process. If the Stop Button is pressed twice it stops the process and puts the Filler/Dispenser/IBC in a standby mode.

Help Button

The Help button displays a Help message for the current Menu item (the Menu item in front of the cursor) that is displayed. In Standby the Help button does not display a Help message.

Manual Button

Enables you to enter the manual mode of operation

Print Button

The Print Button when pressed brings up a series of screens and allows the user to Print the following:

- Current IBC Dispense
- Current Cycle
- Totals
- Setup Data
- Self Test
- Error Log

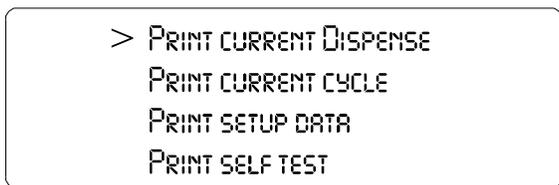Press the Print button, the following screen appears:

```
> PRINT CURRENT DISPENSE
  PRINT CURRENT CYCLE
  PRINT SETUP DATA
  PRINT SELF TEST
```

**FIG. 5-2 PRINT SCREEN DEFAULT FOR IBC DIS-
PENSER**

Note that the cursor is in front of the Print Current Dispense menu. That is the default setting. The print button will only print the menu with a cursor in front of it. To move to another menu press the up or down arrow until the cursor is in front of the menu you want to print.
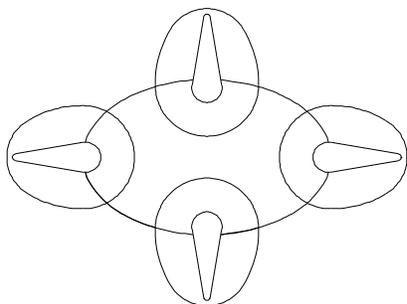
Up/Down - Left/Right Buttons

FIG. 5-3 DIRECTIONAL BUTTONS

The Up/Down arrow buttons move the cursor vertically allowing the user to scroll through each item of a menu. The Left/Right arrow buttons move the cursor horizontally left and right. The Left arrow button has an added backspace function. For example if there are Alpha/Numeric characters that appear in the display, as you press the left button it erases the characters. The Right arrow button moves the cursor to the right in the display and does not erase an alphanumeric entry. The Left/Right arrow buttons also move the cursor through a pick list. (See Fig. 5-3)

Enter Button

The Enter button enters the Alpha/Numeric value entered for a menu item in the display. The Enter button also enters the selections from a pick list. (See Fig. 5-4)
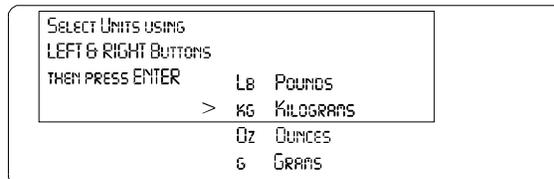
```
SELECT UNITS USING
LEFT & RIGHT BUTTONS
THEN PRESS ENTER    LB   POUNDS
                 >  KG   KILOGRAMS
                    OZ   OUNCES
                    G    GRAMS
```

FIG. 5-4 LIST SELECTION/ENTER BUTTON

For example, when selecting units from a pick list, use the left and right arrows to move the cursor in front of the unit you want and press the Enter button.

Exit Button

The Exit button disregards the current value entry, restores the previous value and moves the cursor to the last menu.

Clear Button

The Clear button clears the total Alpha/Numeric Entry and repositions the cursor for the first entry.

Ingr./1 Button

Enables you to change the pre programmed ingredient (1-12) while in the Standby Mode. Also enters the integer 1 in the display.

2/ABC Button

Enters the integer 2 in the display. Also enters the characters A, B, C. Pushing the button once enters the integer 2.

NOTE: For numeric entries only: Push the button and the number on the button is entered.

NOTE: For Alphanumeric entries only: Pushing the button once, the first letter on the button is entered in uppercase, A, D, G, and so on. Push the button a second time, the second letter is entered in uppercase, B, E, H, K and so on. Push the button a third time, the third letter is entered in uppercase, C, F, I, L, and so on. Push the button a fourth time, the fourth letter is entered in uppercase, S, Z. Push the button a fifth time the first letter is entered in lowercase, a, d, g, and so on. After you go through the lowercase letters, you can push the button again for the number. You need to push the buttons rapidly. If you delay too long the instrument will accept the alphanumeric character and move the cursor to the left preparing for

the next alphanumeric entry. This is true for all the Alphanumeric buttons. If this occurs use the left arrow button to erase the current entry and enter another

Setup/3/DEF Button

This enables you to access the configuration and setup menus. Also enters the number 3 and the letters D, E, F.

Amount/4/GHI

Enables you to change the amount of the ingredient while in the standby mode. Also enters the number 4 and the letters C, H, I.

Units/5/JKL Button

Enables you to change the units of measure (Lbs/Kg/oz/g) while in the standby mode of operation. Also enters the integer 5 and the letters J, K, L.

6/MNO Button

Enters the integer 6 and the letters M, N, O.

Cycle/7/PQRS Button

Enables you to change the number of cycles (fills or dispenses) while in the standby mode. Also enters the integer 7 and letters P, Q, R, S.

8/TUV Button

Enters the integer 8 and the letters T, U, V.

Test/9/WXYZ Button

Enables you to enter the selftest or diagnostics mode. Also enters the inter 9 and letters W, X, Y, Z.

User/./_/@ Button

Enables you to change the 3 digit user code while in the standby mode. Also enters the period (.), underscore (_) and @ symbols.

0/Char. Button

Enters the integer 0 in the display. When you push the button the second time a set of characters appears in the display.

Step 1.   Using the up and down arrow buttons move the cursor in front of the character you want to display.
Step 2.   Press the Enter Button to select the character.
Step 3.   Press the Exit Button to return to the display. The character should now appear next to the cursor.

Starting Up for the First Time

When the HI 3010 Filler/Dispenser/IBC powers up after delivery from the factory, a display appears asking you to choose the application you want to use. The Display appears in the Front Panel Display and Web Site.

Step 1.   The First display you will see on a product right from the factory or when changing the instrument from a Dispenser to an IBC Dispenser is the "How Will I Be Used?" Display asking you what you how to use the Filler/Dispenser/IBC. (See Fig. 5-5)
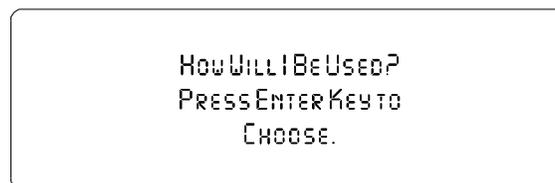

FIG. 5-5 FIRST DISPLAY

Step 1.   Press the Enter Button from the Front Panel or click OK in the Web Dialog Box. The "Choose One" Screen appears. (See Fig. 5-6)
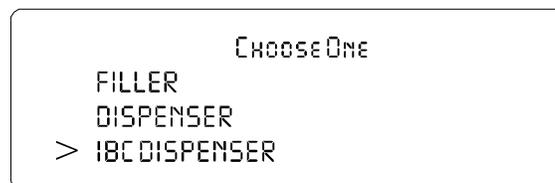

FIG. 5-6 INSTRUMENT SELECTION DISPLAY

Step 2.   Use the up and down arrows to move the cursor in front of the instrument you want to use. The Filler Instrument is the default selection.
Step 3.   Press on the Enter button. The Selection Alert display appears asking if you are sure you want this instrument. (See Fig. 5-7)

•   If you are sure you want the Instrument Selected, press the Enter Key from the Front Panel; left click on OK in the Web Page. The Standby Display appears. (See Fig. 5-8)
•   If you are sure you DO NOT want this instrument, or are uncertain about what selection you have made, press the Exit Key; left click on Cancel in the Web Page. The Instrument Selection Display reappears. Repeat Steps 2 and 3.
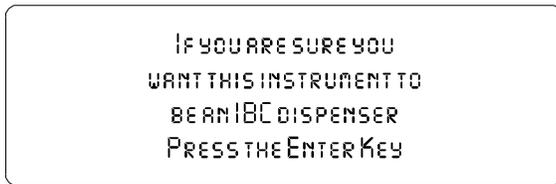
```
  If you are sure you
  want this instrument to
  be an IBC dispenser
  Press the Enter Key
```

FIG. 5-7 SELECTION ALERT DISPLAY

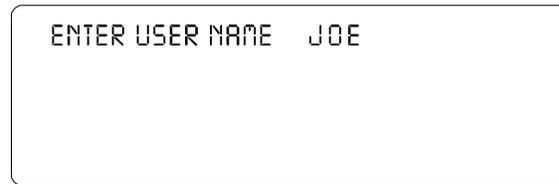## Predispense Procedures

Step 1.   Check to be sure that the first bulk container you are going to dispense into is in the correct position.
Step 2.   Check to see if the IBC Dispenser is configured for your specific dispensing application. If it is not you will have to configure the instrument. For configuration procedures please refer to the HI 3010 Service Manual for instructions.
Step 3.   Check to see if the instrument is in the Standby mode. The Standby menu should appear in the display with an ingredient listed. (See Fig. 5-8)
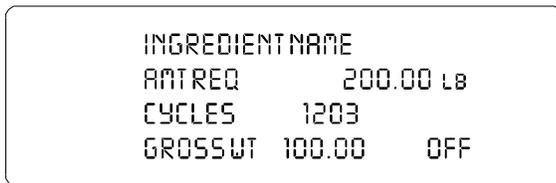
```
  INGREDIENT NAME
  AMT REQ         200.00 LB
  CYCLES    1203
  GROSS WT  100.00      OFF
```

FIG. 5-8 STANDBY DISPLAY

Enter The User ID

Step 1.   Press the User button. The User Menu appears. (See Fig. 5-9)
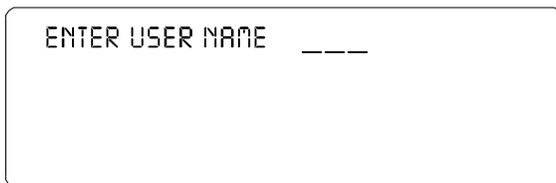
```
  ENTER USER NAME    ___
```

FIG. 5-9 USER MENU

Step 2.   Press the Clear button to erase the current entry.
Step 3.   Use the Alphanumeric buttons to enter your user number. A user number is three (3) characters long and can consist of Alphanumeric characters. (See Fig. 5-10)

```
  ENTER USER NAME    JOE
```

FIG. 5-10 USER NAME/JOE

Some examples:

- Joe
- 312
- J15
- JD7

Step 4.   Press the Enter button to set the entry.

IBC/Dispensing - Single Speed

NOTE: *The values are used for illustration purposes only, your requirements may vary.*

Step 1.   If the ingredient is the ingredient you want. Go to Step 3.
Step 2.   If the ingredient that appears in the Standby Menu is NOT the ingredient you want, do the following:

- Press the Ingr./1 button once. The Ingredient Menu appears with the ingredient number that appears on the Standby Display. (See Fig. 5-11)
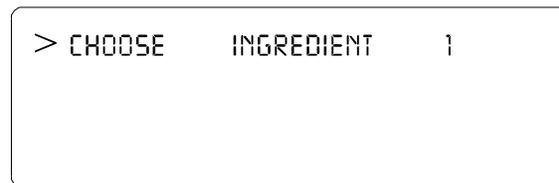
```
  > CHOOSE     INGREDIENT    1
```

FIG. 5-11 INGREDIENT MENU

- To change the ingredient number, press the left or right arrow buttons until the ingredient number appears.
- Another way to change the ingredient number is to press the clear button which removes the current ingredient number. Use the Alphanumeric keypad to enter the new Ingredient number. For example enter the number 12 for the Granules ingredient (See Fig. 5-12 & 5-13)
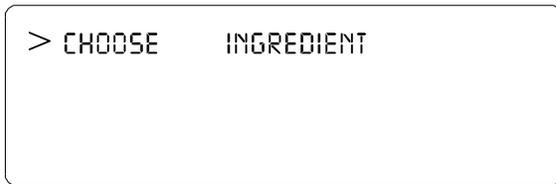
> CHOOSE   INGREDIENT

FIG. 5-12 PRESS THE CLEAR BUTTON TO CLEAR INGREDIENT NUMBER
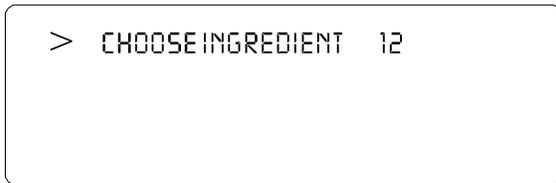
> CHOOSEINGREDIENT   12

FIG. 5-13 NEW INGREDIENT NUMBER

NOTE: The ingredient number listed usually will have an ingredient name, which is created during the IBC Dispenser setup process.

- Press the Enter button. The Standby Menu appears with the chosen ingredient name, cycle number, amount required and user name. In our example Ingredient 12 is Granules which has been configured during the setup procedures. (See Fig. 5-14)
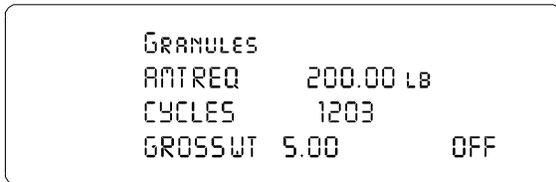
Granules
AMTREQ   200.00 LB
CYCLES   1203
GROSSWT 5.00   OFF

FIG. 5-14 STANDBY MENU/SELECTED INGREDI-ENT - GRANULES

Step 3.   If the Amount Required is the amount that you want to dispense per cycle, go to Step 5.

Step 4.   If you want to change the Amount Required, do the following:

NOTE: The values entered here do not change the setup values for this ingredient. The changes made here are for this session of filling/dispensing only and are not saved when the instrument is powered down. The ingredient parameters that are configured in setup are the only parameters that are saved. If you want to permanently change the parameters for this ingredient you must go

through the configuration process. For configuration information see the HI 3010 Service Manual for instructions.

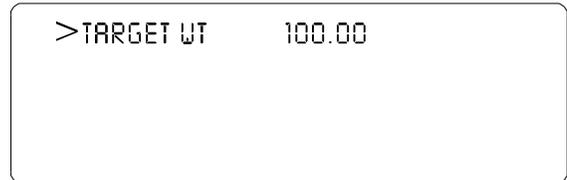- Press on the Amount/4 button once. The Target WT. Menu appears. (See Fig. 5-15

>TARGET WT   100.00

FIG. 5-15 TARGET WEIGHT

- You can change the Target Weight two ways.

1. Press the left or right arrow buttons to select the Target Weight you want.
2. Press the Clear button to remove the current Target Weight. Use the Alphanumeric buttons to enter the new Target Weight. For example enter the number 100.00 for the flour ingredient (See Fig. 5-16 & 5-17)

>TARGET WT

FIG. 5-16 TARGET WEIGHT/ERASED VALUES

- Use the alphanumeric keypad and enter the new Target Weight. (See Fig. 5-17)

NOTE: You can enter values from .000001-999999 depending on the location of the decimal point that configured during setup.
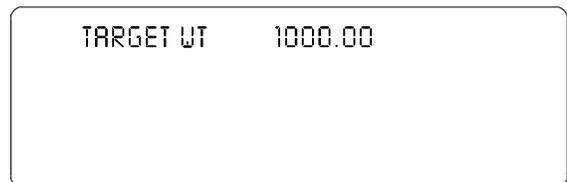
TARGET WT   1000.00

FIG. 5-17 TARGET WT/NEW VALUE

• Press the Enter button. The Standby Menu appears with the new Amount Required. In our example we used 1000.00 lbs. (See Fig. 5-18)
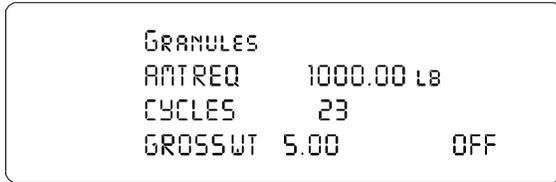
```
Granules
AMTREQ    1000.00 LB
CYCLES     23
GROSSWT  5.00        OFF
```

FIG. 5-18 STANDBY MENU/NEW AMOUNT REQUIRED

Step 5.   If the number of dispenses is the number you want, go to Step 7.

Step 6.   If you want to change the number of dispenses, do the following:

NOTE: 1Dispense = 1 Cycle. Dispenses and Cycles are used interchangeably.

• Press the Cycle/7 button. The Choose Dispense Menu appears. (See Fig. 5-19)

```
> CHOOSECYCLES:    1305
```

FIG. 5-19 CHOOSE DISPENSE MENU

• Press the Clear button to erase the existing values. (See fig. 5-20)

```
> CHOOSECYCLES:
```

FIG. 5-20 DISPENSE MENU/ERASED VALUES

• Use the alphanumeric keypad and enter the new number of dispenses. For our example we used 11. (See Fig. 5-21)

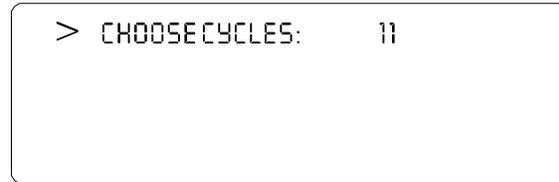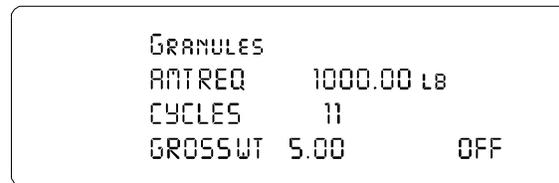*NOTE: You can enter values from 1 - 9999.*

```
> CHOOSECYCLES:    11
```

FIG. 5-21 IBC DISPENSE MENU/NEW DISPENSES NUMBER

• Press the Enter button. The Standby Menu appears with the new cycles value. (See Fig. 5-22)

```
Granules
AMTREQ    1000.00 LB
CYCLES     11
GROSSWT  5.00        OFF
```
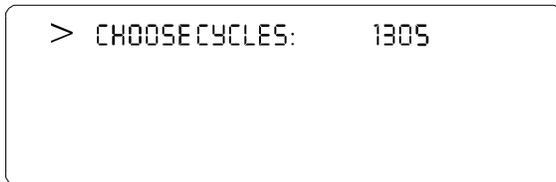
FIG. 5-22 STANDBY DISPLAY/NEW IBC DISPENSES NUMBER

Step 7.   Press the Start button.

• When you Press the Start button to begin the IBC dispensing process, the Standby Display changes and shows that the instrument is on and waiting to dispense. (See Fig. 5-23)

```
Granules
AMT    0.00/1000.00
CYCLES  1/11      LB
          WAITING    ON
```

FIG. 5-23 WAITING TO DISPENSE ON

Step 8.   If the motion is within set motion tolerance, the scale autotares and if The OK to Dispense Feature is not on, dispensing begins. The IBC Dispense Display appears. (See Fig. 5-24)

```
  Granules
  AMT      0.00/1000.00
  CYCLES    1/11      LB
            FAST DISP    ON
```
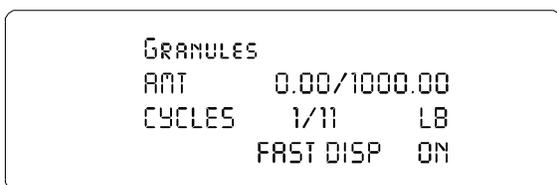
FIG. 5-24 IBC DISPENSE DISPLAY/WAITING ON

NOTE: *From this point on the IBC dispensing process is automatic and under normal conditions does not require operator intervention. The displays provided are to illustrate the procedures the instrument goes through and the displays associated with these procedures. It is highly unlikely that you will be required to manually intervene except when the Alarm conditions occur. A list of the Alarm conditions and remedies are provided after this section.*

Step 9.   If the "OK to Dispense" function is turned ON, in addition to the motion and autotare, the instrument checks to see that the system is ready to dispense. This means that the instrument can check a proximity switch for container positioning, a sensor detecting that a valve is open or closed, an OK to Dispense instruction sent from a PLC or DCS and so on.

- If it is OK to Dispense, the Filler/Dispenser/IBC starts dispensing and returns to the Dispense Display. (See Fig. 5-25)

NOTE: *The "Fast Dispense" appears for both Single or Dual Speed IBC Dispensing.*

- Ingredient = Granules
- Current dispensed amount = 0.00 lbs out of 1000.00 lbs. loss in weight for cycle number 1.
- Cycle = 1 out of 11 cycles.
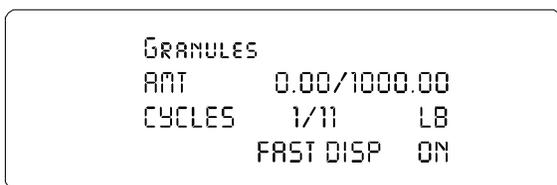- IBC Dispenser Status = FAST DISPENSE ON

```
  Granules
  AMT      0.00/1000.00
  CYCLES    1/11      LB
            FAST DISP    ON
```

FIG. 5-25 FAST DISPENSE ON DISPLAY

- If it is NOT OK to Dispense, an alarm appears in the display.

Step 10.   If the Fast Dispense Display appears showing a steady weight (no loss-in-weight) and there is no indication of motion. If you have enabled the Auto Auxiliary function the instrument turns on the auxiliary timer at the same time. (See Fig. 5-26)
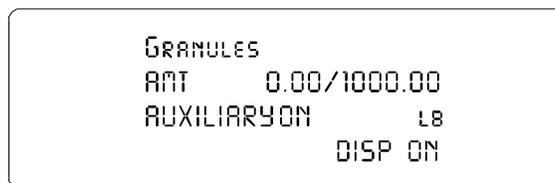
```
  Granules
  AMT      0.00/1000.00
  AUXILIARYON        LB
            DISP ON
```

FIG. 5-26 AUTO AUXILIARY ON DISPLAY

- If you want to pause the auxiliary function. Press the Stop button once. The Auxiliary Display changes from ON to HLD. (See Fig. 5-27)
- To restart the auxiliary function press the Start button. The fast dispense with vibration appears. (See Fig. 5-28)
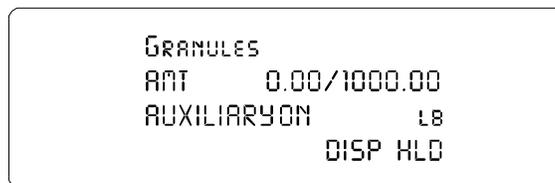
```
  Granules
  AMT      0.00/1000.00
  AUXILIARYON        LB
            DISP HLD
```

FIG. 5-27 PAUSING THE AUXILIARY FUNCTION

```
  Granules
  AMT      0.00/1000.00
  AUXILIARYON        LB
            FAST DISP ON
```
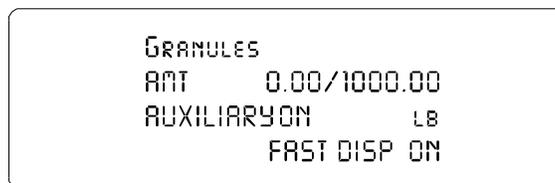
FIG. 5-28 FAST DISPENSE/WITH AUXILIARY ON

NOTE: *The auxiliary function will stop at the end of its pre-programmed time.*

NOTE: *If you want to Pause the auxiliary function press the Stop button one time. If you want to Stop the auxiliary function press the Stop button two times. The instrument returns to the Standby Mode and does not process any more cycles.*

Step 11.   When the Net weight on the scale is equal to or greater than the target weight minus its preact value the Filler/Dispenser/IBC goes into a wait sequence to allow things to settle before checking to see if the dispensed (loss-in-weight) material is correct. (See Fig. 5-29)
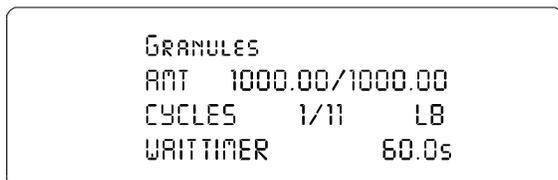
```
┌─────────────────────────────┐
│    Granules                 │
│    AMT  1000.00/1000.00     │
│    CYCLES   1/11    LB      │
│    WAITTIMER      60.0s     │
└─────────────────────────────┘
```

FIG. 5-29 IBC DISPENSE WAIT TIMER DISPLAY

Step 12.   The Filler/Dispenser/IBC automatically checks to see if the dispense is within the target window.

•   If the dispense is within the target window and you do not have the Discharge Function turned ON (See Discharge Function below), the instrument returns to the Standby Display, repeats the motion check, autotares and/or checks the OK to Dispense processes and begins dispense cycle number 2, then 3, 4 and so on. (See Fig. 5-30)

NOTE: It is important to note that if Auto Preact is ON, the Filler/Dispenser/IBC will automatically adjust the Ingredient Pre-Act parameter insuring that "UNDERDISPENSE" and "OVERDISPENSE" conditions do not occur or at best are minimized. The new Preact value is saved for the ingredient being dispensed and becomes part of the Ingredient Parameter. It is highly recommended that you turn the Auto Preact function ON. (For configuration information see the HI 3010 Service Manual for instructions)
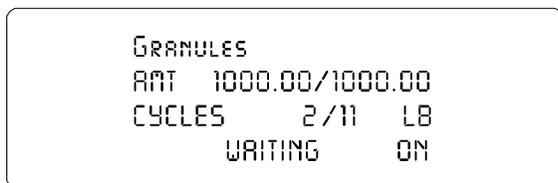
```
┌─────────────────────────────┐
│    Granules                 │
│    AMT  1000.00/1000.00     │
│    CYCLES   2/11    LB      │
│          WAITING     ON     │
└─────────────────────────────┘
```

FIG. 5-30 BEGINNING DISPENSE CYCLE #2

Step 13.   The IBC Dispenser Continues going through the dispense cycles until all the dispense cycles are completed. (See Fig. 5-31)
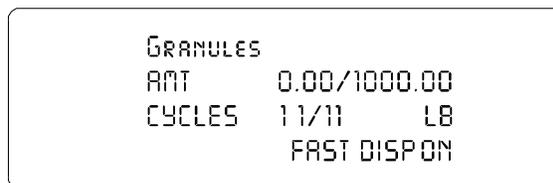
```
┌─────────────────────────────┐
│    Granules                 │
│    AMT     0.00/1000.00     │
│    CYCLES   11/11    LB     │
│          FAST DISP ON       │
└─────────────────────────────┘
```

FIG. 5-31 LAST DISPENSE CYCLE

Step 14.   After completion of all the cycles, the Filler/Dispenser/IBC goes back to the Standby Menu. (See Fig. 5-32)

```
┌─────────────────────────────┐
│    Granules                 │
│    AMTREQ    1000.00 LB     │
│    CYCLES      11           │
│    GROSSWT  5.00      OFF   │
└─────────────────────────────┘
```
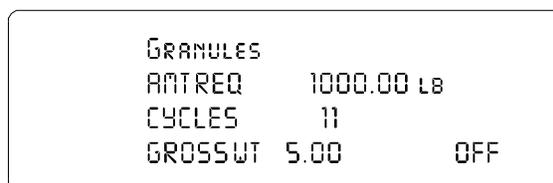
FIG. 5-32 STANDBY MENU

Step 15.   The Standby Menu enables you to select another ingredient, Target Weight, Number of Cycles, and User to begin a new dispensing process.

Jog Function

Step 1.   If the loss-in-weight detected in the wait timer state (See Fig. 5-29) is below the target window and the Jog Function is turned ON, the Jog function automatically comes on. (See Fig. 5-33)
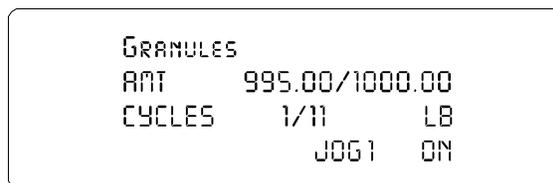
```
┌─────────────────────────────┐
│    Granules                 │
│    AMT    995.00/1000.00    │
│    CYCLES    1/11    LB     │
│             JOG1    ON      │
└─────────────────────────────┘
```

FIG. 5-33 JOG ON DISPLAY

Step 2.   The Filler/Dispenser goes through one (1) JOG sequence that was previously set up.   (See Fig.5-34) To set up the JOG Parameters see the HI 3010 Installation and Service Manual.
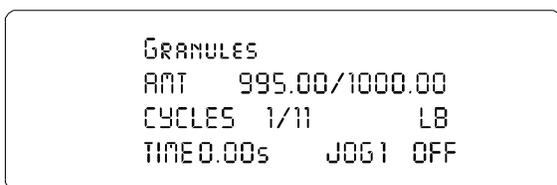
```
Granules
AMT   995.00/1000.00
CYCLES  1/11       LB
TIME0.00s    JOG1 OFF
```

FIG. 5-34 JOG 1 DISPLAY

Step 3.   The instrument goes to the Jog Off State where it checks to see if the loss in weight is within the target window. A timer is displayed counting down the time the instrument is in the Jog Off state. If it is, the dispense process continues going through the dispense cycles until all cycles are complete. (See Fig. 5-35)
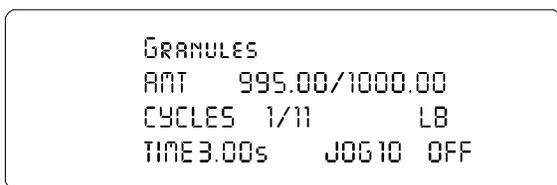
```
Granules
AMT   995.00/1000.00
CYCLES  1/11       LB
TIME3.00s    JOG10 OFF
```

**FIG. 5-35 JOG DISPLAY/COMPLETED FOUR JOG
SEQUENCES/CHECKING WEIGHT**

Pausing the Jog Cycle

•   You can pause the JOG cycle by pushing the Stop button once at any time during the JOG cycle. The JOG Hold display appears. (See Fig. 5-36)

```
Granules
AMT   995.00/1000.00
CYCLES  1/11       LB
TIME1.50s    JOG1 HLD
```
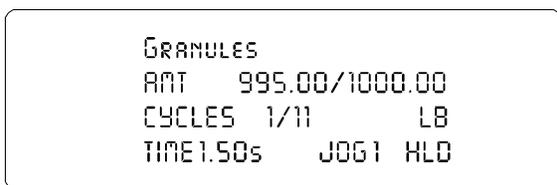
**FIG. 5-36 JOG PAUSED 1.50 SECONDS INTO THE
JOG SEQUENCE**

Step 4.   If the loss in weight is still NOT within the target window, the instrument automatically continues through the preset JOG sequences until the target window is reached.

NOTE: To prevent Jogging make sure you turn the Auto Pre-Act ON. It is important to note that if Auto Preact is ON, the Filler/Dispenser will automatically adjust the Ingredient Pre-Act parameter insuring that "UNDERDISPENSE" and "OVER-

DISPENSE" conditions do not occur. The new Pre Act value is saved for the ingredient being dispensed and becomes part of the Ingredient Parameter. It is highly recommended that you turn the Auto Pre-Act function ON. (For configuration information see the HI 3010 Service Manual for instructions)

Discharge Function

After an IBC Dispense completes, which may include a JOG if necessary, you have the option to Discharge the Dispense. Once the instrument has determined that the dispense is within the target window, it discharges before returning to the Dispense ON Display or the Dispense Standby Display depending on which dispense cycle you just finished.

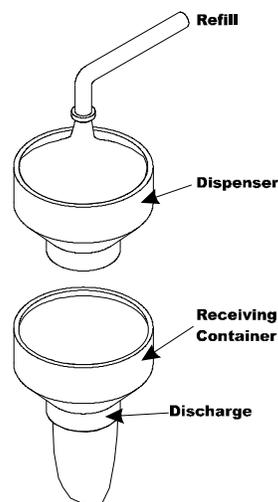*NOTE: You are not discharging the IBC Dispenser vessel but the receiving container.   (See Fig. 5-37)*

FIG. 5-37 DISCHARGE DIAGRAM

The Auto Discharge Function is user selectable and must be turned ON during Setup. (To turn the Auto Discharge Function ON, see the HI 3010 Service Manual for instructions)

Step 1.   The Filler/Dispenser/IBC then gets set to Discharge the material in the receiving container. The Awaiting Command to Discharge display appears if auto discharge is Off but discharge is On. (See Fig. 5-38) To start the discharge push the Start button. The Command to discharge can also come from a PLC or other controller.

```
GRANULES
AMT   1000.00/1000.00
!AWAITING COMMAND    L8
  TO DISCHARGE!      HLD
```

**FIG. 5-38 AWAITING COMMAND TO DISCHARGE
DISPLAY**

Step 2.   If the OK to Discharge is ON, the instrument
            checks to see if it is OK to discharge. The instru-
            ment also checks to see if the discharge gate is
            open.
Step 3.   The system discharges the current dispensed
            material from the receiving container. (See Fig.
            5-37)
Step 4.   When the discharge is complete, the instrument
            closes the discharge gate and returns to the Dis-
            pense On display or the Standby Display depend-
            ing on the dispensing cycle.

Pausing the Discharge Cycle

```
GRANULES
AMT   1000.00/1000.00
                     L8
   DISCHARGING       ON
```

FIG. 5-39 DISCHARGING ON

•   To pause the discharge, press the Stop but-
    ton once. (See Fig. 5-40)
•   To resume discharging, press the Start but-
    ton.

```
GRANULES
AMT   1000.00/1000.00
                     L8
   DISCHARGING       HLD
```

FIG. 5-40 DISCHARGING PAUSED

IBC/Dispensing - Dual Speed

About Dual Speed IBC Dispensing

About Dual Speed Dispensing

Dual speed IBC/\dispensing involves two dispense rates,
Fast and Slow. The Fast dispense rate rapidly dispenses
material into a vessel up to a pre set loss-in-weight set point.
At that point the slow dispense rate begins to slowly dis-
pense from the IBC until the target loss-in-weight is reached.

Most of the Steps and alarms for the Dual Speed IBC/Dis-
penser are the same as the Single Speed IBC/Dispenser
except for the following

Dual Speed - Fast Dispense Sequential

Step 1.   Once dispensing begins, the Fast Dispense Dis-
            play appears. (See Fig. 5-41)

```
GRANULES
AMT      0.00/1000.00
CYCLES    1/11     LB
          FAST DISP ON
```

FIG. 5-41 DISPENSE DISPLAY/FAST DISPENSE ON

Step 2.   The fast dispense continues to dispense until it
            reaches a predefined setpoint.
Step 3.   The Slow Dispense Gate opens and continues to
            dispense. (See Fig. 5-42)

```
GRANULES
AMT     995.0/1000.00
CYCLES    1/11     LB
          SLOW DISP ON
```

FIG. 5-42 SLOW DISPENSE DISPLAY

Step 4.   When the slow dispense reaches the Target Win-
            dow the instrument goes into a wait state. If the
            weight is within the target window IBC Dis-
            penser starts another cycle or goes to Standby
            depending on which cycle was just completed.

Pausing Slow Dispense

•   To pause the Slow Dispense, press the
    Stop button once. (See Fig. 5-43)

```
  GRANULES
  AMT     995.0/1000.00
  CYCLES    1/11    LB
            SLOW DISP HLD
```

FIG. 5-43 SLOW DISPENSE HOLD

- To resume Slow dispense press the Start button.

Fast Dispense Simultaneous

- Once dispensing begins, the Fast Dispense Display appears, however both Fast and Slow dispense operate at the same time. (See Fig. 5-44)

```
  GRANULES
  AMT       0.00/1000.00
  CYCLES    1/11    LB
            FAST DISP ON
```

FIG. 5-44 IBC DISPENSE DISPLAY/FAST DISPENSE ON

NOTE: The "Fast Dispense" appears for both Single or Dual Speed Dispensing.

1. Once the Fast Dispense reaches a set point it stops.
2. The Slow Dispense continues to dispense until the loss-in-weight target window is reached. (See Fig. 4-45)

```
  GRANULES
  AMT       0.00/1000.00
  CYCLES    1/11    LB
            SLOWDISP ON
```

FIG. 4-45 IBC DISPENSE DISPLAY/SLOW DISPENSE ON

3. If the dispense is within the target window and you do not have the Discharge Function turned ON (See Discharge Function above), the instrument returns to the Waiting On Display, repeats the motion check,

autotares and/or checks the OK to Dispense processes and begins dispense cycle number 2, then 3, 4 and so on.

4. If the dispense is within the target window and it is the last dispense cycle (See Fig. 4-46) of a dispense sequence, the instrument goes to Standby and the Standby Display appears. (See Fig. 4-47)

```
  GRANULES
  AMT    1000.00/1000.00
  CYCLES   11/11    LB
  WAITTIMER        60.0s
```

FIG. 4-46 LAST CYCLE IN GRANULES SEQUENCE

```
  GRANULES
  AMTREQD  1000.00LB
  CYCLES   11
  GROSSWT   5.0LB OFF
```

FIG. 4-47 STANDBY DISPLAY

IBC Dispense Alarms

Not OK to Dispense Alarm

- - - - - **ALARM CONDITION** - - - - -

- If the OK to Dispense function is turned On and is not present within a pre-programmed time frame a NOT OK TO DISPENSE appears in the display. (See Fig. 5-48)

```
  GRANULES
  AMT       0.00/1000.00
  !NOTOKTODISP!    LB
   ALARM  FASTDISP HLD
```

FIG. 5-48 NOT OK TO DISPENSE

1. The Operator needs to determine why it is NOT OK to DISPENSE by checking for problems with the electrical and /or mechanical systems.

2. Once the problem has been fixed, push the Clear button to clear the Alarm. The Filler/Dispenser/IBC returns to the Standby mode waiting a Start Command.

NOTE: *The OK to DISPENSE Timer has a preset time to determine if it is OK to Dispense. If the OK to Dispense times out, it means that the preset time maybe too short for the process and the NOT OK to DISPENSE Alarm appears with no real alarm condition. You may need to reset the timer if it appears that no electrical or mechanical reason for the alarm is determined. The OK to DIS-PENSE timer may be set incorrectly for your process. See the HI 3010 Service Manual for Instructions on setting the OK to DISPENSE Timer.*

Lost Ok to Dispense Alarm

- - - - - ALARM CONDITION - - - - -

• During the dispensing process, conditions may develop that cause the Filler/Dispenser/IBC to lose the OK to DISPENSE during Fast Dispense or Slow Dispense. When this occurs an alarm appears that says LOST OK TO DISPENSE. (See Figs. 5-49 & 5-50)

```
Granules
AMT      0.00/1000.00
!LOSTOKTODISP!     LB
   ALARM FASTDISP HLD
```

FIG. 5-49 LOST OK TO DISPENSE ALARM/FAST DISPENSE

```
Granules
AMT      0.00/1000.00
!LOSTOKTODISP!     LB
   ALARM SLOWDISP HLD
```

FIG. 5-50 LOST OK TO DISPENSE ALARM/SLOW DISPENSE

1. The Operator needs to determine why the system LOST OK to DISPENSE by checking for problems with the electrical and /or mechanical systems.

2. Once the problem has been fixed, push the Clear button to clear the Alarm. The Filler/Dispenser/IBC resumes dispensing from where it stopped.
3. If the OK TO DISPENSE was lost while in the fast or slow dispense mode the instrument asks if you want to Resume the Fast Dispense (See Fig. 5-51) or Slow Dispense (See Fig. 5-52)

```
Granules
AMT     120.00/1000.00
RESUME DISPENSE FAST
PRESS START        HLD
```

FIG. 5-51 RESUME DISPENSE FAST

```
Granules
AMT     120.00/1000.00
RESUME DISPENSE SLOW
PRESS START        HLD
```

FIG. 5-52 RESUME DISPENSE SLOW

Change IBC Alarm

- - - - - ALARM CONDITION - - - - -

• When dispensing from the IBC, if the net loss-in-weight is less than the target set point minimum value and there is no motion detected (weight change within the tolerance value over a certain time) the IBC dispenser will turn on an auxiliary device to help move the material from the IBC.
• If there is still no motion after a programmed period of time or the auxiliary function is not turned on, an alarm telling you to change IBC appears. (See fig. 5-53)

```
Granules
AMT      0.00/1000.00
!CHANGEIBC!        LB
  !ALARM!          HLD
```

FIG. 5-53 CHANGE IBC ALARM

1. Press the Clear button to clear the alarm then manually inspect the IBC to determine if it is empty.
2. If it is empty replace the IBC with a full one.
3. When the full IBC is in place, press the Start button. The IBC dispenser completes the dispense from where it left off before the bag change.

NOTE: *If the IBC is not empty, fix the problem and press the Start button once. The IBC dispenser completes the dispense from where it left off before the bag change.*

No Fast Feed Alarm

- - - - - ALARM CONDITION - - - - -

- If the Fast Dispense Gate valve or feeder is not open or on at the time you want to dispense, the NO FAST FEED alarm appears on the display. (See Fig. 5-54)

```
Granules
AMT          0.00/1000.00
!NO FAST FEED!
!ALARM!               HLD
```

FIG. 5-54 NO FAST FEED ALARM

1. Determine why you do not have Fast Feed and correct the problem.
2. Press the Clear button to clear the alarm. The RESUME DISPENS-ING? display appears, for single speed or sequential IBC dispensing. (See Fig. 5-55)

```
Granules
AMT        0.00/1000.00
RESUME DISPENSE?    LB
  PRESS START       HLD
```

FIG. 5-55 RESUME DISPENSING FAST DISPLAY

3. Press the Start button to resume dispense. (See Fig. 5-56)
4. In dual speed/simultaneous operation press the Clear button to clear the alarm. The RESUME DISPENSE SLOW appears. (See Fig. 5-57)

```
Granules
AMT          0.00/1000.00
CYCLES    1/11        LB
              FAST DISP ON
```

FIG. 5-56 FAST DISPENSE ON

```
Granules
AMT     120.00/1000.00
RESUME DISPENSE SLOW
PRESS START        HLD
```

FIG. 5-57 RESUME DISPENSE SLOW

Fast Feed On Alarm

- - - - - ALARM CONDITION - - - - -

- If the Fast Dispense Gate valve or feeder does not close or shut off at the end of a cycle, the FAST FEED ON alarm appears on the display. (See Fig. 5-58)

```
Granules
AMT        1001.00/1000.00
!ALARM FAST GATE!
!DID NOT CLOSE!          HLD
```

FIG. 5-58 FAST FEED ON ALARM

1. Determine why the Fast Feed is On and correct the problem.
2. Press the Clear button to clear the alarm.
3. If the weight is NOT within the target window and you do not have the JOG function on, the IBC dispense is accepted and an UNDER DISPENSE or OVER DISPENSE alarm will appear depending on the weight dispensed.

No Slow Feed Alarm

- - - - - **ALARM CONDITION** - - - - -

• If the Slow Dispense Gate valve or feeder is not open or on at the time you want to slow dispense, the NO SLOW FEED alarm appears on the display. (See Fig. 5-59)

```
Granules
AMT        991.00/1000.00
!NO SLOW FEED!
!ALARM!              HLD
```

FIG. 5-59 NO SLOW FEED ALARM

1. Determine why the Slow IBC Dispense Gate did not open and correct the problem.
2. Press the Clear button to clear the alarm. The "RESUME DISPENSING SLOW" display appears. (See Fig. 5-60)

```
Granules
AMT      120.00/1000.00
RESUME DISPENSE SLOW
PRESS START         HLD
```

FIG. 5-60 RESUME DISPENSING DISPLAY

3. Press the Start button to resume slow dispensing.

NOTE: At the beginning of a dispense in Dual speed/ simultaneous dispensing the instrument checks to make sure that the instrument is dispensing slowly before starting the Fast Dispense. If the instrument is NOT dispensing slowly the NO SLOW FEED ALARM appears. Clearing the alarm returns the system to Standby Mode. Any further cycles are not completed.

Slow Feed On Alarm

- - - - - **ALARM CONDITION** - - - - -

• If the Slow Dispense Gate valve or feeder does NOT close or shut off, the SLOW FEED ON alarm appears on the display. (See Fig. 5-61)

```
Granules
AMT      1001.23/1000.00
!SLOW FEED ON!
!ALARM!              HLD
```

FIG. 5-61 SLOW FEED ON ALARM

1. Determine why the Slow Feed is On and correct the problem.
2. Press the Clear button to clear the alarm. The wait timer display appears. (See Fig. 5-62)

```
Granules
AMT    1000.00/1000.00
CYCLES     1/11     LB
WAIT TIMER        60.0s
```

FIG. 5-62 WAIT TIMER DISPLAY

Under dispense/Over dispense Alarms

- - - - - **ALARM CONDITION** - - - - -

• If the weight is NOT within the target window and the JOG function is not turned On, the dispense is not accepted in the wait state and an UNDER DISPENSE or OVER DISPENSE alarm appear depending on the weight dispensed. (See Figs. 5-63 & 64)

```
Granules
AMT      999.84/1000.00
!UNDER DISPENSE!    LB
   ALARM           HLD
```

FIG. 5-63 UNDERDISPENSE ALARM

```
Granules
AMT    1000.84/1000.00
!OVER DISPENSE!    LB
   ALARM          HLD
```

FIG. 5-64 OVERDISPENSE ALARM

- OVERDISPENSE ALARM, press the Clear button to clear the alarm. The Accept the Dispense display appears. (See Fig. 5-65) At this time you can:

    1. Accept the dispense by pressing the START button.
    2. If your system allows, physically remove some of the material until it meets the target window requirements and then press the START button.
    3. The instrument returns to the Waiting ON display, repeats the motion check, autotares and/or checks the OK to Dispense processes and begins dispense cycle number 2.

NOTE: *Pressing the Stop button returns the display to the Standby State. Any further cycles are not completed.*

```
Granules
AMT     1000.84/1000.00
ACCEPT DISPENSE?    LB
PRESS START         HLD
```

FIG. 5-65 ACCEPT DISPENSE DISPLAY

- UNDERDISPENSE ALARM, press the Clear button to clear the alarm, the Accept the Dispense display appears. At this time you can:

    1. Accept the dispense by pressing the START button.
    2. If your system allows, physically add some of the material until it meets the target window requirements and then press the START button.
    3. The instrument returns to the Waiting On Display, repeats the motion check, autotares and/or checks the OK to Dispense processes and begins dispense cycle number 2.

Dispense Timeout Alarm

- - - - - ALARM CONDITION - - - - -

- This function if turned on, times the dispense cycle between the On and Wait modes. If this time is exceeded the TIME-OUT ALARM appears. (See Fig. 5-66)

```
Granules
AMT      995.00/1000.00
    !TIMEOUT!
    !ALARM!
```

FIG. 5-66 TIMEOUT ALARM

1. Do a physical check of your system looking for blockages or breaks and make corrections as necessary.
2. Press the Clear button to clear the alarm. Depending on whether you are operating in single or dual speed when the Timeout occurred, one of the following displays appears.

```
Granules
AMT      120.00/1000.00
RESUME DISPENSE FAST
PRESS START         HLD
```

FIG. 5-67 RESUME DISPENSE FAST

```
Granules
AMT      120.00/1000.00
RESUME DISPENSE SLOW
PRESS START         HLD
```

FIG. 5-68 RESUME DISPENSE SLOW

3. Press the Start button to resume the fast or slow IBC dispense. (See Fig.s 5-67 & 5-68) If the Stop button is pressed, the instrument goes to Standby Mode and does not complete any more requested cycles.

Jog Alarms

Did Not Jog Alarm

- - - - - ALARM CONDITION - - - - -

- The instrument checks to see if the gate valve or feeder of the vessel opens or comes on. If not, the DID NOT JOG ALARM appears on the display and the

Filler/Dispenser/IBC is placed in a hold state. (See Fig. 5-69)

```
 GRANULES
 AMT    995.00/1000.00
!DIDNOTJOG!        LB
   !ALARM!         HLD
```
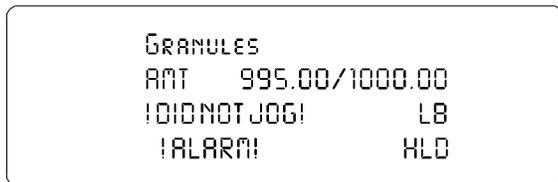
FIG. 5-69 DID NOT JOG ALARM

1. Check to see why there was no Jog. Correct the problem. Press on the Clear button to clear the alarm.
2. The Jog sequence resumes from where the Jog left off when it was paused.

Jog Stuck On Alarm

• After each Jog the IBC dispenser goes to a pause state (Jog OFF) for a pre-determined period of time if the jog stops. In this state it checks the weight to see if it is within the target window. If it is, it moves onto the next cycle. If it is Not, it jogs again as long as the allowable number of jogs has not been exceeded. If the Jog does not stop the JOG STUCK ON ALARM appears. (See Fig. 5-70)

```
 GRANULES
 AMT     995.00/1000.00
!JOGSTUCKON!       JOG1
   !ALARM!       JOG1HLD
```
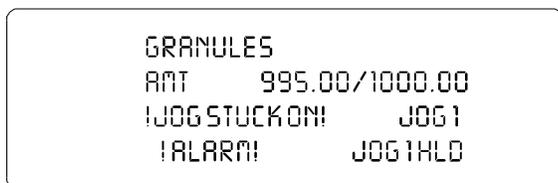
FIG. 5-70 JOG STUCK ON ALARM

1. Check to see why the gate valve or feeder did not close or stop. Correct the problem. Press on the Clear button to clear the alarm.
2. The instrument goes back to the WAIT mode where it checks if the weight is within the target window. If the weight is still below the target window the instrument begins another jog cycle.

Jog Count Alarm

- - - - - ALARM CONDITION - - - - -

• If the pre-programmed number of JOG sequences are completed and an UNDER-DISPENSE condition still exists, a JOG count alarm appears telling you that you have used up the JOGs for this sequence of cycles. (See Fig. 5-71)

```
 GRANULES
 AMT    999.92/1000.00
    !JOGCOUNT!        LB
     ALARM    JOG9 HLD
```
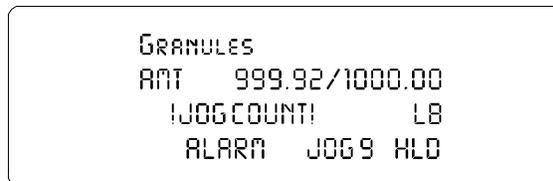
FIG. 5-71 JOG COUNT ALARM

1. Press the Clear button to clear the alarm.
2. The JOG display reappears asking you if you want to start the JOG sequence again. (See Fig. 5-72)

```
 GRANULES
 AMT    999.85/1000.00
 JOG9CONTINUE?      LB
 PRESS START       HLD
```

FIG. 5-72 JOG DISPLAY/JOG CONTINUE

3. If you want the instrument to JOG again, press the Start button to repeat the JOG sequence.
4. If you DO NOT want the instrument to JOG again, press the Stop button. The instrument goes to the Standby Menu and doesn't complete any more cycles.

Discharge Alarms

Not OK to Discharge Alarm

- - - - - ALARM CONDITION - - - - -

• If the function is on and instrument does not see an OK to Discharge, a Not OK to discharge alarm appears. (See Fig. 5-73)

```
 ╭──────────────────────────────────╮
 │                                  │
 │   GRANULES                       │
 │   AMT      1000.84/1000.00       │
 │   !NOTOKTODISCHARGE!      LB     │
 │      ALARM               HLD     │
 │                                  │
 ╰──────────────────────────────────╯
```
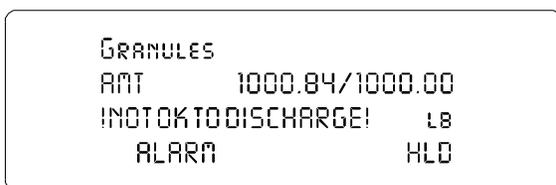
FIG. 4-73 NOT OK TO DISCHARGE ALARM

1. Check to see what is causing the Not OK to discharge alarm to appear.
2. Correct the problem.
3. Press the Clear button to clear the alarm. If auto discharge is on the dispenser looks for an OK to Discharge signal. If the OK to Discharge is Off the awaiting Command to Discharge display appears. (See Fig. 5-74)

```
 ╭──────────────────────────────────╮
 │                                  │
 │   GRANULES                       │
 │   AMT      1000.84/1000.00       │
 │   !AWAITING COMMAND!      LB     │
 │   !TO DISCHARGE ALARM!    HLD    │
 │                                  │
 ╰──────────────────────────────────╯
```
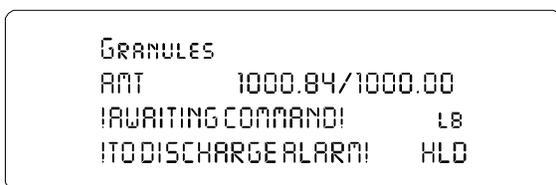
FIG. 4-74 AWAITING COMMAND TO DISCHARGE

No Discharge Alarm

- - - - - ALARM CONDITION - - - - -

• If the instrument determines that the discharge did not occur, the NO DISCHARGE alarm appears. (See Fig. 5-75)

```
 ╭──────────────────────────────────╮
 │                                  │
 │   GRANULES                       │
 │                                  │
 │   !NO DISCHARGE!                 │
 │     !ALARM!              HLD     │
 │                                  │
 ╰──────────────────────────────────╯
```
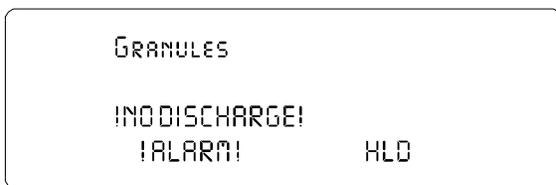
FIG. 5-75 NO DISCHARGE ALARM

1. Check to see what is preventing the discharge.
2. Correct the problem.
3. Press the Clear button to clear the alarm. The Awaiting Command to Discharge display appears.

Discharge On Alarm

- - - - - ALARM CONDITION - - - - -

• If the Discharge gate valve or feeder does not close or turn off, a DISCHARGE ON ALARM appears. (See Fig. 5-76)

```
 ╭──────────────────────────────────╮
 │                                  │
 │   GRANULES                       │
 │   AMT   1000.00/1000.00          │
 │   !DISCHARGE ON!                 │
 │    !ALARM!               HLD     │
 │                                  │
 ╰──────────────────────────────────╯
```
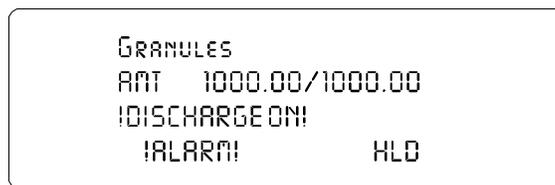
FIG. 5-76 DISCHARGE ON ALARM

1. Check to see what is causing the problem.
2. Correct the problem.
3. Press the Clear button to clear the alarm.
4. The CLOSE DISCHARGE MANUALLY display appears. When you close the Discharge, press the Start button.
5. The instrument returns to the Dispense On display or the Standby Display depending on the dispensing cycle.

Operating the IBC Dispenser from the Ethernet (Web Browser)

Getting Started

Step 1. Make sure you have installed the Ethernet cable between your computer and the instrument.
Step 2. Open the browser on your computer.
Step 3. In the URL Address field type the IP Address of the HI 3010 you want to operate (For complete instructions see the Cabling/Installation section of this manual). The Filler/Dispenser Home Page appears. (See Fig. 5-101)

**FIG. 5-77 FILLER/DISPENSER HOME PAGE/
SELECTING OPERATIONS**

Step 4.   Click on "Operations". When entering Opera-
tions for the first time after cycling the power off/
on, an Alert asking for a User Name and Pass-
word appears. (See Fig. 5-102)

FIG. 5-78 ENTERING USER NAME AND PASSWORD

Step 5.   Enter the User Name and Password and click
OK. The Operation Page appears. (See Fig. 5-
103)

*NOTE: When you enter the user name and password at
the beginning of each session, you won't have to
enter it again for the session.*

FIG. 5-79 OPERATION PAGE

**Diagnostics - See The HI 3010 Technical Service
Manual, Chapter 7 - System Integrity Check and
Fault Determination From the Web Browser**

Monitoring the HI 3010

The monitoring page displays the Standby and run Displays.
This information is automatically updated every 3 seconds.
To update it more often press on the Refresh button in your
browser.

Step 1.   Click on "Monitor". The Monitor Page Appears.
(See Fig. 5-104)

FIG. 5-80 MONITORING THE INSTRUMENT

Step 2.   Click on "Back" to return to the Operation page.

View and Clear Totalized Weight

This page provides the Totalized Weight for each ingredient
that has been selected. It reads the totalized weight for Ingre-
dient 1-12 from the last time the totalized ingredient weight
was cleared. The page also allows you to clear an ingredients
totalized weight.

Step 1.   Click on "Totalizers". The Totalizer page
appears. (See Fig. 5-105)

Operation - Totalizers

Instrument ID: Hardy IBC/Dispenser
Units: lb

Ingr. #	Ingr. Name	Totalized Weight	Cycles
1	INGREDIENT 1	0	0
2	INGREDIENT 2	0	0
3	INGREDIENT 3	0	0
4	INGREDIENT 4	0	0
5	INGREDIENT 5	0	0
6	INGREDIENT 6	0	0
7	INGREDIENT 7	0	0
8	INGREDIENT 8	0	0
9	INGREDIENT 9	0	0
10	INGREDIENT 10	0	0
11	INGREDIENT 11	0	0
12	INGREDIENT 12	0	0

Clear Totalizer [None ▼]

[Clear Totalizer]

Caution: pressing the Clear Totalizer button will set the selected totalizer value to zero.

FIG. 5-81 OPERATION - TOTALIZERS PAGE

Step 2.   Click on the Clear Totalizer Pull Down menu to select an ingredient whose totalized weight you want to clear. (See Fig. 5-106)

9	INGREDIENT 9	0
10	INGREDIENT 10	0
11	INGREDIENT 11	0
12	INGREDIENT 12	0

Clear Totalizer [Ing. #5 ▼]

[Clear Totali]   Ing. #3
                 Ing. #4
ion: pressing the Clear Totalizer
value to zero.   Ing. #5
                 Ing. #6
                 Ing. #7
                 Ing. #8
                 Ing. #9
                 Ing. #10
                 Ing. #11   Home - Operation - Configuration
                 Ing. #12
                 ALL ▼   HI 3000 Series Online Support Site
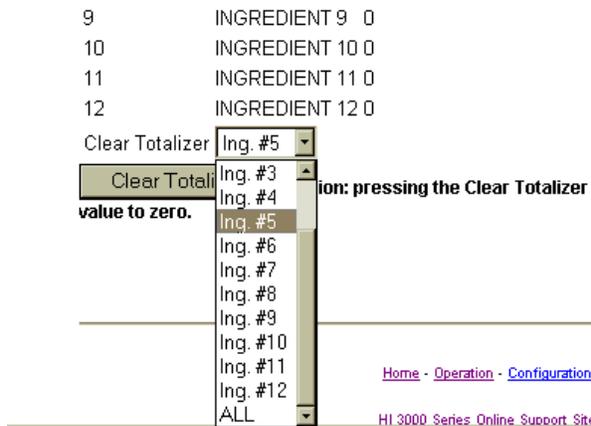
FIG. 5-82 CLEAR TOTALIZER LIST/SELECTING INGREDIENT TO CLEAR

Step 3.   Click on the Ingredient # you want to clear.

Step 4.   Click on the Clear Totalizer button to clear the totalized weight for the selected ingredient.

CAUTION: PRESSING THE CLEAR TOTALIZER BUTTON WILL SET THE SELECTED TOTALIZER TO ZERO.

Step 5.   Click on "Home" to return to the Filler/Dispenser Home Page.

NOTE: *The ability to operate the instrument from a Web Page will be available in future iterations of the Web Site.*

Operating in Manual Mode from the Front Panel

The HI 3010 allows the user to perform some of the operations in manual mode. The following Dispensing Functions can operate Manually:

- Tare Scale
- Discharge
- Refill
- Auxiliary Device (Output Relay)
- Fast Dispense
- Slow Dispense

Step 1.   Press the Manual button. The Manual Mode display appears with the cursor in front of Tare Scale. (See Fig. 5-107)

```
 _____
|                                   |
| MANUAL MODE                       |
| >TARE SCALE            ->          |
|  DISCHARGE             ->          |
|  REFILL                ->          |
|_____|
```

FIG. 5-83 MANUAL MODE DISPLAY/SELECTING TARE SCALE

Step 2.   Press the Enter button. The Tare Mode display appears. (See Fig. 3-108)

```
 _____
|                                   |
|          TARE MODE                |
|        PRESS CLEAR KEY            |
|             NOW                   |
|_____|
```
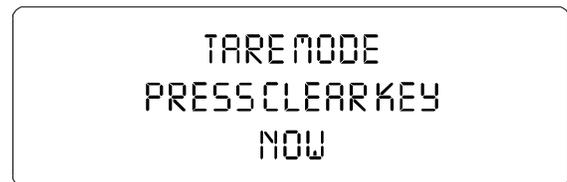
FIG. 5-84 TARE MODE DISPLAY

Step 3.   Follow the instruction on the screen. To Tare the scale press the Clr. (Clear) button. A display appears momentarily that says Tare Complete.

Step 4.   Press the Exit button to return to the Manual Mode Display.

NOTE: *Each one of the displays will have different instructions.*

Step 5.   Press the down arrow until the cursor is in front of Discharge

Step 6. Press the Enter button. The Discharge Mode display appears. (See Fig. 3-109)

```
DISCHARGE MODE
PRESS START KEY NOW
TO START DISCHARGE
```
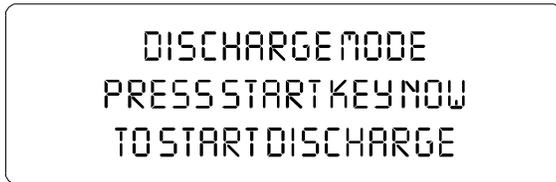
FIG. 5-85 DISCHARGE MODE DISPLAY/STARTING DISCHARGE

Step 7. Press the Start button. To stop the discharge you will have to manually press the stop button. (See Fig. 3-110)

```
DISCHARGE MODE
PRESS STOP KEY NOW
TO STOP DISCHARGE
```
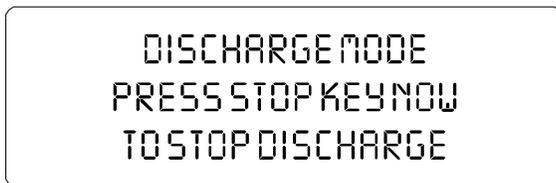
FIG. 5-86 DISCHARGE MODE DISPLAY/STOPPING DISCHARGE

Step 8. To select another function, press the up or down button to move the cursor in front of the function that you want to perform.

Step 9. Press Exit to return to the Manual Mode display.

Step 10. Press Exit to return to the Standby display.

Operating in Manual Mode from the Web Browser

You currently cannot operate the instrument from the Web Browser.

Software Downloads for Your HI 3010

Software downloads are generally done for one of the following reasons:
- Publication of a Technical Bulletin
- Recommendation from Technical Support or Hardy Web Tech

Step 1. In a web browser, go to www.hardyinstruments.com/process_weighing/filler_dispensers+controllers/hi+3010+filler+_+dispenser+controller to open the page shown in the following picture:

FIG. 5-87 LINK TO DOWNLOAD PAGE

Step 2. Select the link: Downloads for current HI 3010 weight controller users.

FIG. 5-88 DOWNLOAD PAGE

Step 3. Select the type of software to download.

Step 4. Find and start the Auto Update.exe program.

Step 5. Click Find to search for and list the units that are online on this network.

Step 6. Select the IP address of the unit you want to upgrade.

Step 7.   Click Browse to find and select the file you downloaded..

Step 8.   With both the IP address and file selected, click Update. When asked for a User Name, enter hardy, and for Password use updatepass (all lowercase) and click OK. A percent complete bar will show the progress of the upgrade followed by a screen indicating the programming is complete.

NOTE: *If Update does not display the Password screen, your program file may have too long of a path from the root directory. Try moving your files up to your root directory and run again.*

Step 9.   Cycle power on your HI 3010.

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HARDY
PROCESS SOLUTIONS
Measurement ▪ Automation ▪ Productivity