System 101

Basic Filler
Version 1.02

Operating Instructions

920i ® **FlexWeigh Systems**

Contents

1.0 Introduction

This manual is intended for use by service technicians and operators responsible for installing and operating the *Flexweigh System 101 Basic Filler*. Additional information on the actual hardware features of the *920i* are explained in the *920i* Installation and Operation manual (PN 67887) and is included with this product.

1.1 Safety

Safety Symbol Definitions:

⚠️ **WARNING**   *Indicates a potentially hazardous situation that, if not avoided could result in serious injury or death, and includes hazards that are exposed when guards are removed.*

⚠️ **CAUTION**   *Indicates a potentially hazardous situation that, if not avoided may result in minor or moderate injury.*

🛈 **Important**   *Indicates information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.*

Safety Precautions

Do not operate or work on this equipment unless you have read and understand the instructions and warnings in this Manual. Failure to follow the instructions or heed the warnings could result in injury or death. Contact any Rice Lake Weighing System dealer for replacement manuals. Proper care is your responsibility.

General Safety

⚠️ **WARNING**

Failure to heed may result in serious injury of death.

Some procedures described in this manual require work inside the indicator enclosure. These procedures are to be performed by qualified service personnel only.

DO NOT allow minors (children) or inexperienced persons to operate this unit.

DO NOT operate without all shields and guards in place.

DO NOT step on the unit.

DO NOT jump up and down on the scale.

DO NOT use for purposes other then weight taking.

DO NOT place fingers into slots or possible pinch points.

DO NOT use any load bearing component that is worn beyond 5% of the original dimension.

DO NOT use this product if any of the components are cracked.

DO NOT exceed the rated load limit of the unit.

DO NOT make alterations or modifications to the unit.

DO NOT remove or obscure warning labels.

DO NOT use near water.

Before opening the unit, ensure the power cord is disconnected from the outlet.

Keep hands, feet and loose clothing away from moving parts.

1.2 Overview

The *Flexweigh System 101 Basic Filler* is used for filling a container that is placed on a scale. It has the simplicity of one-button operation and will automatically tare the empty container, automatically begin and end filling of the container, and automatically store, display and transmit each fill weight and ongoing production accumulations. Built-in safety interlocks prevent startup of a fill cycle if an empty container is not in place, or if the previously filled container has not been removed.

1.3 Standard Features

The *System 101* comes with the following standard features:

- Wallmount stainless steel enclosure
- Front panel switches including E-Stop, Reset/Resume, Start
- Softkeys for presets, CN#, Alpha-numeric ID#1, Alpha-numeric ID#2, and Totals
- Accumulating subtotal and total registers
- Transmitted audit trail
- Digital I/O board
- Relay rack and SSR relay outputs
  - Fast feed
  - Slow feed
  - Fill complete (optional)
  - Zero tolerance (optional)

(!) **Important**   *The iRite program and source code that make up the 920i Flexweigh 101 Basic Filler are property of the manufacturer. Modifications to this program and equipment must be performed by Rice Lake Weighing Systems.*

For more information on the iRite compiler utility program, refer to the 920i Installation and Operation Manual (PN 67887) and is included with this product.

1.4 Button Functions

The functions of the front panel buttons for the *System 101* are listed in Table 1-1.

Front Panel Button	Function
E-Stop	Stops the filling process and removes power from the relays. It also puts the process into a paused state.
Start	Starts the filling process.
Reset	Aborts the fill process. This requires that the E-Stop button is in a stopped position.
Resume	Starts the fill process from a paused state. This requires that the E-Stop is in a run position.

Table 1-1. Front Panel Button Functions

1.5 Operation Menu Softkeys

Operation menu softkeys are defined to provide flexibility of operator functions for specific applications. Softkey assignments are listed on the tabs shown at the bottom of the LCD display and softkey functions are activated by pressing the arrow keys below the softkey tabs (Figure 1-1). They are password protected and offer access to the following:

- Presets
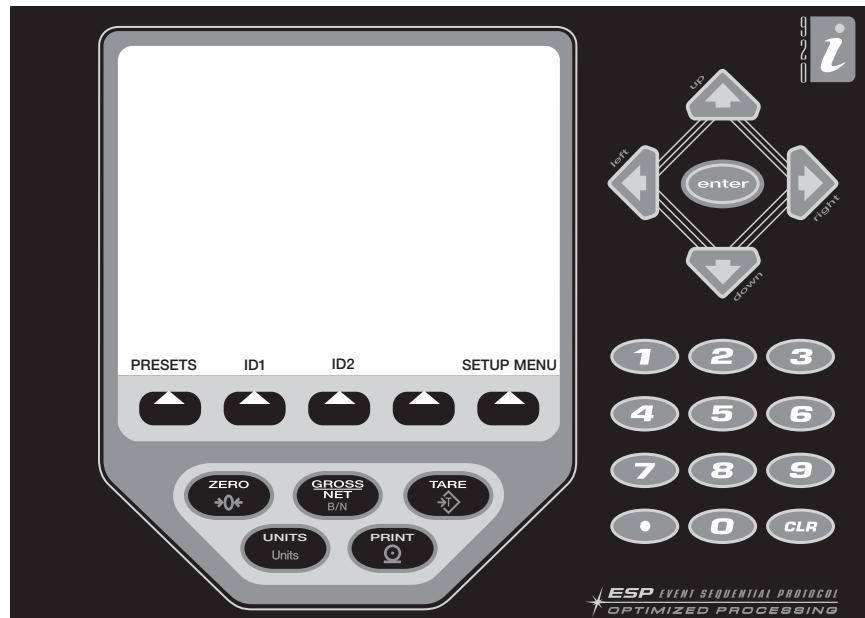- ID 1
- ID 2
- Totals
- Setup Menu

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Figure 1-1. 920i Front Panel

The set of softkeys shown on the display is determined by the indicator configuration and program.

Softkey	Default	Softkey	Description
Preset Softkeys	-	Target Weight Dribble Weight Preact Weight Zero Tolerance Weight	Refer to Section 4.1 on page 13 for detailed information on these functions.
Totals Softkeys	-	Consecutive Number Print Subtotals Print Totals	Refer to Section 4.2 on page 16 for detailed information on these functions.
Time/Date	Current	Time/Date	Time and date of 920i
System Password	"""""""	Setup Password	Changing the password that is required for entry into the setup menu. Setting the password to nothing will cause the system to not prompt for a password when the Setup Menu softkey is pressed.
Enabling/Disabling ID#1	-	ID #1	This allows the operator to log an extra data field. A softkey will appear on the main screen to allow the operator to enter more data (ie: formula, ID Truck, container, operator)
Enabling/Disabling ID#2	-	ID #2	This allows the operator to log an extra data field. A softkey will appear on the main screen to allow the operator to enter more data (ie: formula, ID Truck, container, operator)
Filling Speeds	Single Speed	Single, Dual or Parallel	Allows the operator to change the filling speed operations
Auto Tare Feature	Enabled	Auto Tare Enabled/Disabled	Allows the operator to enable/disable the auto tare feature
Auto Print Feature	Enabled	Auto Print Enabled/Disabled	Allows the operator to enable/disable the auto print feature
Delay After Discharge	-	Delay After Discharge	Allows the operator to enter a time in seconds to delay after completion of Discharge before a new Start input is enabled.
Test Digital I/O	-	Fill Complete Slow Fill Fast Fill	Refer to Section 3.9 on page 11 for detailed information on these functions.

Table 1-2. Configurable Softkeys

2.0   Installation

This section describes procedures for setting up and getting the *System101 Basic Filler* ready to weigh.

⚠️ **CAUTION** — *Use a wrist strap to ground yourself and protect components from electrostatic discharge (ESD) when working inside the indicator enclosure.*

The supply cord serves as the power disconnect for the unit. The power outlet supplying the indicator must be installed near the unit and be easily accessible.

⚠️ **WARNING** — *The Flexweigh System 101 Basic Filler has no on/off switch. Before opening the unit, ensure the power cord is disconnected from the power outlet.*

2.1   Unpacking and Assembly

Immediately after unpacking, visually inspect the unit to ensure all components are included and undamaged. The shipping carton should contain the *System 101* unit and this manual. If any parts were damaged in shipment, notify Rice Lake Weighing Systems and the shipper immediately.

2.2   Enclosure Disassembly

The *System 101* must be opened to install option cards and to connect cables for installed option cards.
Ensure power to the indicator is disconnected, then open the enclosure.

2.3   Cable Connections

The *System 101* provides eleven cord grips for cabling into the indicator. The parts kit includes cord grip plugs to prevent moisture from entering the enclosure. Install these plugs into all cord grips that will not be used in your application. Use the cable grounding instructions for wiring into the indicator.
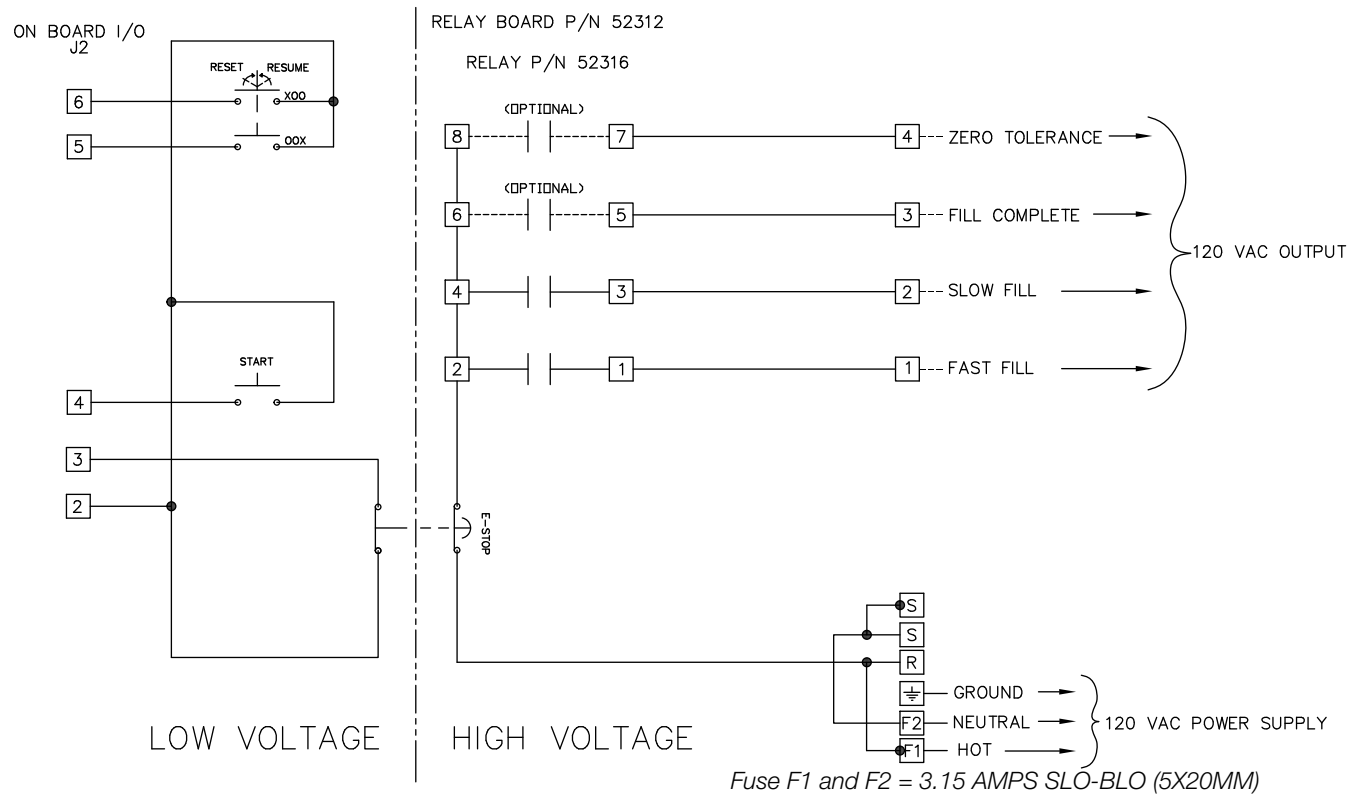
Figure 2-1. Flexweigh 101 Block Wiring Diagram

📝 **Note** — *An additional adhesive label (121108) is included in the parts kit and can be installed at the installer's discretion indicating correct terminal block numbering.*

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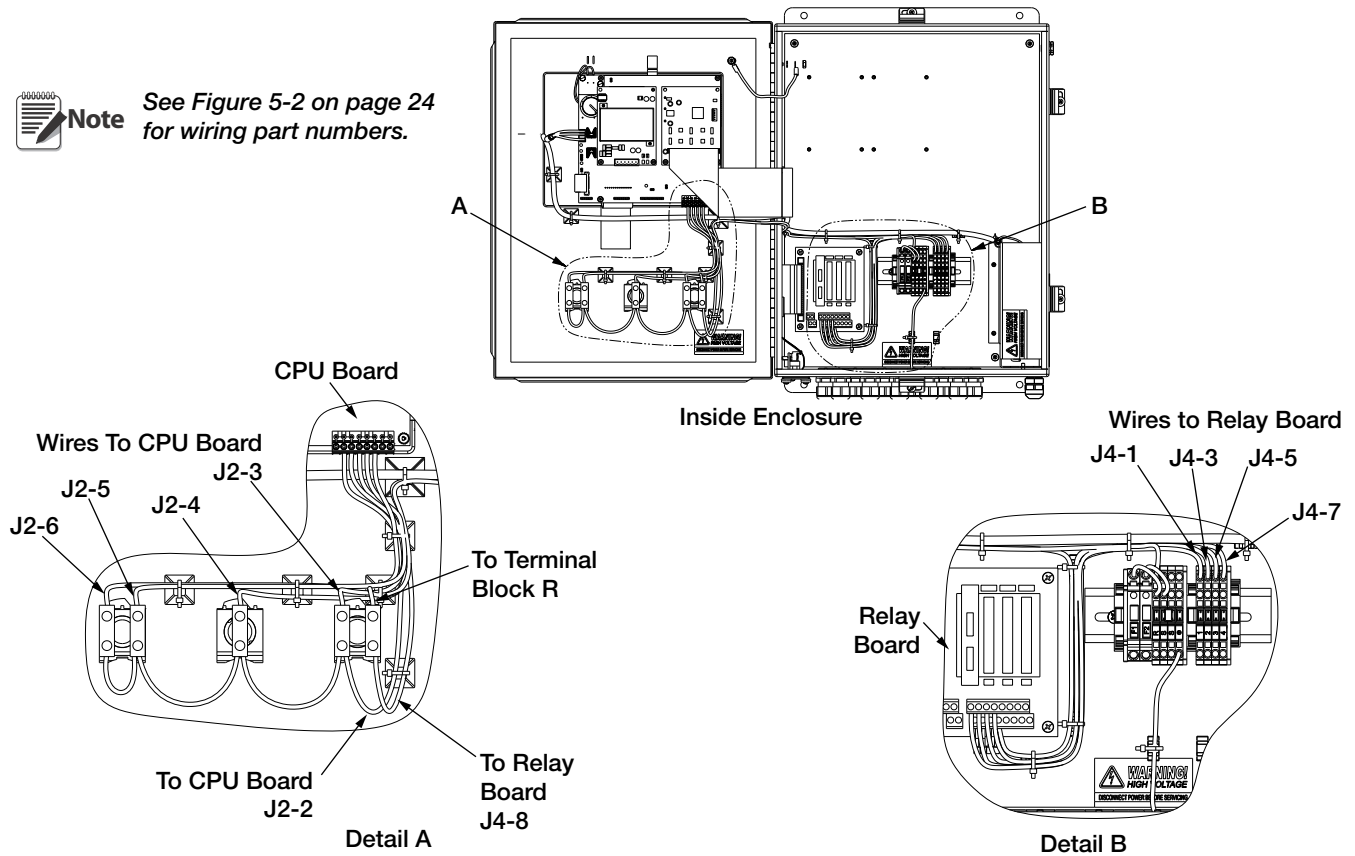
Figure 2-2. Wiring Diagram – Inside Enclosure

2.4   Cable Grounding

Cables routed through the cord grips should be grounded against the indicator enclosure. Follow cable grounding instructions in the *920i* Installation and Operation Manual (PN 67887) which is also included with this product.

2.5   Parts Kit Contents

Table 2-1 lists the parts kit contents for the *System 101*.

Part No	Description	QTY
14626	Kep nuts, 8-32NC (6)	6
15133	Lock washers, No. 8, type A (6)	6
15631	Cable ties (4 single A/D, 6 dual A/D)	4
15665	Reducing glands for 1/2 NPT cord grips (11)	11
15887	6-position screw terminal for load cell connection (1-single A/D, 2-dual A/D)	1
19538	Cord grip plugs (10-single A/D, 9-dual A/D)	10
94422	Capacity Label (1-single A/D, 2-dual A/D)	1
53075	Cable shield ground clamps (6)	6
70599	6-position screw terminals for J2 and J10 (2)	2
71125	3-position screw terminal for J11 (1)	1
71126	4-position screw terminal for J9 and optional keyboard connection (2)	2
121108	Label, Terminal Block Identification (1)	1

Table 2-1. Parts Kits Contents (PN 121143)

2.6 Option Cards

Table 2-2 list the available option card that are used in the *System 101*. The single channel A/D card can be installed in slot 1 and the 24 channel I/O card in slot 2.

Slot	Type
1	Single Channel A/D Card
2	24 Channel I/O Card

Table 2-2. Option Card Locations

Digital I/O

Slot	Bit	Type	Function
0	1	Programmability	E-Stop
0	2		Start
0	3		Resume
0	4		Reset
0	5-6	Off	Currently not used
2	1	Output	Fast Fill
2	2		Slow Fill
2	3		Fill Complete
2	4		Zero Tolerance
2	5-24	Off	Currently not used

Table 2-3. Digital I/O Assignments

Serial Ports

Port	Type	Description	Setup
1	CMD	Currently not used	9600 baud 8 bit None 2
2	CMD/KEYBOARD	iRev downloads/operator input	115200 8 bit None 2
3	CMD	Audit trail printer	9600 baud 8 bit None 2
4	CMD	Currently not used	9600 baud 8 bit None 2

Table 2-4. Serial Port Setup

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3.0 Setup Menu

The *System 101* has various setup parameters. They are explained in further detail in the following sections.

3.1 Entering the Setup Menu

Note *Note that the front panel E-stop button must be in the stopped position (pushed in) to enable any of the following keypad entries.*

1. Press the **Setup Menu** softkey on the main menu screen and the system performs one of the following actions.
   - If a system password is entered, proceed to Step 2.
   - If no system password is entered, the *Setup Menu Main Screen* will display (see Figure 3-2).

2. Press the **Setup Password** softkey. The system prompts with *Enter Password*.

```
04/27/2011              02:15PM                    SCALE #1
                    136.8 Gross                     SCALE #1
                          Lb

              Program: Express 101 (V 1.00)
     ID #1 (disabled)          Start     O   Zero Tol    ☼
     ID #2 (disabled)          Resume    O   Fill Copt   ☼
     Dual Speed (enabled)      Reset     O   Slow Fill   ⧖
     Auto Tare (enabled)       Stop      O   Fast Fill   ⧖
     Auto Print (disabled)
     Delay After Discharge (sec) :30
    Enter New Password:


       Home                  Cancel                   End
```
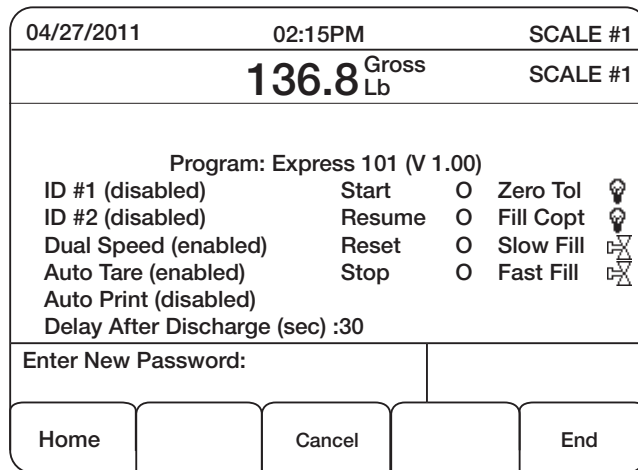
Figure 3-1. Setup Menu Enter Password

3. Enter the password and press the **ENTER** key on the *920i*.
   The system checks the entered value against the system password and performs one of the following actions:
   - If the password is valid the *Setup Menu Main Screen* will display (see Figure 3-2).
   - If the password is invalid, *Invalid password* will display momentarily and display exits the operation.

```
04/27/2011              02:15PM                    SCALE #1
                    136.8 Gross                     SCALE #1
                          Lb
                      SETUP MENU
              Program: Express 101 (V 1.00)
     ID #1 (disabled)          Start     O   Zero Tol    ☼
     ID #2 (disabled)          Resume    O   Fill Copt   ☼
     Dual Speed (enabled)      Reset     O   Slow Fill   ⧖
     Auto Tare (enabled)       Stop      O   Fast Fill   ⧖
     Auto Print (disabled)
     Delay After Discharge (sec) :30
    Setup Menu:

                   Setup
    Time/Date    Password    ID #1     ID #2      More =>
```
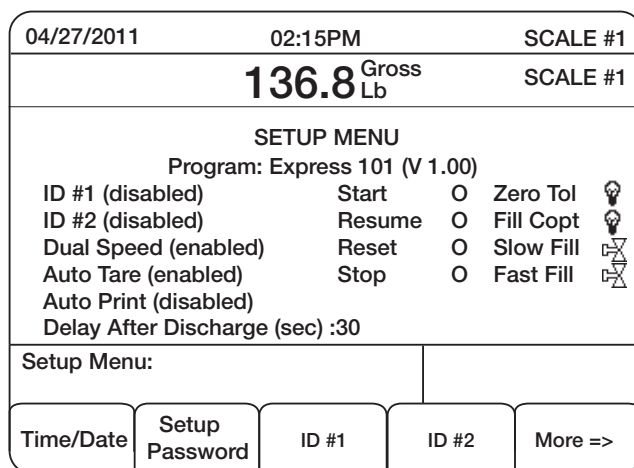
Figure 3-2. Setup Menu Main Screen

3.2 Setting the System Time and Date

Use the following steps to set up the system time and date.

1. From the *Main Setup Menu Screen*, press the **Time/Date** softkey.


```
04/27/2011              02:15PM              SCALE #1

                    136.8 Gross              SCALE #1
                          Lb

                      SETUP MENU
               Program: Express 101 (V 1.00)
   ID #1 (disabled)         Start    O    Zero Tol
   ID #2 (disabled)         Resume   O    Fill Copt
   Dual Speed (enabled)     Reset    O    Slow Fill
   Auto Tare (enabled)      Stop     O    Fast Fill
   Auto Print (disabled)
   Delay After Discharge (sec) :30

   Setup Menu:

  Time/Date  Setup     ID #1      ID #2     More =>
            Password
```
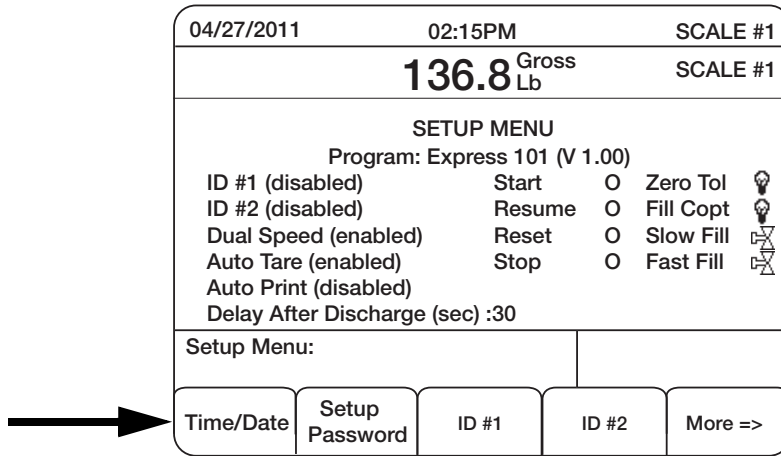
Figure 3-3. Select Time/Date Softkey

2. Use the arrow keys on the *920i* and the numeric keypad to modify the time and or date.
3. Press the **enter** key to save your settings.


```
              03:52 PM

              04/17/2012

                        Cancel
```

Figure 3-4. Time and Date Main Screen

Note *The Cancel softkey can be pressed at any time to exit this sequence without saving any changes.*

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3.3 Modifying the Setup Password

Use the following steps to modify the setup password.

1. From the *Main Setup Menu Screen*, press the **Setup Password** softkey.
2. The system prompts, *Enter New Password*.

```
┌─────────────────────────────────────────────────┐
│ 04/27/2011          02:15PM           SCALE #1   │
│                          Gross                   │
│              136.8 Lb                 SCALE #1   │
│                                                  │
│                                                  │
│            Program: Express 101 (V 1.00)         │
│   ID #1 (disabled)        Start   O   Zero Tol  ☼│
│   ID #2 (disabled)        Resume  O   Fill Copt ☼│
│   Dual Speed (enabled)    Reset   O   Slow Fill  │
│   Auto Tare (enabled)     Stop    O   Fast Fill  │
│   Auto Print (disabled)                          │
│   Delay After Discharge (sec) :30                │
│  ┌──────────────────────────┬───────────────────┐│
│  │ Enter New Password:      │                   ││
│  └──────────────────────────┴───────────────────┘│
│  ┌────────┬──────┬────────┬──────┬──────┐        │
│  │  Home  │      │ Cancel │      │ End  │        │
│  └────────┴──────┴────────┴──────┴──────┘        │
└─────────────────────────────────────────────────┘
```

Figure 3-5. Enter New Password

3. Enter the new password and press the **enter** key.
4. The system prompts *Re-enter password* to verify.
5. Re-enter the password and press the **enter** key again. The system performs one of the following actions.
   - If the passwords match, the system displays *Password Changed.*
   - If the passwords do not match, the system displays *Passwords Did Not Match* and exits the operation.

3.4 Enabling/Disabling Additional Data Fields

Use the following steps to enable or disable additional data fields.
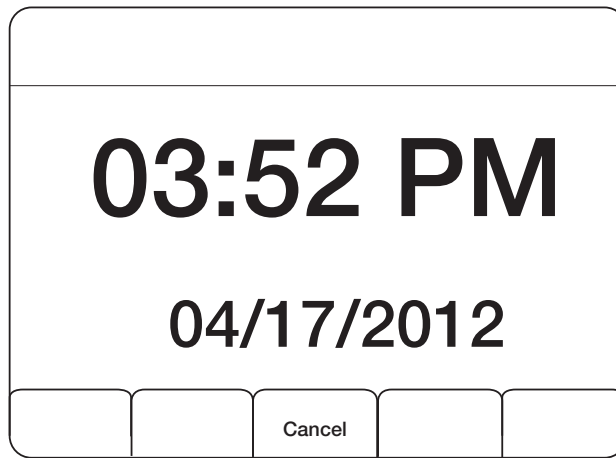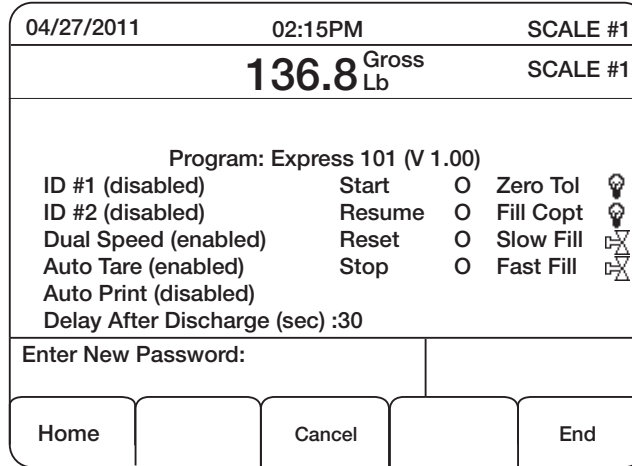
1. From the main setup menu screen, press the **Setup Password** softkey (shown in Figure 3-2).

📝**Note** *A setup password is not required if it has never been set or if you are already in Setup mode.*

2. Press the **ID #1** or **ID #2** softkey. The system displays *Enable ID #1* or *ID #2* while displaying **Yes** or **No** softkeys or *Disable ID #1 or #2*.
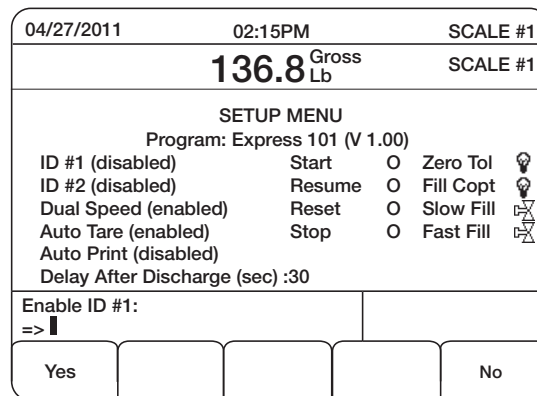
```
┌─────────────────────────────────────────────────┐
│ 04/27/2011          02:15PM           SCALE #1   │
│                          Gross                   │
│              136.8 Lb                 SCALE #1   │
│                   SETUP MENU                     │
│            Program: Express 101 (V 1.00)         │
│   ID #1 (disabled)        Start   O   Zero Tol  ☼│
│   ID #2 (disabled)        Resume  O   Fill Copt ☼│
│   Dual Speed (enabled)    Reset   O   Slow Fill  │
│   Auto Tare (enabled)     Stop    O   Fast Fill  │
│   Auto Print (disabled)                          │
│   Delay After Discharge (sec) :30                │
│  ┌──────────────────────────┬───────────────────┐│
│  │ Enable ID #1:            │                   ││
│  │ =>                       │                   ││
│  └──────────────────────────┴───────────────────┘│
│  ┌────────┬──────┬────────┬──────┬──────┐        │
│  │  Yes   │      │        │      │  No  │        │
│  └────────┴──────┴────────┴──────┴──────┘        │
└─────────────────────────────────────────────────┘
```

Figure 3-6. Enabling IDs

3. The operator does one of the following.

   Press the **Yes** softkey, the system prompts *Enter Extra Data #1 Name*. Enter the name and press the **enter** key on the *920i*. A new data field appears on the main display and as a softkey so that the operator can change it. To enter alpha characters, press the **Up** navigation key to access a pop up alphabet.

   Press the **Yes** softkey and this returns the operator back to Step 1.

3.5   Modifying the Filling Speeds

Use the following steps to modify the filling speeds.

1. From the *Main Setup Menu Screen*, press the **Setup Password** softkey (a password is not required).
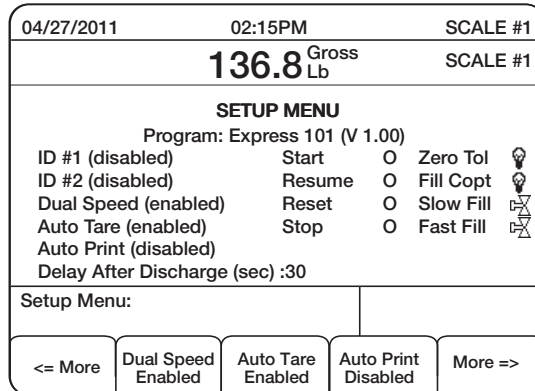2. Press the **More=>** softkey to access the second and third menu screens.

04/27/2011	02:15PM	SCALE #1
	136.8 Gross Lb	SCALE #1

SETUP MENU
Program: Express 101 (V 1.00)

ID #1 (disabled)	Start	O	Zero Tol	☉
ID #2 (disabled)	Resume	O	Fill Copt	☉
Dual Speed (enabled)	Reset	O	Slow Fill	⊠
Auto Tare (enabled)	Stop	O	Fast Fill	⊠
Auto Print (disabled)				
Delay After Discharge (sec) :30				

Setup Menu:

<= More	Dual Speed Enabled	Auto Tare Enabled	Auto Print Disabled	More =>

Figure 3-7. Setup Main Menu Screen #2

3. Press the **Single Speed Enabled, Dual Speed Enabled** or **Parallel Speed Enabled** softkey.
4. The system will toggle between the three modes of operation (see Section 4.3 on page 18) and will display the selected filling speed.

3.6   Modifying the Auto Tare

Use the following steps to modify the auto tare.

1. From the *Main Setup Menu Screen*, press the **More=>** softkey to access the second setup menu screen.
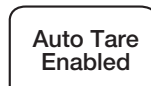
Auto Tare
Enabled

Figure 3-8. Auto Tare Softkey

2. Press the **Auto Tare Enabled** or **Auto Tare Disabled** softkey which allows the operator to enable or disable the auto tare feature. The system will toggle between the two modes of operation.

3.7   Modifying Auto Print

Use the following steps to modify the auto print.

1. From the *Main Setup Menu Screen*, press the **More=>** softkey to access the second setup menu screen.
2. Press the **Auto Print Enabled** or **Auto Print Disabled** softkey. The system will toggle between the two modes of operation.

Auto Print
Disabled

Figure 3-9. Auto Print Disabled Softkey

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3.8   Delay After Discharge

Use the following steps to modify the delay after discharge.

1. Cycle through pressing the **More =>** softkey to access the third setup menu screen which includes the **Delay After Discharge** softkey.

Figure 3-10. Delay After Discharge Softkey Location

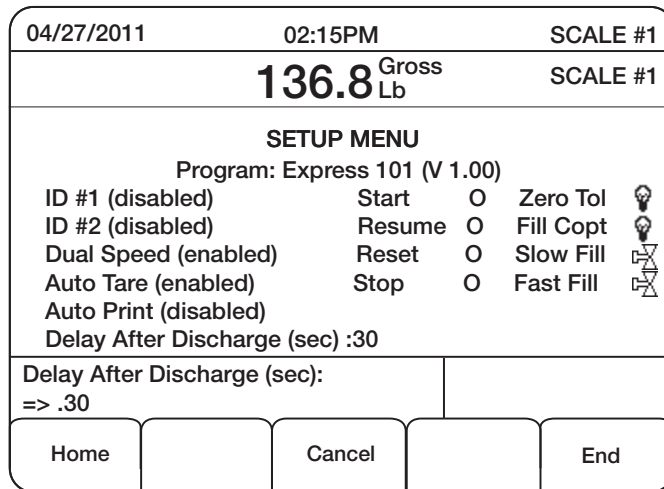2. Press the **Delay After Discharge** softkey to access that softkey.

Figure 3-11. Enter Time

3. Enter in the time in seconds to delay after completion of a discharge before a new start input will be allowed.

3.9   Test Digital IO

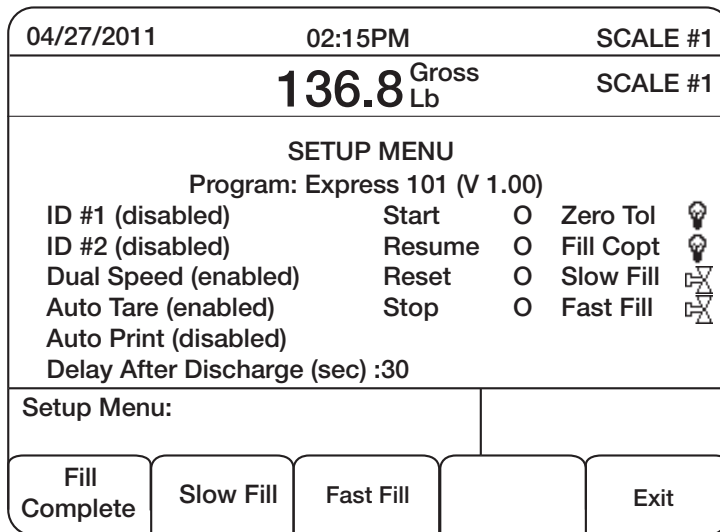Press the **Test Digital IO** softkey to test the Zero Tolerance, Fill Complete, Slow Fill and Fast Fill relay outputs.

Figure 3-12. Test Digital I/O

Zero Tolerance

Press the **Zero Tolerance** softkey to test the zero tolerance output. If the weight is within the preset zero tolerance, a front panel light will indicate this as being on. It is an optional output.

Fill Complete

Press the **Fill Complete** softkey to test the digital I/O. A front panel light will indicate this as being on. This is an optional output.

Slow Fill

By pressing the **Slow Fill** softkey, the digital I/O is tested and the Slow Fill icon on the setup menu screen is

darkened ![icon] while it's being tested. Press the **Slow Fill** softkey again and the icon clears again.

Fast Fill

By pressing the **Fast Fill** softkey, the digital I/O is tested and the Fast Fill icon on the setup menu screen is darkened

![icon] while it's being tested. Press the **Fast Fill** softkey again and the icon clears again.

4.0 Sequence of Operation

The following instructions explain a basic sequence of operation for the *System 101*.

4.1 Entering Presets Softkey Menu

The *System 101* has the capability to allow the operator to modify the presets/weights. Use the following instructions to do this.

Note *The front panel E-stop button must be in the stopped position (pushed in) to enable any of the following keypad entries.*


```
04/27/2011      10:29AM                    SCALE #1
                                            SCALE
                         89  Gross           #1
                             Net
      Target       Dribble      Preact     Near Zero
      200.0 Lb       75          0.0         10.0




      Consec. #        Subtotal         Total
        23             1687 Lb         3468 Lb

   Presets                        Totals     Setup
                                             Menu
```

Figure 4-1. Presets Menu Screen

1. Press the **Presets** softkey. Softkeys in Figure 4-2 are displayed.


```
04/27/2011      10:45AM                    SCALE #1
                                            SCALE
                         89  Gross           #1
                             Net
      Target       Dribble      Preact     Near Zero
      200.0 Lb       75          0.0         10.0




      Consec. #        Subtotal         Total
        23             1687 Lb         3468 Lb

   Target    Dribble    Preact    Zero Tol
   Weight    Weight     Weight    Weight      Exit
```

Figure 4-2. Presets Softkey Parameters

2. Press the corresponding softkey to edit the data. Parameters that can be edited include:
    - Target weight
    - Dribble weight
    - Preact weight
    - Zero tolerance weight

Target Weight

This is the desired weight value for a final fill weight. Enter the target weight using the numeric keypad. Press **enter** on the *920i* to save that value. The existing number needs to first be cleared by using the **clear** key.

04/27/2011	10:34AM		SCALE #1
	89 Gross Net		SCALE #1
Target	**Dribble**	**Preact**	**Near Zero**
200.0 Lb	75	0.0	10.0

Enter Target Weight

Consec. #	**Subtotal**	**Total**
23	1687 Lb	3468 Lb

Enter Target Weight
=> 25

| Home | | Cancel | | Exit |

Figure 4-3. Enter Target Weight

Dribble Weight

When a 2-speed fill is enabled (either Parallel or Sequential), this is the desired weight value below the Target Weight that the cycle switches from Fast Feed to Dribble Feed.

1. Enter the dribble weight using the numeric keypad.
2. Press **enter** on the *920i* to save that value.

Note *The existing number needs to first be cleared by using the* **clear** *key.*

04/27/2011	10:16AM		SCALE #1
	89 Gross Net		SCALE #1
Target	**Dribble**	**Preact**	**Near Zero**
200.0 Lb	75	0.0	10.0

Enter Dribble Weight

Consec. #	**Subtotal**	**Total**
23	1687 Lb	3468 Lb

Enter Dribble Weight
=> 12.0

| Home | | Cancel | | End |

Figure 4-4. Enter Dribble Weight

Preact Weight

Preact weight allows material to cut off prior to the original target value to allow for free fall material to settle onto the scale.

1. Enter the preact weight using the numeric keypad.
2. Press **enter** on the *920i* to save that value.

📝**Note** *The existing number needs to first be cleared by using the* **clear** *key.*

```
┌─────────────────────────────────────────────────┐
│ 04/27/2011     10:22AM              SCALE #1     │
│                                                   │
│              89  Gross              SCALE         │
│                  Net                 #1           │
│ ─────────────────────────────────────────────    │
│  Target    │  Dribble  │  Preact  │  Near Zero    │
│  200.0 Lb  │    75     │   0.0    │    10.0       │
│                                                   │
│                                                   │
│          Enter Preact Weight                      │
│ ─────────────────────────────────────────────    │
│  Consec. #  │   Subtotal   │     Total            │
│     23      │   1687 Lb    │    3468 Lb           │
│ Enter Preact Weight                               │
│ =>  110                                           │
│  Home    │        │  Cancel  │        │  Exit     │
└─────────────────────────────────────────────────┘
```

Figure 4-5. Enter Preact Weight

Zero Tolerance Weight

This is the weight under which the system considers the scale to be empty. The scale weight must be within the gross weight value before the system 101 basic filler will start a batch.

1. Enter the preact weight using the numeric keypad.
2. Press **enter** on the *920i* to save that value.

📝**Note** *The existing number needs to first be cleared by using the* **clear** *key.*

```
┌─────────────────────────────────────────────────┐
│ 04/27/2011     10:36AM              SCALE #1     │
│                                                   │
│              89  Gross              SCALE         │
│                  Net                 #1           │
│ ─────────────────────────────────────────────    │
│  Target    │  Dribble  │  Preact  │  Near Zero    │
│  200.0 Lb  │    75     │   0.0    │    10.0       │
│                                                   │
│                                                   │
│        Enter Zero Tolerance Wt.                   │
│ ─────────────────────────────────────────────    │
│  Consec. #  │   Subtotal   │     Total            │
│     23      │   1687 Lb    │    3468 Lb           │
│ Enter Zero Tolerance Weight                       │
│ =>  110                                           │
│  Home    │        │  Cancel  │        │  Exit     │
└─────────────────────────────────────────────────┘
```

Figure 4-6. Enter Zero Tolerance Weight

Exit

Press the **Exit** softkey to leave the presets menu parameters.

4.2   Entering Totals Softkey Menu

Figure 4-7. Printing and Clearing Accumulators Menu

1. Press the **Totals** softkey.

2. The operator can print and reset the consecutive number, subtotal and totals by pressing the appropriate softkey. Parameters that can be edited include:

    - Consecutive Number
    - Print Sub Total
    - Print Total

Consecutive Number

Press the **Consecutive Number** softkey to enter the next number to be weighed. The system keeps incrementing every time a batch is running (counter).

Figure 4-8. Enter Consecutive Number

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Print Sub Total

1. Press the **Totals** softkey (Figure 4-7) to access the **Print Sub Total** softkey.
2. Press the **Print Sub Total** softkey to access the following screen.

04/27/2011	10:49AM		SCALE #1
		Gross Net	SCALE #1
Target	Dribble	Preact	Near Zero
200.0 Lb	75	0.0	10.0
	Clear Sub Total?		
Consec. #	Subtotal		Total
23	1687 Lb		3468 Lb
Yes			No

Figure 4-9. Clear Sub Total Screen

3. Press the **Yes** softkey to clear the subtotal of the batch.
   Press the **No** softkey to exit out of the screen.

Print Total

1. Press the **Totals** softkey (Figure 4-7) to access the **Print Total** softkey.
2. Press the **Print Total** softkey to access the following screen.

04/27/2011	10:50AM		SCALE #1
		Gross Net	SCALE #1
Target	Dribble	Preact	Near Zero
200.0 Lb	75	0.0	10.0
	Clear Total?		
Consec. #	Subtotal		Total
23	1687 Lb		3468 Lb
Yes			No

Figure 4-10. Clear Total Screen

3. Press the **Yes** softkey to clear the total and sub-total of the batch.
   Press the **No** softkey to exit out of the screen.

4.3   Filling a Container

Use the following steps to fill a container on the scale.

1. Place a container on the scale
2. Press the **Start** button on the unit. The system verifies if:
   - Gross weight is within the zero tolerance
   - E-Stop is pulled out
   - A valid target weight is entered

The system increments the Consecutive Number by 1 on the main display.

The system tares the scale if Auto Tare is enabled (shown in the setup menu).

04/27/2011	10:15AM		SCALE #1

89 Gross Net   SCALE #1

Target	Dribble	Preact	Near Zero
200.0 Lb	75	0.0	10.0

Fast Filling

Consec. #	Subtotal	Total
23	1687 Lb	3468 Lb

Figure 4-11. Fill Screen Example

The system begins filling either of three speeds and displays a basic filling screen although this screen will change depending up what kind of filling is being done.

- Single Speed Filling - The system turns on fast fill until the target weight-preact weight is satisfied.
- Parallel Speed Filling - Turns on the fast fill and slow fill until the dribble weight is satisfied. The system then turns off the fast fill and leaves the slow fill on until the target weight-preact weight is satisfied.
- Dual Speed Filling - Turns on the fast fill until the dribble weight is satisfied. The system turns on the slow fill until the target weight-preact weight is satisfied.

System does the following when the target is reached:

- Capture a stable net weight
- Displays *remove container*
- Updates the sub total weight and number of fills
- Updates the total and number of fills
- Turns on the Fill Complete Output

Once the container is removed and the weight falls within the Zero Tolerance, the Fill Complete Output is turned off, the Zero Tolerance output is turned on, and the system is ready for the next fill.

4.4   Pausing/Resume/Reset a Fill

1. Press the E-Stop button. System turns off all outputs and displays *System Paused*.
2. Press the Resume switch to resume where the current batch left off.
   Press the Reset switch to return back to Step 1 to start over.

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4.5   Audit Trail Print

Record keeping is an important part of any system. The *System 101* has the ability to be connected to a printer for retaining detailed records on batches, cycle runs, cycle paused, etc.

The preferred printer to integrate with the *System 101* is the *TMU-220 Tape Printer* but will easily integrate with any strip printer.

Hook up the printer to the *System 101* per printer manual instructions.

Shown below are five examples of tape samples that can be printed using the *System 101* and the *TMU-220 Tape Printer*.

```
Start Cycle    6 04:31PM 04/27/2011
Id AB123 Location Rice Lake

End Cycle
 111.2 lb  04:31PM 04/27/2011

Start Cycle    7 04:32PM 04/27/2011
Id AB123 Location Rice Lake

Cycle Stopped  04:32PM 04/27/2011

Cycle Resumed 04:32PM 04/27/2011

End Cycle
 116.0 lb  04:32PM 04/27/2011

Start Cycle    8 04:32PM 04/27/2011
Id AB123 Location Rice Lake

Cycle Stopped  04:32PM 04/27/2011

Cycle Reset    04:32PM 04/27/2011
```
Batch Stopped & Resume & Reset Print

```
Sub Total      04:32PM 04/27/2011
Id AB123 Location Rice Lake
   7 cycles        755.8 lb
```
Sub Total Printout

```
Total          04:34PM 04/27/2011
Id AB123 Location Rice Lake
   9 cycles       1022.9 lb
```
Total Printout

```
Start Cycle    1 04:03PM 04/27/2011

End Cycle
 111.1 lb  04:03PM 04/27/2011

Start Cycle    2 04:03PM 04/27/2011

End Cycle
 104.9 lb  04:03PM 04/27/2011
```
No Extra ID Fields Running Batch Print

```
Start Cycle    3 04:07PM 04/27/2011
Id AB123 Location Rice Lake

End Cycle
 100.7 lb  04:07PM 04/27/2011

Start Cycle    4 04:07PM 04/27/2011
Id AB123 Location Rice Lake

End Cycle
 109.1 lb  04:07PM 04/27/2011

Start Cycle    5 04:07PM 04/27/2011
Id AB123 Location Rice Lake

End Cycle
 102.8 lb  04:08PM 04/27/2011
```
2 Extra ID Fields Running Batch Printout

Figure 4-12. Tape Printer Example

5.0   Appendix

5.1   Options

Several options are available with the Flexweigh System 101 Basic Filler. Those options that are available include:

- Auto-Mode Front Panel Controls
- Manual-Mode Front Panel Controls
- Optional Front Panel Pilot Lights

Three Position Selector Switch

Includes:

- Manual/Off/Auto

Manual Mode Front Panel Push Button

Includes:

- Manual Fill

Maintained Return Buttons

- Fill - On/Jog
- Fill - Fast/Slow

Optional Front Panel Event Pilot Lights

Includes:

- Green Ready
- Red Fill Complete
- Amber Filling
- Amber Filling Fast
- Amber Filling Slow
- Blue Discharging
- Blue Discharging Fast
- Blue Discharging Slow

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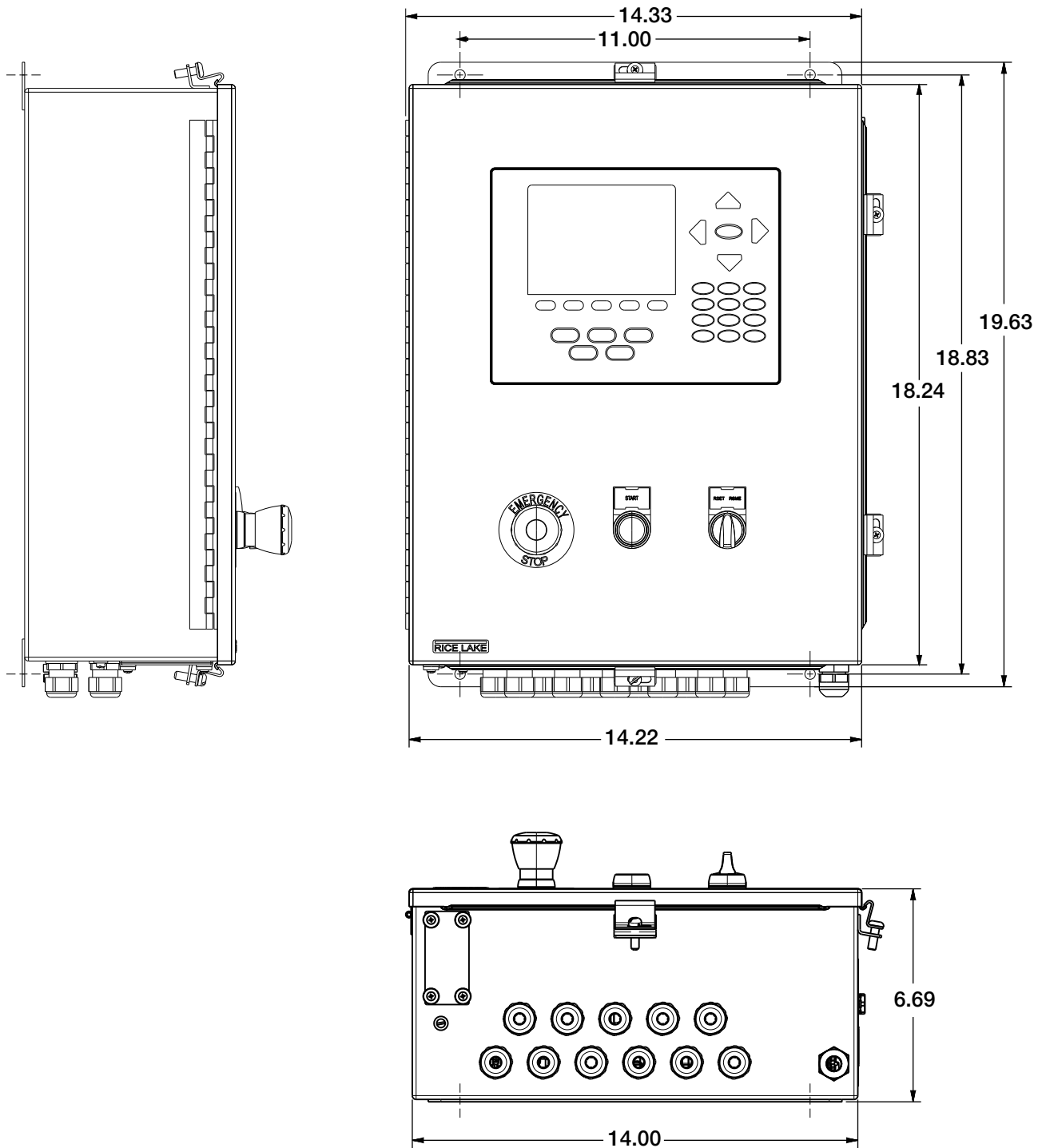# 5.2 Product Dimensions

Figure 5-1. Flexweigh 101 Basic Filler Enclosure Dimensions
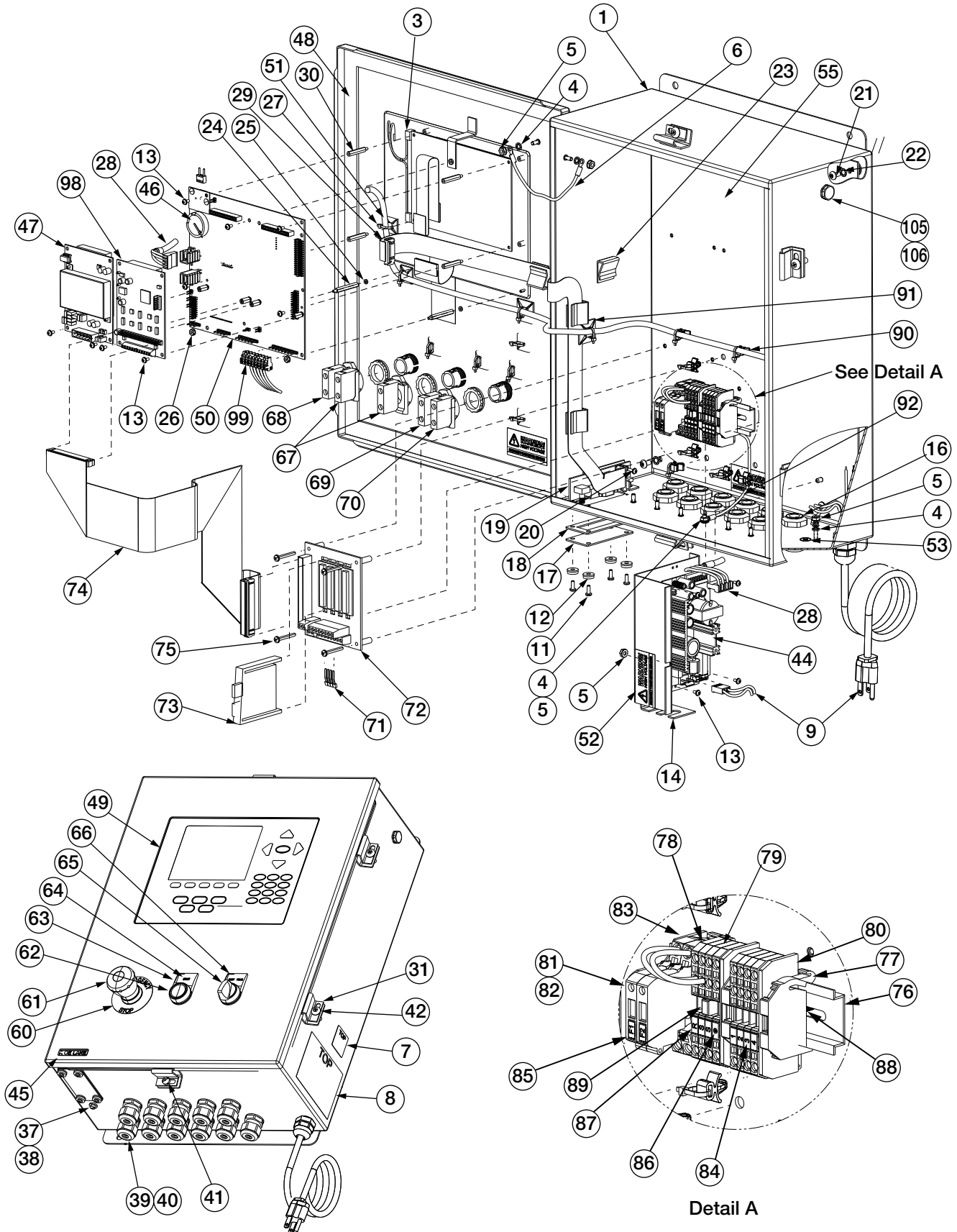
5.3 Replacement Parts and Assembly Drawings

Figure 5-1. Replacement Parts Illustration

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Item No	Part No	Description (Quantity)	Qty
1	120417	Enclosure, Wall Mount	1
3	67614	Display, LCD Module, 920i	1
4	15134	Lock Washers, No 8, Type A	4
5	14626	Kep Nuts, 8-32NC Hex	4
6	15601	Ground Wire, 6 in w/No. 8	1
7	53308	Label, 1.25 x 1.25 8000T	1
8	53307	Label, 4.000 x 2.875	1
9	85202	Power Cord Assembly, 120 VAC	1
11	14845	Machine Screws, 6-32NC x 3/8	8
12	45042	Washer, Bonded Sealing SS	8
13	14822	Machine Screws, 4-40NC x 1/4	13
14	69538	Power Supply Bracket	1
16	15630	Locknuts, 1/2 NPT Black	11
17	67530	Interface Board Plate	1
18	67535	Interface Board Gasket	1
19	67869	920i Inteface Board	1
20	55708	Machine Screws, 4-40NC x 3/8	2
21	14875	Machine Screws, 10-32NF x 3/8	4
22	15140	Lock Washer, No. 10, Type A	4
23	46192	Flat Ribbon Cable Clamp	4
24	68661	Standoffs, Male-FEM, 4-40NC	2
25	69898	Nylon Washer ID 0.112	2
26	14618	Kep Nuts, 4-40NC Hex	2
27	15631	Cable Tie, 3 in Nylon	18
28	71431	Cable Assembly, 65W power	1
29	71436	Ribbon Cable Assembly, 28 in	1
30	67886	Standoffs, Long, Male 4-40NC	4
31	71739	Cinching Enclosure Clip	4
37	42640	Machine Screw, 1/4 - 28NF x 1	1
38	59250	Washer, .255 ID x .437 OD	1
39	30376	Sealing Ring, 1/2 NPT, Nylon	11
40	15628	Cord Grip, 1/2 NPT, Black	11
41	71455	Machine Screws, 1/4-28NF x .75	1
42	71447	Machine Screws 1/4-28NF	3
44	71333	920i Power Supply Board	1
45	68216	Metal Nameplate	1
46	69290	3V Coin Lithium Batter	1
47	67610	Single Channel A/D Card	1
48	68724	920i Cover Gasket	1
49	66502	Overlay, Membrane Switch	1
50	109549	920i CPU Board Assembly	1
51	15650	Cable Tie Mount 3/4 in	7

Item No	Part No	Description (Quantity)	Qty
52	16861	Label, High Voltage	3
53	16892	Label, Earth Ground	1
55	120423	Back Panel Component	1
60	94274	Legend Plate, Emergency Stop	1
61	94273	Red Mushroom Switch	1
62	94277	Switch, Push Button Green	1
63	94316	Legend Plate Holder	2
64	114695	Legend Plate, Start	1
65	94298	3-Position Switch	1
66	120728	Legend Plate, Reset/Resume	1
67	94310	Contact Block	2
68	94311	Contact Block, Switch On	1
69	94312	Contact Block, Switch On	1
70	94313	Contact Block, Switch On	1
71	46189	10 Position Jumper Strap	1
72	52312	8-Channel Mounting Relay Board	1
73	52316	Output Relay Module	2
74	70780	50 Pin Flat Ribbon Cable	1
75	120762	Machine Screw, 6-32NC x 1 - 1/4	4
76	43636	DIN Rail	1
77	61141	Screwless WAGO End Stop	3
78	62964	WAGO Terminal Block	7
79	62966	WAGO Terminal Block	1
80	62968	Intermediate End Plate	3
81	62969	WAGO Fuse Terminal Block	2
82	54215	Time Delay Fuse, 3.15 amp	2
83	66190	Intermediate End Plate	1
84	62959	Label, WAGO Terminal Strip	1
85	65007	Label, WAGO Terminal Block	1
86	62967	Label, WAGO Terminal Block	1
87	66034	Label, WAGO Terminal Block	1
88	22087	Machine Screw, 6-32NC x 3/8	2
89	55337	Jumper, Series 280, Insulated	1
90	80590	Arrowhead Cable Tie Mount	8
91	15658	1 Inch Cable Tie Mount	2
92	121069	9 Inch Ground Assembly Wire	1
98	67608	Card, Digital I/O	1
99	77180	Conn, 8 Pos Screw Terminal	1
105	88733	Vent, Breather Sealed	1
106	88734	Nut, Breather Vent	1
NS	54215	Fuse Between Din Rail/Relay Rack	1
NS	117901	Foam, Mixture High Density	1

Table 5-1. Replacement Parts List
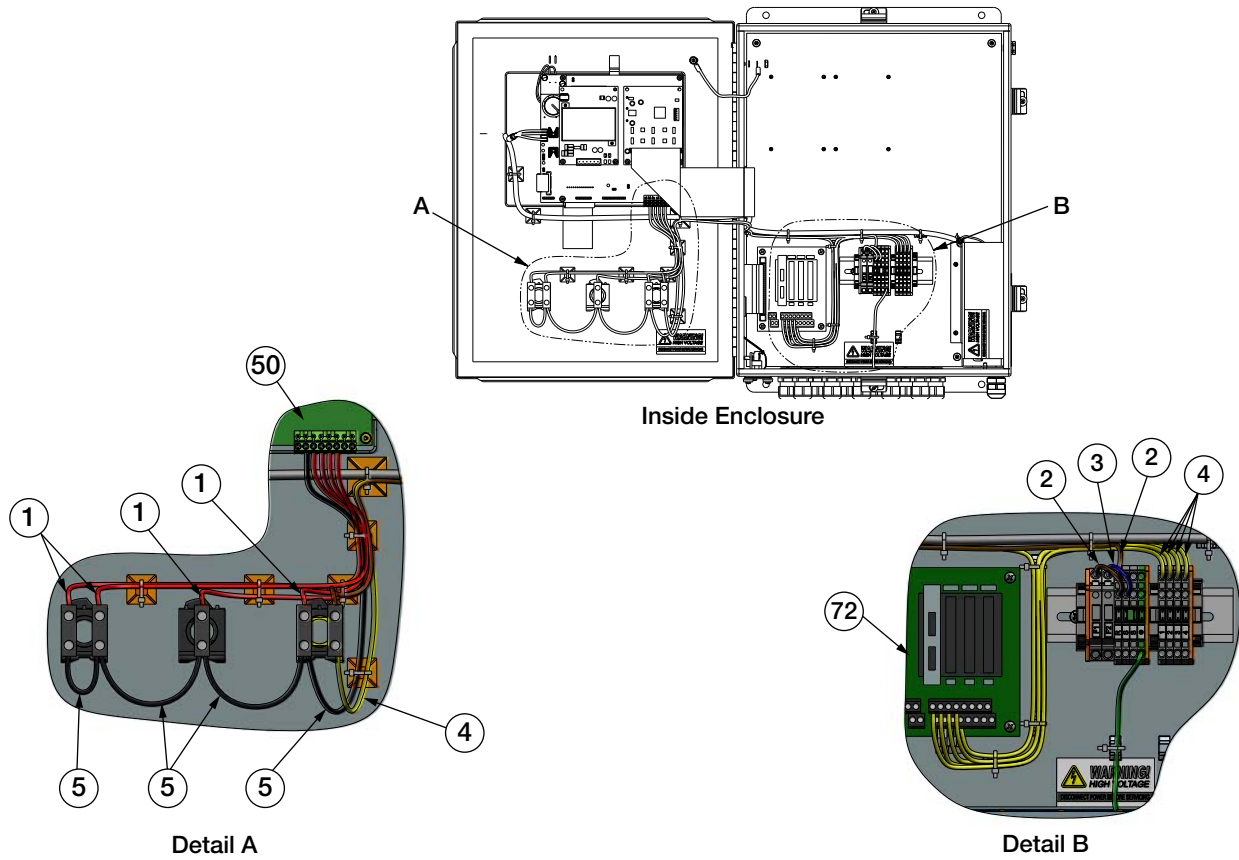
Figure 5-2. Interior Wiring Parts Illustration

Item No	Part No	Description (Quantity)	Qty
1	15433	Wire, 18 AWG, Red Stranded	4 ft
2	15432	Wire, 18 AWG, Brown Stranded	2.5 ft
3	15435	Wire, 18 AWG, Blue Stranded	.33 ft
4	15451	Wire, 18 AWG Yellow Stranded	8 ft
5	15431	Wire, 18 AWG Black Stranded	2ft
50	109549	920i CPU Board Assembly	1
72	52312	8-Channel Mounting Relay Board	1

Table 5-2. Interior Wiring Parts List

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System 101 Limited Warranty

Rice Lake Weighing Systems warrants that all Rice Lake Weighing Systems equipment and systems properly installed by a Distributor or Original Equipment Manufacturer (OEM) will operate per written specifications as confirmed by the Distributor/OEM and accepted by Rice Lake Weighing Systems. All systems and components are warranted against defects in materials and workmanship for two years.

Rice Lake Weighing Systems warrants that the equipment sold hereunder will conform to the current written specifications authorized by Rice Lake Weighing Systems. Rice Lake Weighing Systems warrants the equipment against faulty workmanship and defective materials. If any equipment fails to conform to these warranties, Rice Lake Weighing Systems will, at its option, repair or replace such goods returned within the warranty period subject to the following conditions:

- Upon discovery by Buyer of such nonconformity, Rice Lake Weighing Systems will be given prompt written notice with a detailed explanation of the alleged deficiencies.
- Individual electronic components returned to Rice Lake Weighing Systems for warranty purposes must be packaged to prevent electrostatic discharge (ESD) damage in shipment.
- Examination of such equipment by Rice Lake Weighing Systems confirms that the nonconformity actually exists, and was not caused by accident, misuse, neglect, alteration, improper installation, improper repair or improper testing; Rice Lake Weighing Systems shall be the sole judge of all alleged non-conformities.
- Such equipment has not been modified, altered, or changed by any person other than Rice Lake Weighing Systems or its duly authorized repair agents.
- Rice Lake Weighing Systems will have a reasonable time to repair or replace the defective equipment. Buyer is responsible for shipping charges both ways.
- In no event will Rice Lake Weighing Systems be responsible for travel time or on-location repairs, including assembly or disassembly of equipment, nor will Rice Lake Weighing Systems be liable for the cost of any repairs made by others.

THESE WARRANTIES EXCLUDE ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEITHER RICE LAKE WEIGHING SYSTEMS OR DISTRIBUTOR WILL, IN ANY EVENT, BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

RICE LAKE WEIGHING SYSTEMS AND BUYER AGREE THAT RICE LAKE WEIGHING SYSTEMS'S SOLE AND EXCLUSIVE LIABILITY HEREUNDER IS LIMITED TO REPAIR OR REPLACEMENT OF SUCH GOODS. IN ACCEPTING THIS WARRANTY, THE BUYER WAIVES ANY AND ALL OTHER CLAIMS TO WARRANTY.

SHOULD THE SELLER BE OTHER THAN RICE LAKE WEIGHING SYSTEMS, THE BUYER AGREES TO LOOK ONLY TO THE SELLER FOR WARRANTY CLAIMS.

NO TERMS, CONDITIONS, UNDERSTANDING, OR AGREEMENTS PURPORTING TO MODIFY THE TERMS OF THIS WARRANTY SHALL HAVE ANY LEGAL EFFECT UNLESS MADE IN WRITING AND SIGNED BY A CORPORATE OFFICER OF RICE LAKE WEIGHING SYSTEMS AND THE BUYER.

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