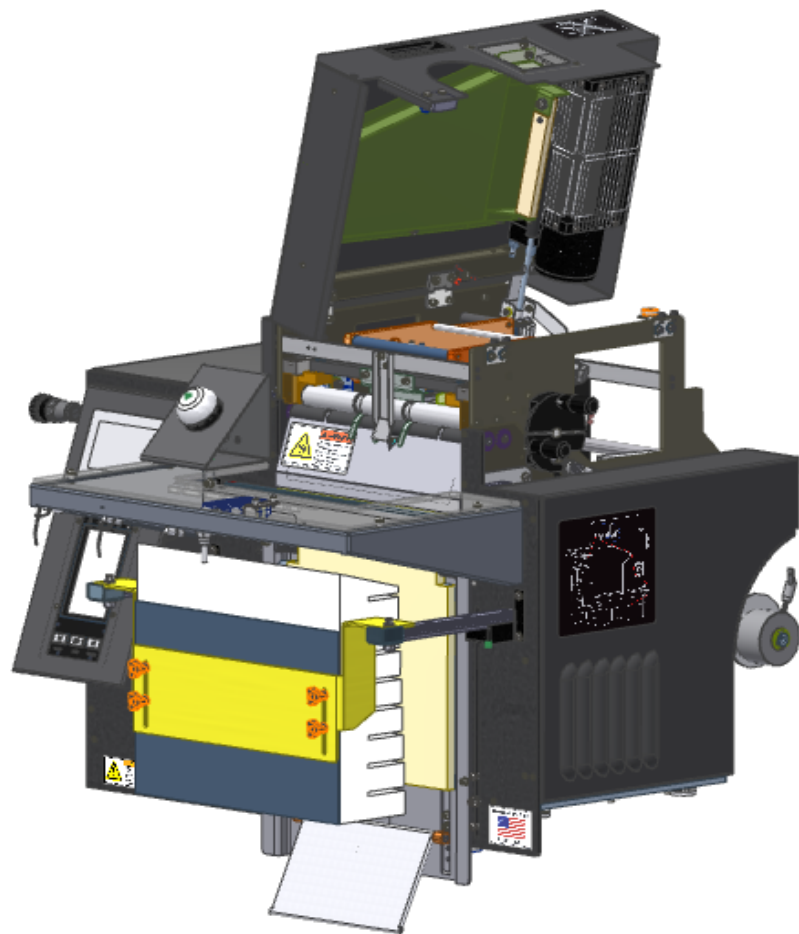


Pregis Sharp™ SX Bagging Machine Operator Manual

Models 1179 (LH) & 1181 (RH)

REV 1 v4– Original Instructions



Products worth protecting deserve Pregis

www.pregis.com



Property of Pregis LLC

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Languages Of Operation Disclaimer

It is illegal to operate this machine in an EU member state if this (or any other related) manual is not written in that State's language. If a translated version is needed, contact Pregis to order the manual.

The original version of this manual is in English and denoted "Original Instructions" in the top right corner. All translated versions are denoted "Translation of Original Instructions" in the same location.

CE Certification



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E-Mail: info@sharppackaging.com
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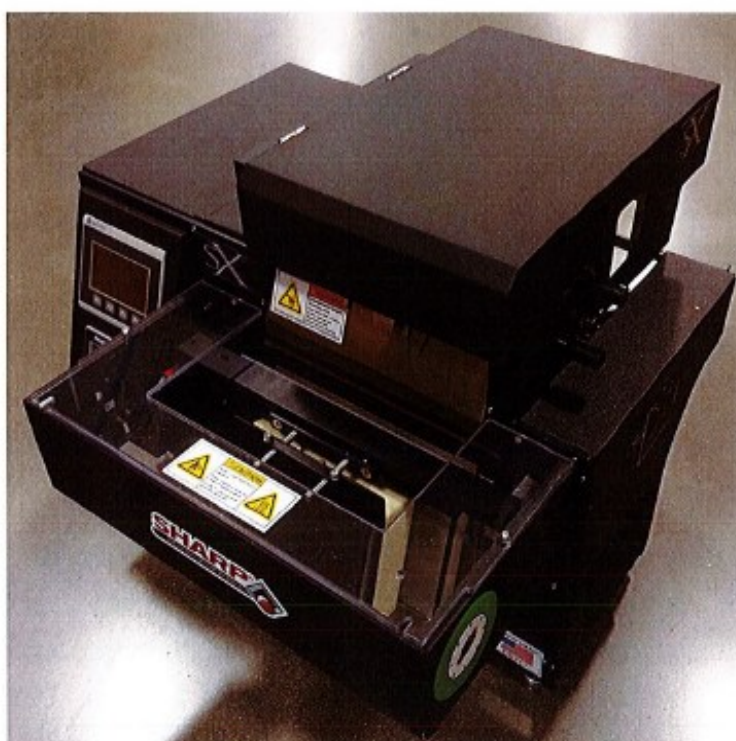
EU Declaration of Conformity

According to EC Machinery Directive 2006/42/EC, Annex II A

We, Pregis Sharp Systems LLC N59 W22387 Silver Spring Drive, Sussex, WI 53072 USA, herewith declare that the following machine complies with the appropriate basic safety and health requirements of the EC Directive based on its design and type, as brought into circulation by us. In case of alteration of the machine, not agreed upon by us, this declaration will lose its validity and belongs to the following equipment described below:

Product: SX Packaging Machine Models: 1153 & 1166

Object of the declaration:



The object of the declaration described above is in conformity with the relevant Union harmonization legislation:

THE INNOVATIVE MANUFACTURER OF FLEXIBLE PACKAGING SYSTEMS: PRE-OPENED BAGS ON A ROLL AND BAGGING MACHINES

Page 1 of 2



Applicable EC Directives:

Machinery Directive 2006/42/EC
Low - Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive
2014/30/EU

Applicable Harmonized Standards:

BSEN 60204-1:2006+A1:2009
BSENISO 12100:2010
BSEN 415-3:1999+A1:2009
IEC 61000-6-4:2006+A1:2010
Generic Emission Industrial Standard
IEC 61000-6-2:2005
Generic Immunity Industrial Standard
IEC 61000-4-2:2008 ESD
IEC 61000-4-3:2006+A1:2007+A2:2010 RF IMMUNITY
IEC 61000-4-4:2012 EFT
IEC 61000-4-5:2014+A1:2017 SURGE
IEC 61000-4-6:2013 COND IMMUNITY
IEC 61000-4-8:2009 MAG FIELD
IEC 61000-4-11:2004+A1:2017 DIP & INTERRUPT

Authorized Signature:

Printed Name:

ROBERT P. HUBBELL

Title:

ELECTRICAL ENGINEER

Date:

6-18-2018

Important Safety Information

Definition of Terms

Throughout this manual, you will find the following safety notices with the accompanying symbol.



This symbol signifies important safety issues regarding the operation and maintenance of the **SX bagger**.



WARNING!

GENERAL WARNING. Indicates information important to the proper operation of the equipment. Failure to observe may result in damage to the equipment and severe bodily injury or death.



CAUTION

GENERAL CAUTION. Indicates information important to the proper operation of the equipment. Failure to observe may result in damage to the equipment.

Safety Labels

The following label is placed onto the **SX bagger** wherever a removable shield, or panel, guards the heated sealing area. Always disconnect electrical power from the machine prior to removing any guards and/or panels.



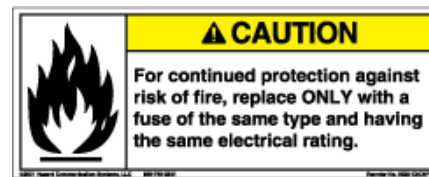
The following label is displayed where there is the potential of your hands, long hair, jewelry, etc., becoming entangled between two rotating parts. Be sure to secure loose items before approaching and operating the machine.



The following label on the **SX bagger** is located where there is potential of injury due to pinch points or moving parts. Make certain electrical power is disconnected before removing any guards and/or panels.



The following label is located in the proximity of a fused circuit. Be certain to replace blown fuses **ONLY** with fuses with the same electrical rating. Always disconnect electrical power before removing any guards and/or panels and servicing the **SX bagger**.



The label shown below is located on the **SX bagger** wherever a removable shield, or panel, guards electrical components. Always disconnect electrical power from machine prior to removing any guards and/or panels with this label.



Safety Rules & Procedures

The machine requires regular, periodic maintenance to ensure reliable service. No maintenance should be performed unless the safety precautions for the maintenance are thoroughly understood.

Follow all instructions in this manual for safe operation.

Follow all company and industry standard safety policies regarding this kind of machinery that may exceed those listed in this manual.

Keep all safety features, guards, interlocks and sensors in good working order.



WARNING!

Always remove electrical power from the unit prior to performing any service on the

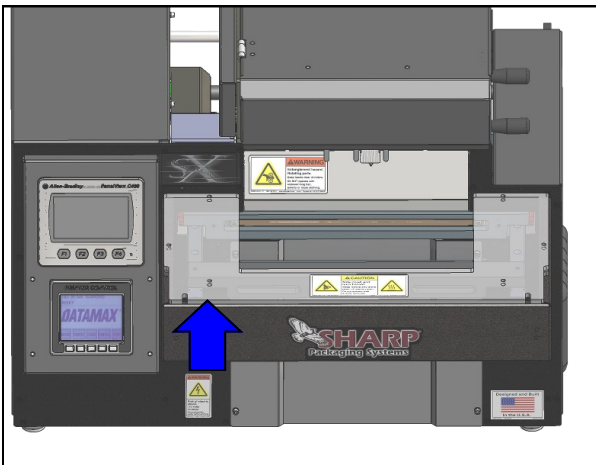


WARNING!

Do NOT operate or perform maintenance with exposed long hair, jewelry or loose clothing as these may get caught in machine. Failure to do so could result in severe bodily injury or death.

Equipment Safety Features

The **SX bagger** is equipped with a polycarbonate shield covering the Obstruction Sensing Jaw and Heated Seal Wire.



DO NOT operated the unit with this feature removed.

Obstruction Sensing Jaw



WARNING!

The SX bagger is equipped with Jaw Obstruction Detection Sensors. These sensors are not designed, nor intended, to be a safety sensor.

The Sealing Assembly is equipped with Obstruction Sensing Sensors, which can detect an obstruction in the Sealing Area. If the Jaw Sensors detect an object preventing the Jaw from closing, the Obstruction Sensors de-energize and place the machine into a fault condition.

A message appears in the display informing the Operator of the Jaw Fault, allowing the Operator to clear the Sealing Area and reset the bagging cycle.

Introduction

General Information

About this manual

This manual has been prepared for your use in operating the **SX bagger**. The **SX bagger** is available in two models; The **1179(LH)** control's are on the left side of machine with a Zebra printer. The **1181(RH)** model is a mirrored version of the **1179(LH)** with controls on the right side of machine.

Included in the manual are helpful facts on operating and basic troubleshooting information.

It is important that you familiarize yourself with the product as much as possible before operating or troubleshooting.

Make sure you read through the **IMPORTANT SAFETY INFORMATION** and **THEORY OF OPERATION** sections of this manual before operating this machine.

The **SX bagger** is designed to be an effective solution for manually bagging product, dramatically reducing packaging costs and improving package quality. The **SX bagger** platform features an integrated pivoting Printhead utilizing a Zebra ZT610 printer.

Print Method

Thermal Transfer, directly onto surface of bag.

Print Speeds

2-12 IPS (50-304 mm/sec)

Print Resolution

300 dpi (11.81 dot/mm)

Print Width (max.)

4.09" (104 mm)

The printer utilizes ZPL® or ZPLII® programming language. Communicates in printable ASCII Characters and is Unicode™ compliant. XML-Enabled Printing - direct connect integration for barcode label printing.

Your **SX bagger** is the result of extensive research and field testing with the following features:

- State of the art *Step Logic Programming* technique that logically controls each machine action (step) in sequence and verifies that the correct action occurred with sensor feedback.

- Simplified layout of digital outputs in PLC program for ease of troubleshooting.
- Improved fault handling that can display multiple fault conditions simultaneously.
- Simplified operator set-up.
- Displays all PLC I/O status, including Expansion I/O.
- Manual pushbuttons on Service Screens provide both text and color cues as to the state of the device.
- Help Screens show setting range and default values.
- Speed settings in inches/second instead of raw numbers.

The materials used were selected for maximum durability and optimum performance. Every unit is thoroughly inspected and tested prior to shipment.

Technical Assistance

Assistance with the **SX bagger** can be obtained by notifying:

Pregis
Automated Mailing & Bagging
N56 W22387 Silver Spring Drive
Sussex, WI 53089 USA

Service: +1 866-904-6979
Parts: +1 800-634-6359

Specifications

Packaging Specifications

	BAG WIDTH	BAG LENGTH	FILM GAUGE
MINIMUM	2" (5 cm)	4" (10 cm)	1 mil (25 microns)
MAXIMUM	11" (28 cm)	32" (81 cm)	4 mil (100 microns)

Machine Specifications

WIDTH	HEIGHT	DEPTH	WEIGHT	POWER	RATE	OPERATING TEMP	HUMIDITY RANGE
28"	29.5"	22"	140 lbs.	115VAC, 15A	35 BPM ¹	32° - 140° F	10% - 90% RH, Non- Condensing

¹Material, gauge and size of package, along with weight and size of product will cause rate to vary.

Poly Lite® Mailers and Bags

The **SX bagger** is designed to use a wide variety of bag sizes and materials. **Pregis Poly Lite® Mailers and Bags** are recommended for optimum operating performance, efficiency and safety. System performance specifications are based on utilizing consistent, high quality, pre-opened bags. Any bag used must meet Pregis tolerances.

Film Types

- General Purpose
- HD Mailer
- Polypropylene
- Military Specification Film
- Gamma Patient
- Anti-Static
- Vapor Corrosive Inhibitor (VCI)

Contact Pregis Customer Service at +1 800-634-6359 to order consumables and for information regarding film and bag specifications.

Thermal Transfer Ribbon

The **SX bagger** uses thermal transfer ribbon to print various information onto the bags as they pass through the machine. The following is a list of ribbon that is available through Pregis:

- Standard Direct Wax Ribbon
- Premium Wax Resin Ribbon

Contact Pregis Customer Service at +1 800-634-6359 to order ribbon.

Theory of Operation

Modes

The bagger has four distinct operating modes: Manual, Auto, Filler, and Auto Filler. Manual and Auto modes are built into the machine and require no optional equipment or changes to the Factory Configuration. Filler and Auto Filler are optional and must be setup in the Admin and Setting II Screen.

To better define these terms, a Filler is a machine such as a weigh scale, vibratory bowl, or infeed conveyor that will fill the open bag with product, prior to sealing the bag. A Filler requires the use of Handshaking I/O between the bagger PLC and the Filler, so that the Filler will know when to deliver product to the bagger and the bagger will know when to cycle.

The term AUTO refers to how the bagger cycles. If the machine cycles bags continuously without the operator manually initiating each cycle start, not including the first bag out, then the machine is cycling automatically (AUTO). If each bagger cycle requires the operator to manually press a cycle start button, foot switch, etc., then the machine is said to be cycling in Manual Mode.

Manual Mode

Filler = OFF

Auto = OFF

Both the Filler and Auto buttons are OFF at the HMI. In manual mode, the operator hand loads or fills each opened bag and then cycles the bagger. The operator initiates a cycle by one of these methods:

- Pressing the Cycle pushbutton on the HMI
- Operating the Foot Switch
- Pressing the optional Optical Touch buttons (anti-tie down)

In manual mode, the machine cycles one bag at a time. Cycle rates in this mode are largely dependent upon the loading speed of the operator.

Filler Mode

Filler = ON

Auto = OFF

With Filler ON and Auto OFF, the bagger will run in "**Filler Mode**". This mode cycles a single bag out each time and requires the operator to initiate a Cycle Start for each bag. In this mode, a filler device or machine does the actual loading or filling of the open bag.

The Filler uses handshake signals to synchronize with the bagger for product delivery. A bagger output, signals the Filler to deliver product and a bagger input, signals when the Filler is done. For example, Filler Mode could be used when an operator is hand loading literature after the infeed conveyor delivered its separate part or component.

Ready for Filler (O-13) – The bagger PLC (Programmable Logic Controller) turns on this output as follows:

- The machine has successfully completed a cycle and presented a new bag. Once the above condition(s) is (are) met the PLC program turns on O-13, essentially telling the Filler device that a bag is present and ready to be filled. The filling device releases its product into the open bag.

Filler Done (I-11) - The Filler device will turn on the bagger PLC input I-11. This signals the bagger that the filler has completed delivery of the product. The filler machine must include a dry contact isolation relay for its signaling device to ensure electrical isolation between the Filler and the Bagger PLC.

- The filler function has a separate detailed specification, "**Filler Handshaking**". The specification covers all **SX bagger** and includes signature sign-off lines so that Filling machine vendors are in 100% compliance with this specification. This also ensures proper operation of a complete system.

Auto Mode

Filler = OFF

Auto = ON

With Filler OFF and Auto ON, the bagger will run in "**Auto Mode**". In Auto Mode the machine operator manually fills the opened bag, while the machine cycles automatically. The Auto Dwell time is adjustable using the numeric entry box located just to the right of the AUTO button.

The operator initiates the first bag out and Auto Mode is immediately activated. When the bag is opened, the operator loads the bag (Auto Dwell Timer is timing). When the timer finishes, the bagger automatically starts the bagger sealing cycle and feeds out the next bag. To cancel Auto Mode, the operator can press the Reset Button on the HMI.

Auto Filler Mode

Filler = ON

Auto = ON

With Filler and Auto both ON the bagger will run in "**Auto Filler Mode**". In this mode a Filler device is used to both fill and automatically initiate the next cycle. This is accomplished by means of hand-shaking I/O provided in the bagger's standard control interface. The Filler device must comply with the "**Filler Handshaking Specification**".

Parts Counting

Filler = ON

Auto = ON/OFF

Parts Counter = ON

Target Count – The numeric entry next to the "Parts Counter" button is the Target Count and is adjustable from 1-999. This button and numeric entry is located on Settings 2 screen.

Actual Count – The numeric entry next to the "Parts Count" displays how many parts have been counted. This number resets to 0 once the bagger cycle is initiated or if Part Counter is turned off. This value can be edited from the dashboard.

The bagger has a setting for counting parts. Parts Counting mode is used in conjunction with the Filler mode. When the parts counter is turned on, the bagger counts each part as it is being loaded into the opened bag. When the terminal count is reached, the Filler Trigger signal is turned on to start the Filler Drop Timer.

Parts can be loaded and counted in the following ways:

Filler

An automatic filling Machine can deliver one part at a time and signal the bagger using the "FILLER DONE" input I-11. The bagger will count each rising edge of I-11 as a single part. When the parts counted equals the target value, the filling cycling is completed and the bagger will automatically cycle after the drop timer has expired.

Hand Loading

A Safety Light Curtain can be used in a hand loading operation. The operator places the product into the open bag. When the operator removes their hand from the safety light curtain, the Parts Counter will increment by one count. The PLC logic is properly de-bounced to ensure that each entry and exit of the light curtain produces exactly one count for the parts counter.

When the operator has hand loaded the required number of parts (1-999) the Cycle will be initiated.

Note: The **Safety Light Curtain function is 100% effective in this mode.** The Light Curtain will always stop the machine cycle if it is violated at any time during the bagger cycle.

Batch Counter

Target Count – The numeric entry next to the “Batch Counter” button is the Target Count and is adjustable from 2-9999. This button and numeric entry is located on Settings 2 screen. When the actual count equals this target, the bagger will be inhibited and cannot be cycled again until this counter is Reset.

Actual Count – The numeric entry next to the “Batch Count” displays how many bags have been sealed. The count will be incremented each time the seal bar has retracted. This value can be edited from the dashboard.

Batch counting allows a customer to make a run of products to a particular quantity and then stop the machine. To use this feature the operator should cycle the first bag out into the loading position and then reset the actual count to 0.

Consecutive Seal Bags Mode

This is a special operating mode that allows multiple filled and sealed bags to be connected together in a continuous strip. There are restrictions and limitations to this feature. This mode requires that the customer pay particular attention to keeping the drive rollers cleaned and in good condition. Dirty drive rolls can result in loss of registration and slipping. The following settings pertain to this function:

Consecutive Bags

This maintained button turns on the function.

Number Of Bags

This numeric entry determines number of bags that will connected together in the strip. The maximum setting is limited to 20 consecutive bags or 50 inches of total strip length, whichever comes first. The operator can enter the desired number of bags, however if the total strip length exceeds 50, the PLC will recalculate the Number of Bags value to limit the total length to 50 inches.

Bag Length Setting

Measure the perf to perf distance of the bags and use this value for the Bag Length setting. Use the Seal Offset setting to adjust the sealing point on the strip of bags.

Consecutive Bags Current Count

The dashboard screen will display the current count value. This value will increment at the end of each bag feed. The consecutive bags counter will reset if there is any fault as the strip of bags is being made.

Stack Light Option

The tri-colored stack light option is used to give plant personnel and operators a quick visual reference to the machine's current operational status. The advantage to this feature is that it conveys important information at a glance, where the HMI screen may be too far away to be read. This is particularly helpful when the bagger is in Auto Fill mode and may be running unattended at times.

This option is strictly a hardware option. No HMI Factory Configuration is needed.

Green Light – In Cycle

OFF indicates the following information:

- The bagger is not ready for the next cycle to begin due to a fault condition, power is removed, etc.

FLASHES at a steady rate, light is on for 0.5 seconds and off for 0.5 seconds, to indicate the following:

- The bagger is ready to cycle and is **WAITING** for a cycle start input from either the operator (Foot Switch, Optical Palm Buttons, Cycle Start) or a Filling Machine (Filler Done Input).

STEADY ON indicates the following:

- The bagger is in cycle. A bagger cycle consists of the following general functions:
 1. Seal the existing bag.
 2. Separate the sealed bag from the web.
 3. Feed out a new bag.
 4. Open the new bag for filling.

Note: Filling of the opened bag is a separate operation and is not part of the bagger cycle.

Red Light – Fault

This light is steady ON if the bagger has an active fault condition. A fault is a condition that detects a significant problem and stops the machine if it is cycling. The fault condition must be corrected and reset before the next cycle can be initiated.

Power-up Lamp Test

When master control power is turned on the Stack light tower will go through a lamp test sequence for 4 seconds to verify that the each light is functioning properly. The sequence is:

Green **On**

Red **Off**

Green **On**

Red **On**

Both **Off**

Both **On**

Test **Done**

Security

Pregis has two versions of the HMI software. A non-secure version and a secure version. Both versions will be installed on the bagger. The secure version has security login as described below.

Security Login

The Security Login occurs when the user selects a secured screen. A login Numeric Keypad will be automatically displayed. The login is a two step operation.

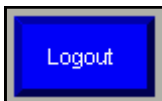
User: A blinking cursor is shown in the box next to the word. Key in the desired User number, but do not press the enter key.

Password: Touch the entry area to the right of Password: and the blinking cursor will show up in the entry box. Key in the correct password number for that user number and then press the enter key.

Security Logout

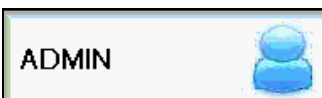
The Security Logout occurs either automatically after 15 minutes of inactivity or if the user presses a Logout button on any of the secured screens. The Logout changes back to the Home Screen.

Security is screen based and defined as three distinct users.



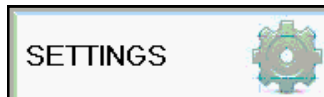
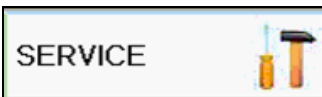
User 1 - Admin

User 1 can access the ADMIN SCREEN only. This is for selecting the options that are installed on the machine.

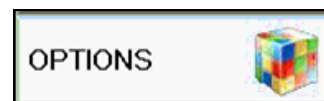
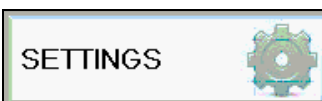


User 2 – Service

User 2 is a qualified service person. This level can access all secured screens except the ADMIN SCREEN. The following Screens are accessible when logged in as User 2.



User 3 – Supervisor



User 3 is a supervisor/super user of the bagger. The following Screens are accessible when logged in as User 3.

No Security

When the non-secured version of HMI program is selected. The Operator can access all screens without a password.

Set-Up & Operation

Machine Placement

The **SX bagger** should be placed on a smooth level surface with access to a 115 VAC, 50/60 Hz, 10 Amp (minimum) electrical outlet.



WARNING!

Do not use Lexan / metal guards to lift the machine. The guards are not designed for lifting. Using the guards for lifting may cause damage to the machine and/or result in severe bodily injury or death.

Locate the machine so there is adequate access to the back and right side for loading bag rolls and ribbon.

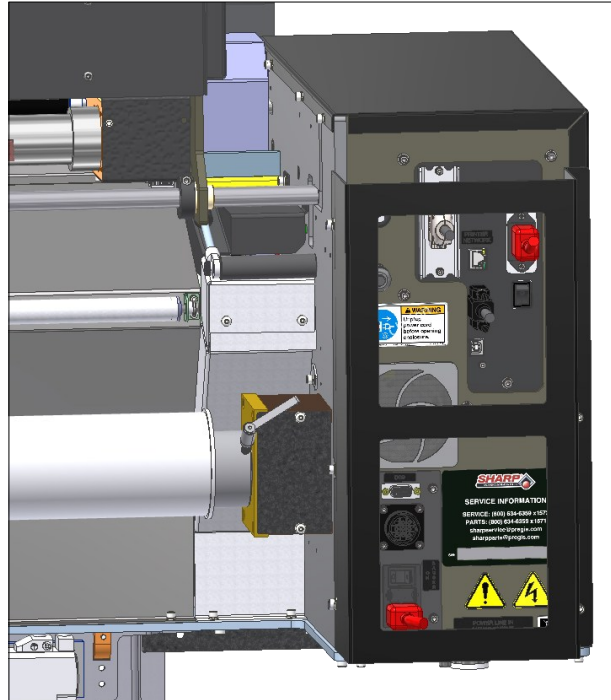
Make sure unit is located at a comfortable height for operation and product loading.



WARNING!

Do not operate the machine in or around standing water. Failure to observe the warning may result in damage to the equipment and/or severe bodily injury or death.

4. To power up the machine, flip switch to the ON position. Turn on Printer Power to ON position.



ELECTRICAL

The **SX bagger** is equipped with a 3-prong electrical cord for standard, properly grounded, 115 VAC, 50/60 Hz, 10 Amp (minimum) service.



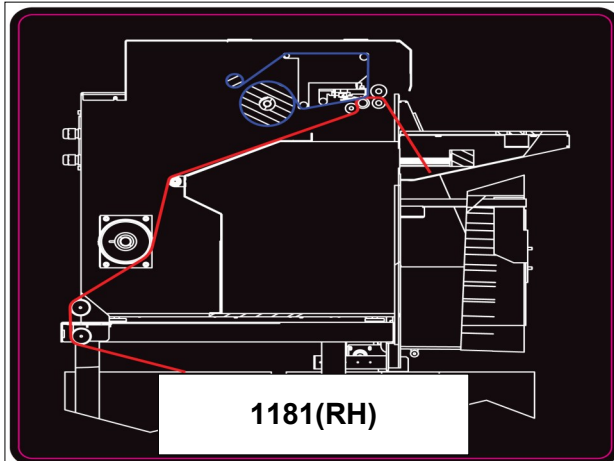
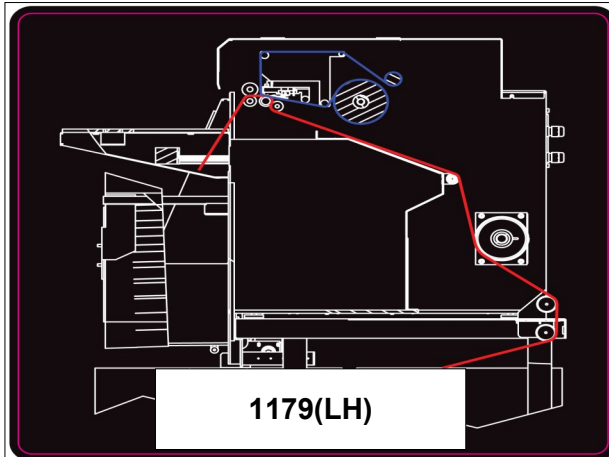
WARNING!

Failure to have properly grounded outlets may cause damage to equipment and/or severe bodily injury or death.

1. Before plugging the cord into the back of the machine, ensure that both switches are in the OFF position.
2. Make sure the wall outlet or electrical drop is rated for proper voltage and that the outlet is grounded.
3. Place the female end of the electrical cord provided into Power Line In and Printer Power, then plug the male end into the electrical outlet.

Loading Bag Film—1179 (LH) Shown (1181[RH] Same Procedure)

A decal showing the film threading path through the machine is located on the Frame Cover.



WARNING!

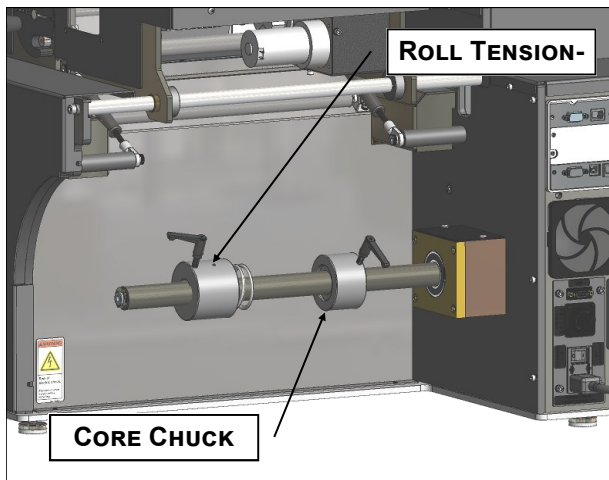
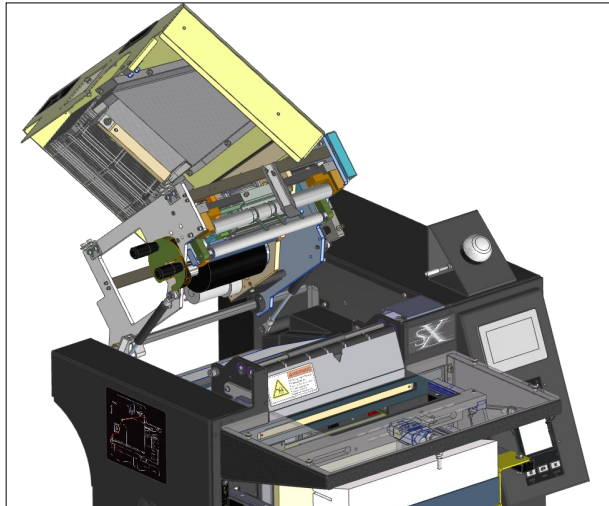
Use extreme caution when feeding bags into machine; electrical voltage and possible pinch points are present.

1. Raise the Printhead Cradle by rotating the Cradle Latch and lifting the Cradle.

NOTE: Ensure Printhead Cradle Gas Springs hold open Printhead Cradle before inserting hands.

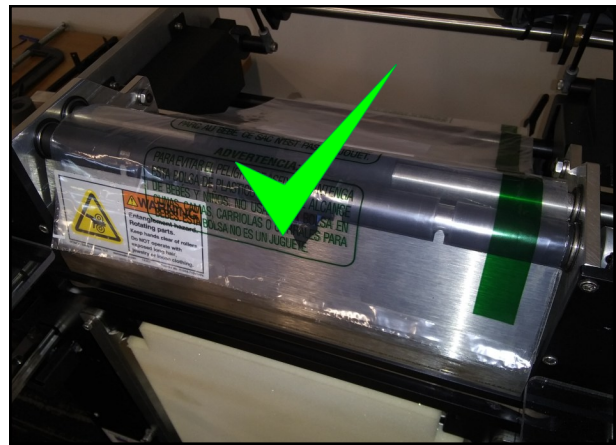
2. Install the roll of bags.

Note: At this point, in most cases, you would center the bags to the Printhead Cradle. However, there may need to be an offset to prevent hang holes, vent holes, etc. from passing over the electric eye. To center the roll, loosen the Core Chuck Adjustment Handle and slide the Core Chuck to the desired position.



3. Replace the Roll Tensioner onto the Roll Unwind Shaft and secure while applying pressure to the Roll Tensioner, compressing the Roll Tensioner Spring approximately 3/8".
4. Feed Bag Film through Bag Unwind Rollers according to threading diagram.

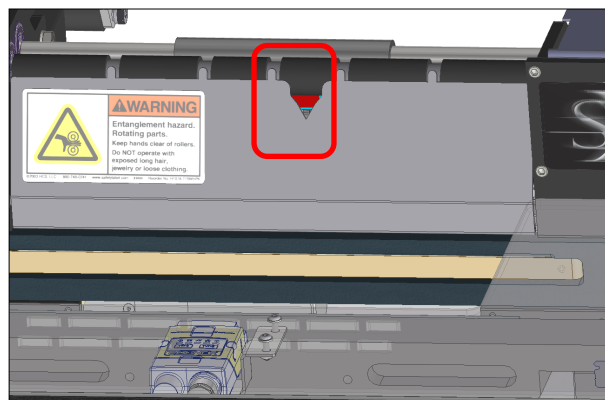
- While standing at the front of the machine, reach through and pull the bags until they drape over the drive roller and covers the Photo-Eye.



- Make sure the open side of the bag faces the Operator.
- Lower and lock the Printhead Cradle into position using the Cradle Latch.
- Press Reset to clear fault and warning.

Bag Position Over Photo-Eye

- The Photo-Eye emits a beam through notch in the Front Finger Plate. The Photo-Eye senses the edge of the bag.



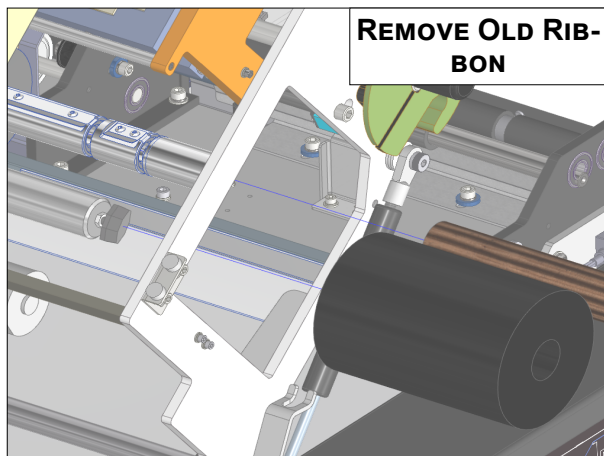
- Position the bag over the Photo-Eye so the edge of the bag is above the Sealing Area.
- If the edge of the bag is below the Sealing Area and the Jaw closes, a fault will occur.

Loading Bag Film—1181 (RH) Shown (1179[LH] Same Procedure)

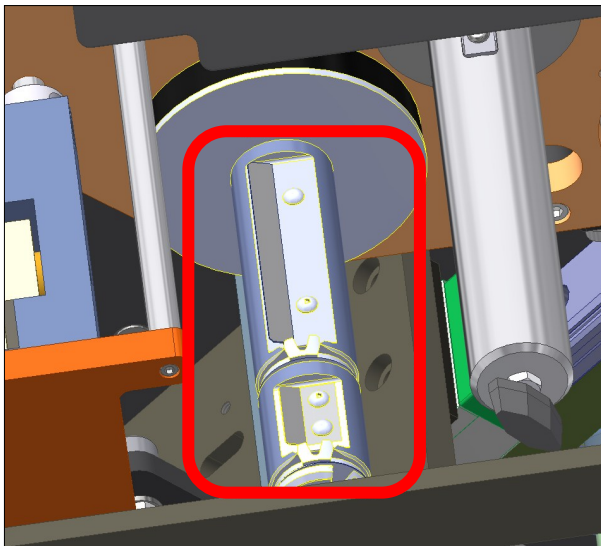
1. Raise the Printhead Cradle and lift the Printhead Cradle Cover.

NOTE: Ensure Printhead Cradle Gas Springs hold open Printhead Cradle before inserting hands.

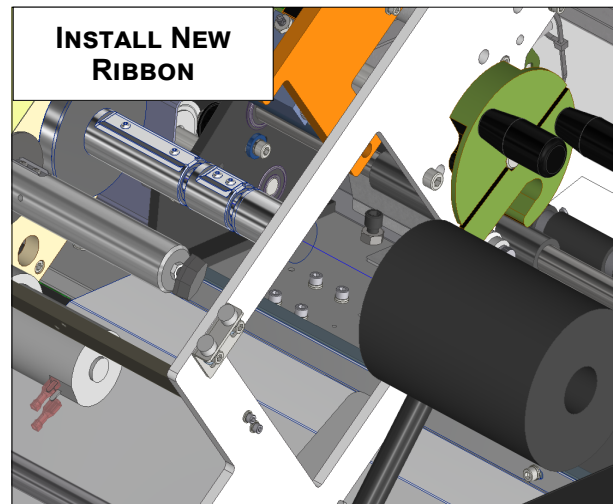
2. Break the ribbon and slide empty spool and used ribbon off of hubs.



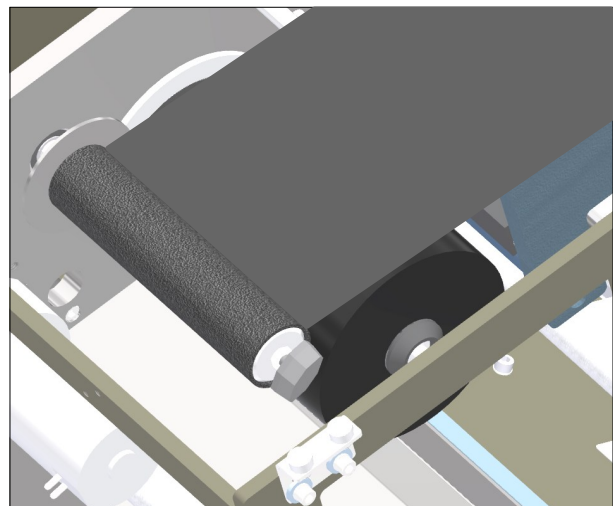
3. Align the Ribbon Blades on Spindle.



4. Place a new roll of ribbon onto the Ribbon Unwind hub.



5. Thread the ribbon through the printer according to diagram on side of bagger.
6. Wrap ribbon onto Take-Up Spool, turn knob on Take-Up Spool counter-clockwise to ensure ribbon is tight.



7. Close the Printhead Cradle Cover.
8. Lower and lock the Printhead Cradle.

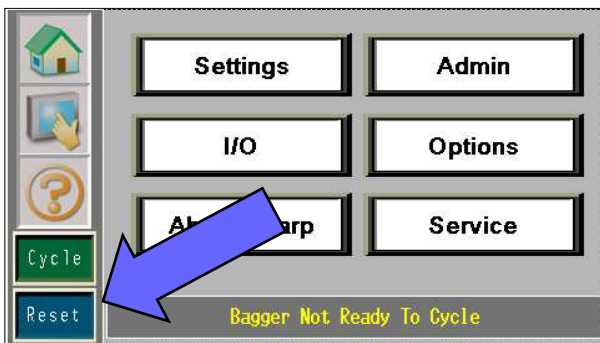
Machine Operation

Before attempting to operate the machine, please carefully read and understand the entire operator's manual including the information under [Important Safety Information](#) and [Controls](#) to obtain optimum performance and a longer service life from the unit.

The Obstruction Jaw and Independent Bag Deflator need Homed whenever bagger is turned ON.

The Sealing Area must be clear of any obstructions, Printer Cover must be down and Printhead Cradle must latched before Homing is performed.

1. Press the Reset Button.

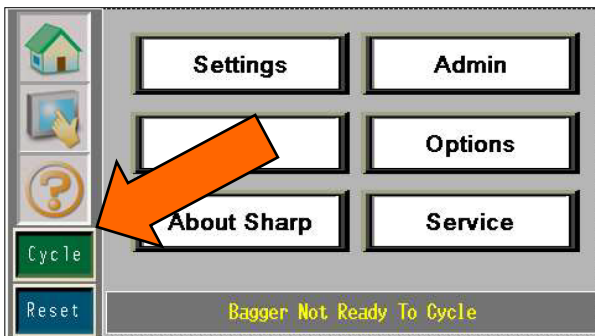


2. The Obstruction Jaw and Independent Bag Deflator will home and return to set Pass-Thru.
3. The Indicator will change to 'Ready to Cycle'.

Cycle Bagger - HMI

When the bag is fed through Sealing Area and bag is filled.

1. Press the 'Cycle' button on the HMI.



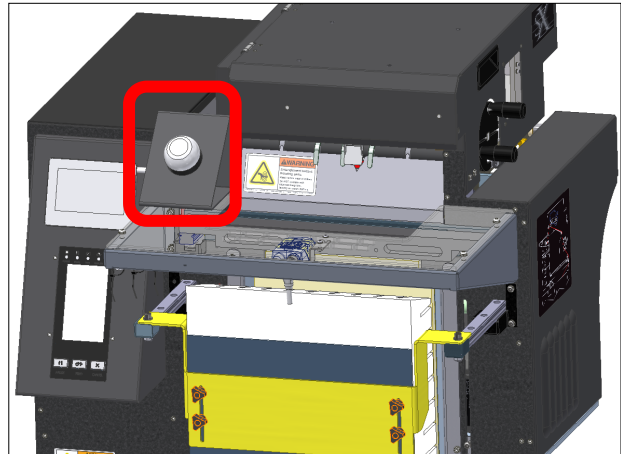
2. The Pressure Jaw and Independent Bag Deflator will close and bag is sealed.

3. The Jaw and Bag Deflator open and the Load Shelf falls so sealed bag can be removed.

Cycle Bagger - Push Button

When the bag is fed through Sealing Area and bag is filled.

1. Press the Push Button.



2. The Pressure Jaw and Independent Bag Deflator will close and bag is sealed.
3. The Jaw and Bag Deflator open and the Load Shelf falls so sealed bag can be removed.

Maintenance

General

This machine requires regular, periodic cleaning to ensure reliable service. Shift and daily cleaning can be performed by the operator with a minimum of training.

Regular cleaning is important for the proper operation and performance of the machine. During operation there will be a normal buildup of dirt, dust, and lubricants on various parts of the machine. Ink rubbed off of printed film can also build up.

The machine and areas directly adjacent to it should be kept clean of debris as these can create safety hazards for the operator and the machine.



WARNING!

Disconnect electrical power cord from the machine prior to performing any maintenance on machine.



WARNING!

Do not spray the electrical components of the machine with any liquid. Liquids on electrical components can cause shorts, damaging the components and causing personal injury or death.



WARNING!

Do not attempt to clean the machine while it is running. Cleaning the machine while it is running can damage the machine and cause severe personal injury or

Daily Maintenance

1. Inspect the electric eye. Clean with a cotton swab if dirty. Do not use any solvents or cleaning solutions on the sensing portions of the electric eye.
2. Clean any excess material from the drive roller assembly. Plastic compounds tend to build-up on the rollers. Clean regularly with a soft, lint-free cloth using a rubber platen roller conditioner/cleaner or isopropyl alcohol.
3. Inspect Teflon tape and replace if damaged or worn.

4. Inspect all electrical lines for any sign of wear or damage. Contact a qualified technician if signs of excessive wear or damage are found.

Weekly Maintenance

1. Clean the drive rollers on the drive roller assembly with a soft, lint-free cloth using a rubber platen roller conditioner/cleaner or isopropyl alcohol.
2. Verify that the rollers on the drive roller assembly spin freely with power removed.
3. Inspect Gas Shocks of Printhead Cradle for leaks or damage. Open Printhead Cradle, verify cradle stays open. Replace Gas Shocks if Printhead Cradle does not stay open.

Annual Maintenance

1. Check all electrical connections.
2. Check entire machine for loose bolts or nuts.
3. Grease the two pressure bar linear guide bearings using a lithium grease (JIS type 2).
4. Apply a light film of grease to the pressure bar rack and pinion gearing using a lithium grease (JIS type 2).
5. Inspect all drive belts for excessive wear and slack.
6. Clean foam element located at the rear of the machine with water, wring out and reinstall.

Cleaning the Printhead

1. Turn off Power.
2. Lift the Printhead Cradle.
3. Remove ribbon from under Printhead.
4. Clean Printhead with alcohol and lint-free towel. Make sure head is completely dry.
5. Replace ribbon.
6. Lower and lock the Printhead Cradle.

Controls

Screen Navigation

Operator Controls

The operator control buttons appear at the lower left hand side of every screen.



Pressing the **"CYCLE"** momentary pushbutton will initiate a bagger cycle if **"Ready To Cycle"** message is displayed. This HMI button is the equivalent to a mechanical Footswitch or Optical Palm button start signals.

Pressing the **"CYCLE"** momentary button will stop subsequent automatic cycles from occurring when running in Filler or Auto modes. Note that this button will not turn off either option.

Pressing the **"CYCLE"** momentary pushbutton will have no effect if **"Not Ready To Cycle"** message is displayed.

Pressing the **"RESET"** momentary button will clear a fault or warning, provided the condition that caused the fault is no longer occurring.

Screen Navigation

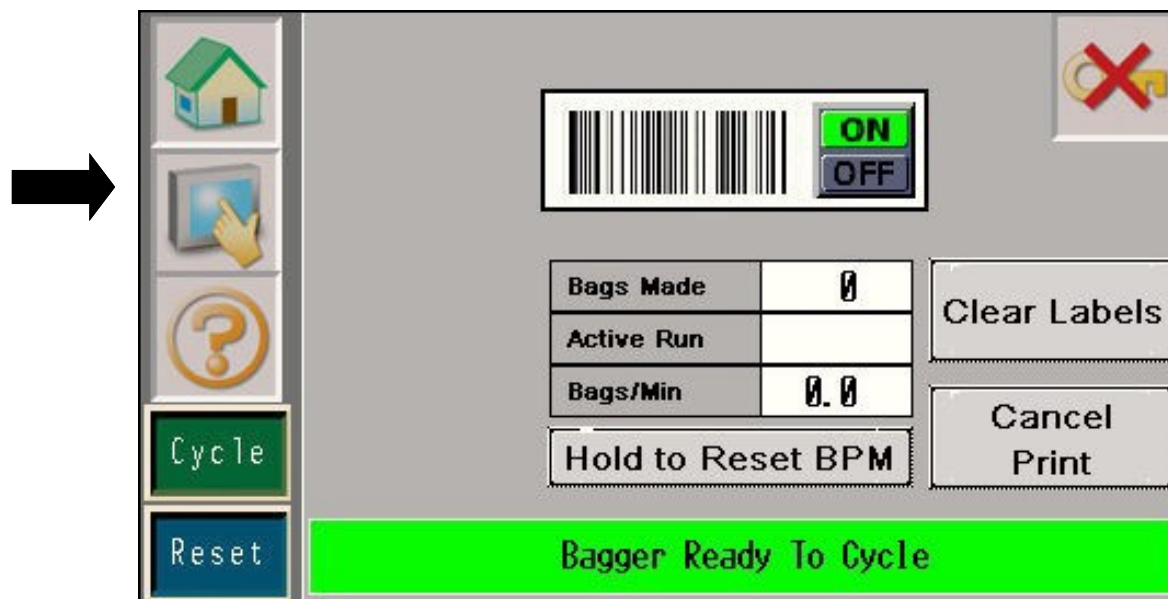
Home Screen

This screen is the Main Menu. This is the starting point to gather information and to setup the machine. This screen is access by pressing the HOME BUTTON on top left corner.



Dashboard Screen

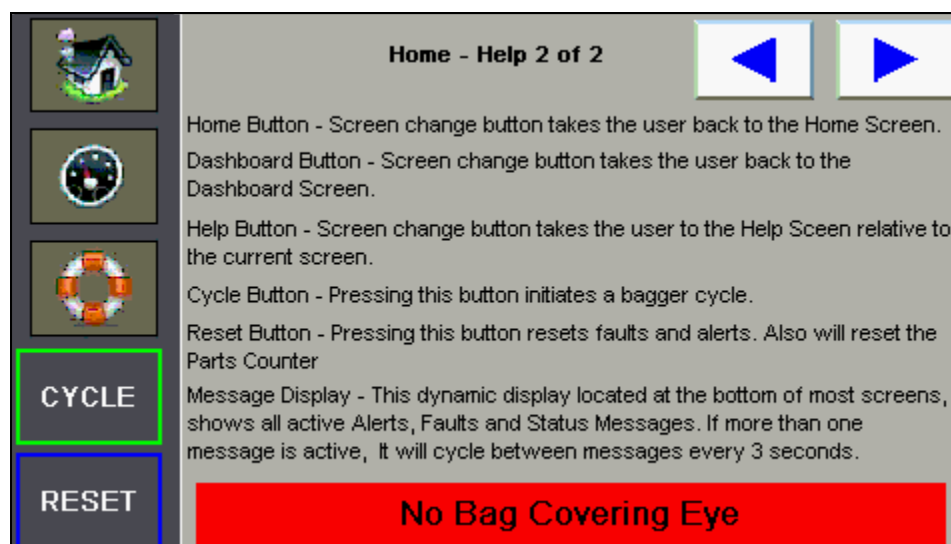
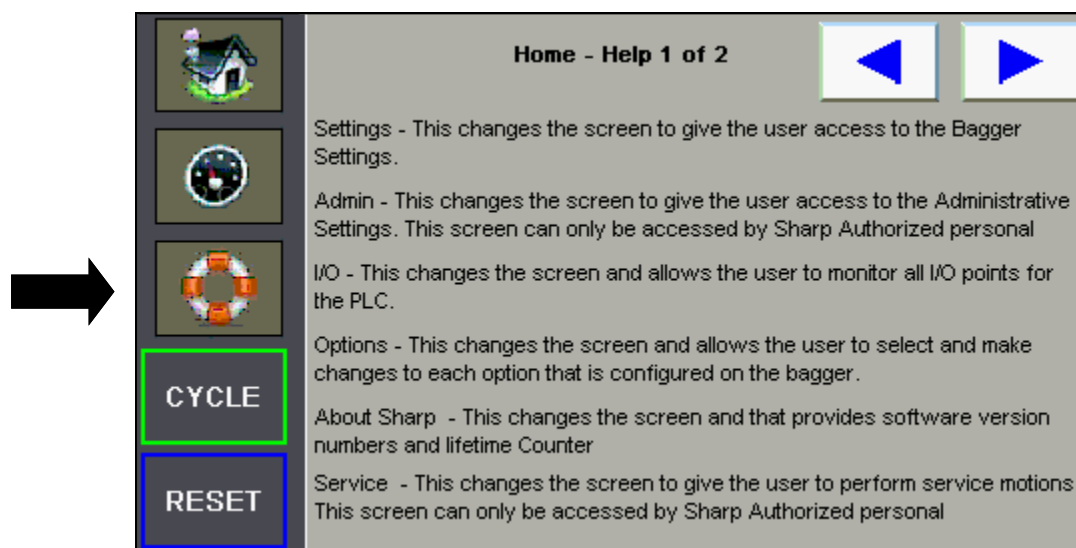
This screen is the Dashboard. The Dashboard is the primary screen used by the operator. This screen is accessed by pressing the TOUCHSCREEN BUTTON below the Home Button. Dashboard appearance and configuration may vary based on options selected in the Settings Screen 2.



Help Screens

A Help Screen can be accessed by pressing the LIFESAVER RING BUTTON beneath the Tachometer Button. The screen provides detailed help information about the particular screen that the user is on. In this example these screens provide help from the Home Screen.

Note that there are 2 help screens for the home screen. Pressing the arrow keys allows the user to navigate through the help screens associated with the screen the operator is currently using. Pressing the help Icon (lifesaver) takes the user back to the first help screen.



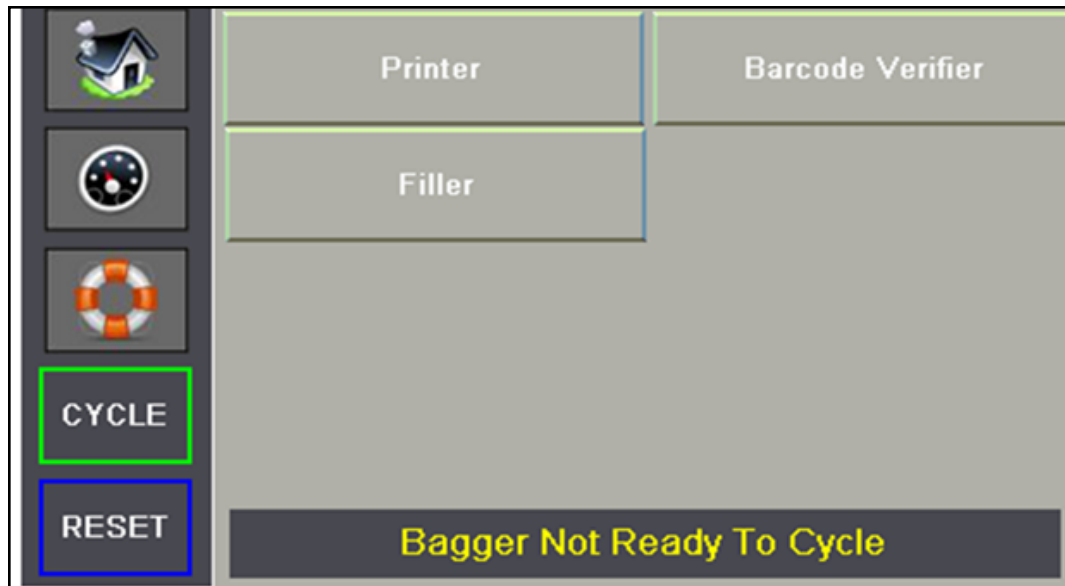
Admin Screen

This screen is used to enable the options that are installed on the bagger. The option must be enabled here first before it can be used on the bagger.

To enable an option, press the pushbutton of the option, the pushbutton will change color.

Note, If a Safety Light Curtain is installed the Filler should be enabled so that the light curtain can be used for Parts Counting/Cycle Initiate function.

If a Stack Light or Light Curtain option is installed, there is no enable selection required.



Settings Screen

There are two screens that allow the user to view and change the current bagger settings.

Settings Screen 1

Bag Length

This refers to the usable area inside the bag. This is measured from the bottom of the bag to the seal. The typical setting is 0.5" less than the measured overall bag length. When using these bags, enter the length shown on the box or roll label.

Seal Offset Distance

The offset distance moves the seal point down from the nominal (zero offset) position. At zero offset, the seal is approximately 0.5 inches below the perforation. The pressure bar will make contact with the filled bag just below the perforation. As the user adds Seal Offset, the seal moves down.

Feed Speed

This setting adjusts the peak forward web speed in inches per second. The value can be varied from 4 to 30 in/sec.

Seal Dwell

The amount of time the impulse seal wire turns on. High quality seals are accomplished through proper seal time settings. These settings will vary with the film gauge and material.

Seal Cool

This setting adjusts the delay (in seconds) that occurs prior to opening the pressure bar. This can be used to allow additional cooling time for the bag seal. Increasing it will slow the machine and increase the bagger cycle time.

Jaw Pass-Thru

The distance the pressure bar and the stripper plate when the Jaw is opened. It can be adjusted from 1.0 – 4.5" of pass-thru.

Setting Screen 2



Batch Counter

The maintained button turns on the Counter. The numeric entry to the right of the button is the Target Count setting. This can be adjusted from 2-9999. When the counter is done, the yellow alert banner is displayed and the bagger cannot cycle until the counter is reset.

Parts Counter

The maintained button turns on the Counter. The numeric entry to the right of the button is the Target Count setting. This can be adjusted from 1-999. When the counter is done, and the desired number of parts have been loaded into the opened bag, the bagger will cycle.

Consecutive Bags

The maintained button turns on the Consecutive Bags function. The numeric entry to the right of the button is the desired number of consecutive bags in the strip. This can be adjusted from 2-20, but is limited to 50.0 inches of total length.

Be sure to change the Bag Length Setting to the measured length of the bag, and use the Seal Offset setting to adjust the desired sealing position for each bag in the strip.

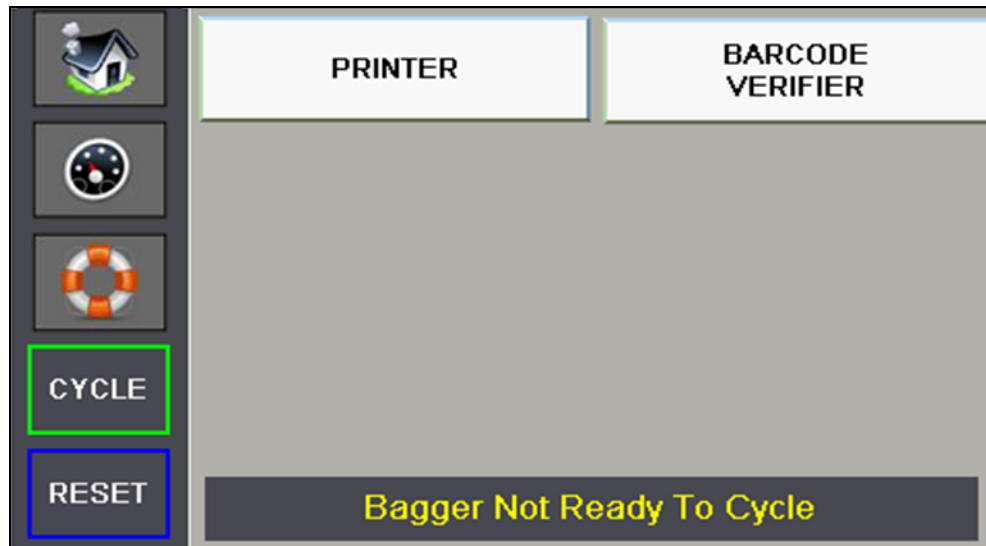
Filler Drop Time

This setting determines the length of time between Filler Done signal and the start of the next bagger cycle. The delay is too ensure that the product has been delivered into the bag and is below the pressure bar. This value is adjustable from 0-9.99 seconds.

HPA Bag Open Dwell

When high pressure air (HPA) is connected, the HPA blows a short blast to aid in opening the bag. The dwell time determines how long the blast lasts. It is adjustable from 0 to 1.0 seconds.

Options



The buttons on the Options Screen provide screen navigation for each option that is configured on the bagger.

Press the desired button to activate the option.

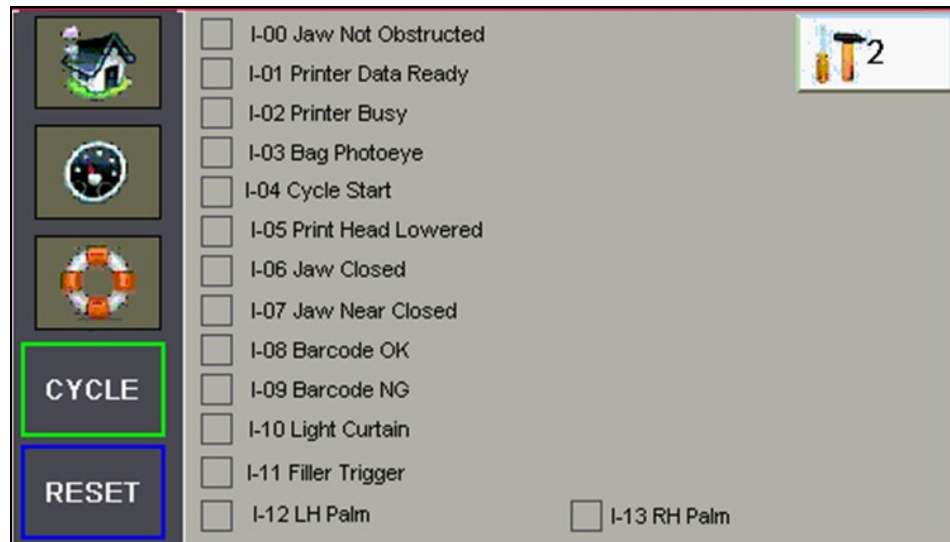
I/O Screen

This screen describes the I/O available to qualified service technicians and technical personnel.

The purpose of this screen is to aid in the troubleshooting and maintenance of the bagger. The section assumes that the person using this screen has a working knowledge of electronics and PLC based control systems.

Input Screen

This screen shows the status of all Input points on the Main PLC and the expansion cassette.



The Input Screen displays a list of input points with checkboxes indicating their status. On the left, there are three icons: a house, a clock, and a life preserver. Below these are two buttons: 'CYCLE' (highlighted with a green border) and 'RESET' (highlighted with a blue border). In the top right corner, there is a small icon of a bagger with the number '2'.

☐	I-00 Jaw Not Obstructed
☐	I-01 Printer Data Ready
☐	I-02 Printer Busy
☐	I-03 Bag Photoeye
☐	I-04 Cycle Start
☐	I-05 Print Head Lowered
☐	I-06 Jaw Closed
☐	I-07 Jaw Near Closed
☐	I-08 Barcode OK
☐	I-09 Barcode NG
☐	I-10 Light Curtain
☐	I-11 Filler Trigger
☐	I-12 LH Palm
☐	I-13 RH Palm

Output Screen

This screen shows the status of all Output points on the Main PLC and the expansion cassette.



The Output Screen displays a list of output points with checkboxes indicating their status. On the left, there are three icons: a house, a clock, and a life preserver. Below these are two buttons: 'CYCLE' (highlighted with a green border) and 'RESET' (highlighted with a blue border). In the top right corner, there is a small icon of a bagger with the number '1'.

☐	O-00 Film Feed PTO
☐	O-01 Jaw PTO
☐	O-02 Seal Wire
☐	O-03 Film Feed Dir
☐	O-04 Jaw Feed Dir
☐	O-05 Lower Print Head
☐	O-06 Request Print
☐	O-07 Print Ribbon Rewind
☐	O-08 Trigger Barcode Verify
☐	O-09 Teach Photoeye
☐	O-10 Red Stack Lt
☐	O-11 Green Stack Lt
☐	O-12 Spare
☐	O-13 Ready Fill

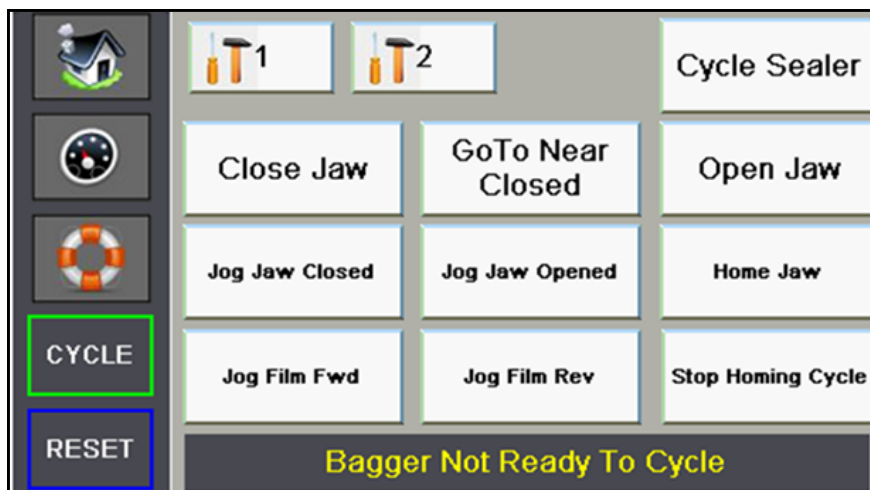
Service Screens

There are two Service Screens to be used by qualified service and maintenance personnel to test the various machine motions. It is assumed that the person using this screen understands the nature of each motion, prior to invoking that motion. Care must be used to ensure the operation does not damage equipment.

Service Screen 1

Close Jaw – The jaw must be at the Pass-Thru position before this motion will occur. When the momentary button is pressed, the Jaw will move to the Sealing Position and the Jaw Closed Sensor should make.

GoTo Near Closed – When the momentary button is pressed, the Jaw will move to the Near Closed Position and the Jaw Near Closed Sensor should make.



Open Jaw – When the momentary button is pressed, the Jaw will move to the Pass-Thru Position determined by the Pass-Thru setting.

Cycle Sealer – When the momentary button is pressed, the Jaw will move to the seal position and the seal wire be activated based on the Seal Dwell Setting. After the Cooling Time has expired, the jaw will return to the Pass-Thru position.

Jog Jaw Closed – When the momentary button is pressed, the Jaw will close at Jogging Speed as long as the button is held. The Jogging will be stopped automatically if the Jaw reaches the Closed Sensor.

Jog Jaw Opened – When the momentary button is pressed, the Jaw will open at Jogging Speed as long as the button is held. The Jogging will be stopped automatically if the Jaw reaches the maximum pass-thru of 4.5 inches.

Home Jaw – All Faults must be cleared before this cycle can be requested. When the momentary button is pressed, the Jaw will begin the Homing cycle. The jaw travels until it hits the Jaw Closed sensor, which is the Home Switch. This establishes a Zero Position. All Jaw moves except Jogging and Faults are Absolute Positional Moves. The homing cycle finishes by moving the jaw to the Pass-Thru Position.

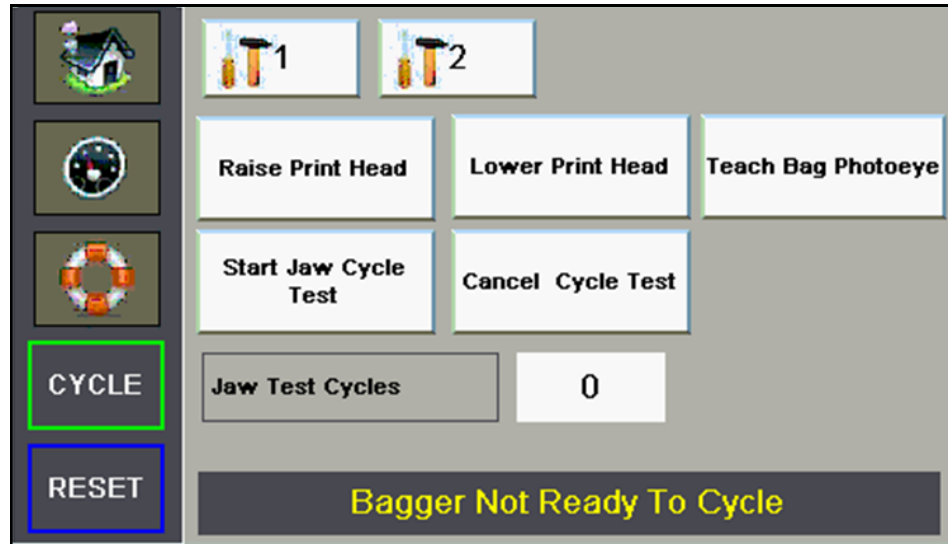
Jog Film Fwd – When the momentary button is pressed, the film will feed out at Jogging Speed as long as the button is held.

Jog Film Rev – When the momentary button is pressed, the film will reverse at Jogging Speed as long as the button is held.

Stop Homing Cycle – When the momentary button is pressed, the Jaw will Homing cycle will be stopped and the jaw will back out 0.5" from the point at which the cycle was stopped. The HMI will display the "Jaw Failed To Home Fault" The fault must be reset before the Jaw Homing Cycle can be repeated.

Service Screens

Service Screen 2



Raise Print Head – The Printer Option must be enabled in the Admin Screen before this service button is active. Pressing it will deenergize the electrical solenoid and raise the print head. The Print Head Lowered sensor will switch off when the head raises.

Lower Print Head – The Printer Option must be enabled in the Factory Configuration, before this service button is active. Pressing it will energize the electrical solenoid and lower the print head. The Print Head Lowered sensor will switch on confirming the head has lowered.

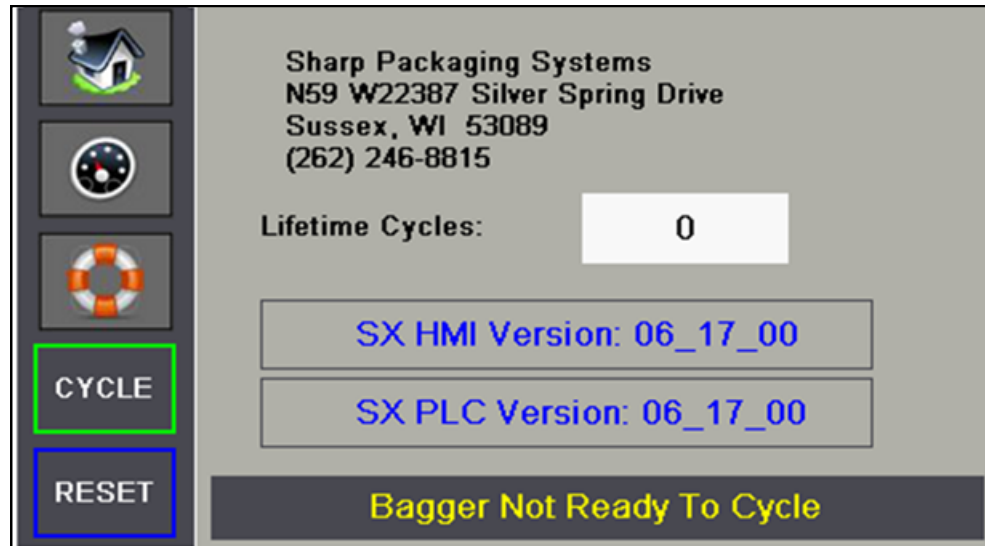
Teach Bag Photoeye – If the bag eye is not detecting the film, the photoeye may need to be taught. Remove the film from between the eye and the reflector and ensure that the top is closed and latched. Press and Hold this button for at least 2 seconds but less than 5 seconds.

Start Jaw Test Cycle – This is a test cycle of the Jaw and is used by the assembly personnel to break-in the Jaw slide. When the button is pressed, the Jaw moves to the Closed Position and dwells there for 0.5 seconds. It then opens to the Pass-Thru Position and dwells there for 0.5 seconds. The cycle runs for 1 hour and records the number of cycles.

Cancel Cycle Test – Pressing this button stops the test cycle.

Jaw Test Cycle – Numeric Readout displays the number of Jaw Cycles. Resets when the next Test Cycle is initiated.

About Pregis Sharp™ Screen



SX Software Version: – This is the revision number of the PLC software.

For this example, 06_17_00 breaks down in the following way: 6 is the Major Release number _17 is the minor revision number _00 indicates a custom version. Custom versions use alpha characters appending on to the last two digits to the numeric.

Lifetime Counter – This numeric displays shows the total number of bagger cycles and cannot be reset

Printer Configuration Screen

The screenshot shows the 'Printer' configuration screen. On the left, there is a vertical menu with three icons: a house, a compass, and a lifebuoy. Below the icons are two buttons: 'CYCLE' (with a green border) and 'RESET' (with a blue border). The main content area is titled 'Printer' and contains three input fields for 'Print Speed', 'Print Offset', and 'Print Length'. Below these fields is a 'Cancel Print Request' button. At the bottom of the screen, a yellow message reads 'Bagger Not Ready To Cycle'.

Printer Button

The printer option must be turned on to operate. Printer is on when large box is Blue.

Print Speed

This numeric setting determines the web feed speed during the print cycle. It is adjustable from 2.00 to 12.00 Inches/Sec. This setting should be set to the same value that resides in the Datamax Printer.

Print Offset

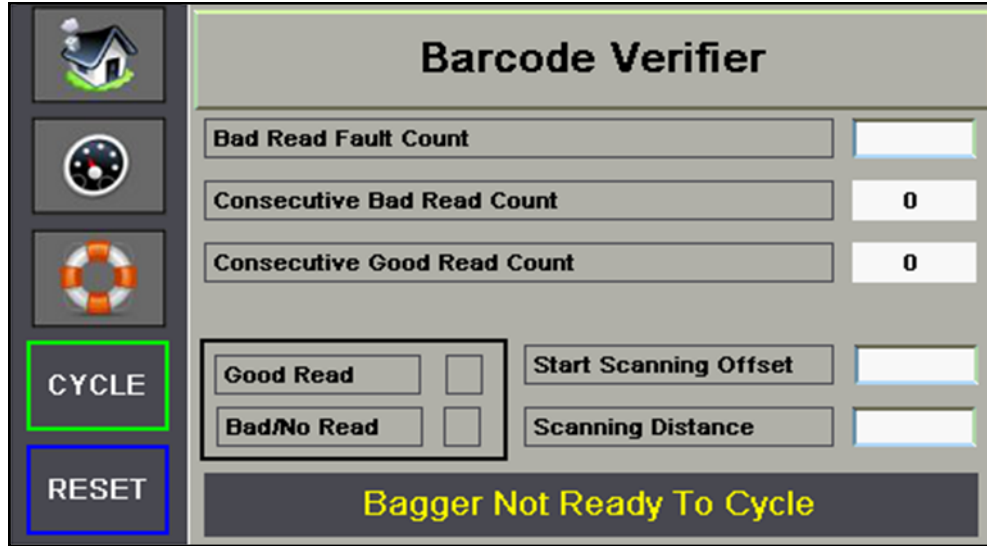
This numeric setting determines the starting position of the printed label. This can be used to adjust the label position on the bag. It is adjustable from 0 to 10.00.

Print Length

This numeric setting determines the distance the web will feed during the print cycle. This should be set to smallest value that will produce the desired label. Typically this setting is approximately $\frac{3}{4}$ of inch longer than the length of the label.

Cancel Print

This button allows a print request to be canceled. The function occurs when the printer option is turned on and the bagger cycles, but no print job was loaded into the printer. The bagger will display a yellow alert message "Waiting for Printer". Pressing the button, cancel the print request and allows the bagger cycle to finish.

Barcode Verifier Configuration Screen


The image shows a software interface titled "Barcode Verifier". On the left is a vertical sidebar with four icons: a house, a target, a life preserver, and a "CYCLE" button (highlighted with a green border). Below the "CYCLE" button is a "RESET" button (highlighted with a blue border). The main area contains several input fields and checkboxes. At the top, "Bad Read Fault Count" has an empty input field. Below it, "Consecutive Bad Read Count" and "Consecutive Good Read Count" both show the value "0". Further down, there are checkboxes for "Good Read" and "Bad/No Read", both of which are currently unchecked. To the right of these are input fields for "Start Scanning Offset" and "Scanning Distance", both of which are empty. At the bottom of the screen, a yellow message bar displays the text "Bagger Not Ready To Cycle".

Barcode Verifier Button

This maintained button turns on the Barcode Verification Option.

Bad Read Fault Count

The number of consecutive bad barcode reads before the bagger will fault. The valid range is 000 - 999.

Consecutive Bad Read Count

The number of bad reads scanned in a row. Scanning a good barcode will reset this value to zero.

Consecutive Good Read Count

The number of good reads scanned in a row. Scanning a bad barcode will reset this value to zero.

Good Read

Box will illuminate green once a good barcode is read.

Bad/No Read

Box will illuminate red once a bad barcode is read.

Start Scanning Offset

The number of inches that the bag will feed forward before the Barcode Scanner is turned ON. The valid range is 0.00 - 32.00 inches.

Scanning Distance

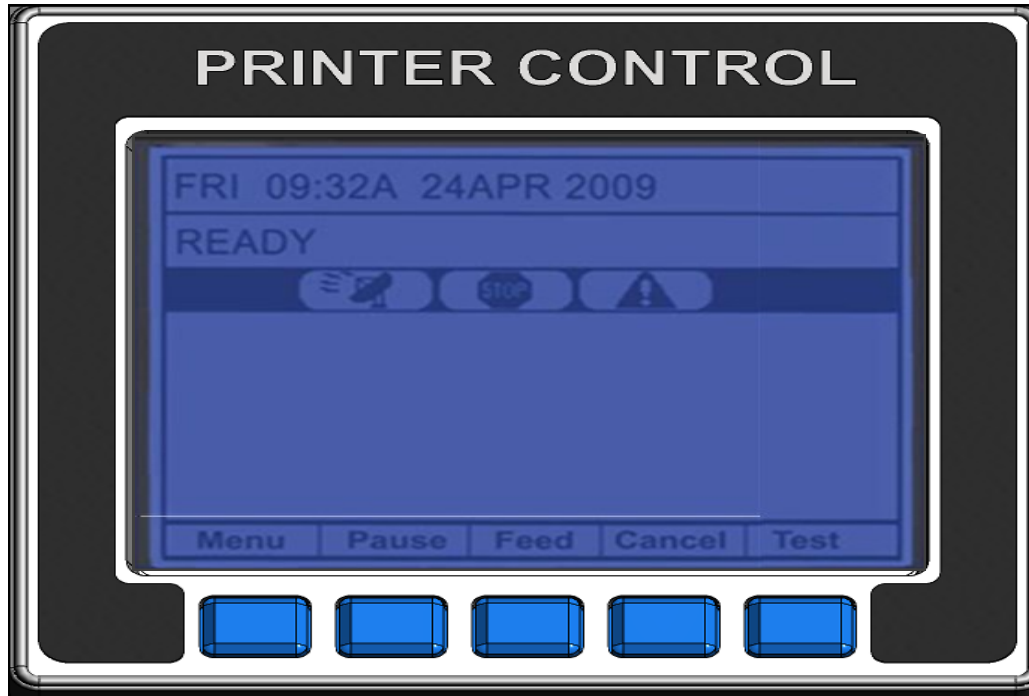
The number of inches that the Barcode Scanner will stay ON once it has been triggered. The valid range is 0.00 - 32.00 inches.

NOTE: Start Scanning Offset + Scanning Distance must not be greater than the bag length.

Printer Controls

Control Panel

The Control Panel is an event-driven user interface composed of a graphics display and Soft Keys.



Time and Date

Displays the current time and date.

Printer Status Line

Following initialization, the 'READY' message and label counter during a batch print job.

Current State Icons

Displays the Icons of the current state of the printer. See description of icons on page 37.

Soft Key Labels

Menu - The Menu key takes the printer offline and enters menu mode.

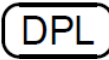
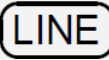
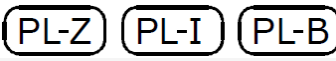
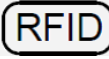
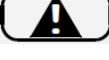
Pause - The Pause key temporarily suspends printing, as noted by the current state indicators. Pressing the key again will return the printer to normal operation.

Feed - The Feed key advances one label, and clears any corrected faults.

Cancel - The Cancel key 'pauses' the printer and prompts you for confirmation. If yes, the current job is cancelled. The printer remains paused until the 'Pause' key is pressed again.

Test - The Test key enters the test mode.

Current Status Icons

ICON	DESCRIPTION
	Initialization, typically brief (but a damaged or invalid printhead can delay the process).
	Display Large Fonts
	Input Mode - DPL
	Input Mode - LINE
	Input Mode - Emulation
	RFID Detected
	SD Memory Card Detected
	USB Memory (or keyboard) Detected
	Wired Network Detected
	Server Inaccessible
	WLAN Associate with Access Point
	WLAN Not Associated with Access Point
	WLAN ADHOC Mode
	Receiving Data
	Paused
	Faulted

Loading a Label

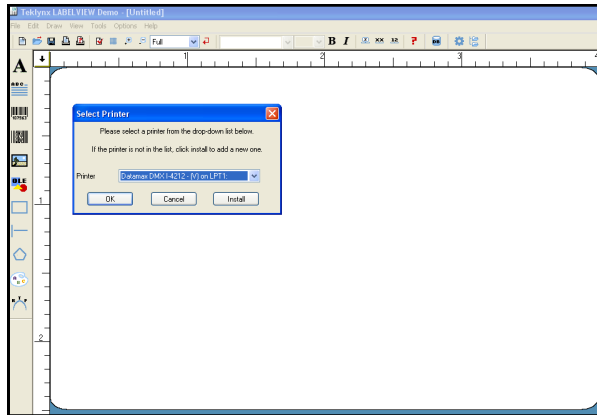
This section will briefly guide you through creating and loading labels using Labelview™. Labelview™ is labeling software available from Pregis. This software can be used for creating text, bar codes, graphics, lines, and boxes. For more detailed instructions on using Labelview™ refer to the Help section within the software.

Note: Software other than Labelview™ may require different settings.

Once Labelview™ is installed on your PC, perform the following steps.

Selecting a Label Printer

1. Go to **File + Select Printer**.
2. Choose the Datamax® DMX I-4212 printer from the list.



3. If the Datamax® driver is not in the list select **Install**.
4. Select the Datamax® DMX I-4212 and click install.
5. Click **Close**.
6. Click **OK**.

Configuring LABELVIEW™

1. Go to Options + Configuration.
2. Under the General tab, uncheck all of the boxes except TrueType Fonts as Graphics.

Creating a New Label

1. To Create a new Label format, go to **File + New** or click on the icon.
2. Fill out the Label Setup tab of the Label Setup dialog box. The following are some recommended settings for this tab.

Print Speed – Start at 8 and adjust for optimal print quality. (Range is 2 – 11.5)

Temperature – Start at 12 and adjust for optimal print quality. (Range is 0 -30)

3. Click on the Options tab and fill in the boxes. The following are some recommended settings for the options tab.

Print Rotation – Normal

Label Stock – Non Inventory

Sensor Type – Continuous

Cut – Don't Cut

Dots per Inch – 203

Back Feed – 0

Increment Method – Printer

Note: Label names and paths can contain up to 250 characters. Longer path and file names are not supported.

4. Click **OK**.

Adding Fields to Labels

Adding any field to a label involves all of the same steps.

Adding Text

1. Click on the  button.
2. Non-Resizable means the picture cannot be changed.
3. **Pictures** = Specify the name of the picture file you wish to insert.
4. **Preview** = Check this box to see a thumbnail of the full picture before you place it on the label.

Boxes / Lines

Click on the  or the  button.

When you add a line to the label, it will first appear in a default size set by the program. Click on and drag the handles provided to resize the object. Clicking on the item where there is no handle will allow you to drag it to a new location on the label. When adding a box, you will be asked to define the horizontal and vertical widths of the lines before placing it on the label.

Saving a Label

1. Go to **File + Save**.
2. You will be prompted to enter the name of the label. You must also specify where you want the format to be saved; which drive and directory. This operation is identical to saving files from any other Windows program. The maximum length allowed for the path and the file name is 255 characters altogether.
3. Click the OK button to save the label and return to the main screen.

Note: You only need to specify the name and location the first time you save. Thereafter, the label will always use that name and location. To change either value, go to File + Save As.

Downloading Labels to Printer

Note: The required serial or parallel cables for downloading labels to the printer are not provided.

1. Within Labelview™, select **File + Open**.
2. Select the label to be printed. Click **OK**.
3. Go to **File + Print**.
4. In the Quick Printing dialog box choose the quantity of labels to be printed and choose Print.
5. A small printing dialog box will appear. When this box disappears the downloading is complete.
6. The printer display will change from READY to WAITING FOR SIGNAL.
7. Cycle the machine.

Fault & Alert Management

HMI Fault Management

All fault and alert messages appear at the bottom of most screens in a single line of text. Messages alternate through a technique known as "Round Robin Display". Each active message appears for 3 seconds and then the display goes to the next. Thus if there were 3 active messages, all 3 would be displayed every 9 seconds.

Fault Messages

Faults are defined as an error condition that will stop the bagger and prevent subsequent cycles from occurring as long as the fault persists. Faults must be corrected and then reset from the HMI using the Reset Button. Faults are first indicated by the red banner at the bottom of all screens.

No Bag Covering Eye

CAUSE: There is no film in the machine or the film is not being detected by the bag edge photo-eye

REMEDY: Position the film over the eye and reset the fault.

Bar Code Fault

CAUSE: Consecutive Bad Read Counter = Barcode Fault Setting

REMEDY: There is a problem with the Barcode Scanner. The taught label is not the same as the printed label or

The print quality of the label is poor and cannot be read.

Light Curtain Violation

CAUSE: Safety light curtain was broken while the bagger was in cycle.

REMEDY: Operators must wait until the bagger cycle is completed before loading parts.

Too Many Parts Counted

CAUSE: The Actual Number of Parts loaded into the open bag exceeded the Target Count.

REMEDY: The Filling device is delivering parts after the "Ready For Filler" switched off, or the filling device delivered multiple parts in a single charge and those parts were counted by the counting device. i.e. light curtain, photo-eye, etc. Close examination of the filler and filling process is required to correct the condition.

Print Head Failed To Lower

CAUSE: The Lower Print Head PLC output O-05 was turned on, but failed to make the lowered switch failed to turn on the Print Head Lowered Input I-05.

REMEDY: Lower Print Head Solenoid may have failed or proximity sensor is not positioned correctly with the target. Check PLC I/O circuits.

Print Head Failed To Raise

CAUSE: The Lower Print Head PLC output O-05 was turned off, but Input I-05 stayed on.

REMEDY: Lower Print Head Solenoid may have failed or proximity sensor is not positioned correctly with the target. Check PLC I/O circuits.

Jaw Motion Fault

CAUSE: The Jaw Axis detected a motion fault

REMEDY: Reset the fault. If problem persists, rehome the Jaw.

Film Feed Motion Fault

CAUSE: The Film Axis detected a motion fault

REMEDY: Reset the fault. If problem persists, lower the Feed Speed setting.

Jaw Failed To Close

CAUSE: The commanded motion did not complete before the fault timer expired. The Jaw Closed Sensor must change states as the jaw moves in to the sealing position. Also the Jaw may have mechanically lost its position.

REMEDY: Reset the fault and Rehome the Jaw.

Pressure Bar Obstruction

CAUSE: The pressure bar attempted to close, but was blocked by an obstruction.

REMEDY: This is usually a part that did not drop past the pressure bar. Increase the Filler Drop Timer setting.

Bag Failed To Separate

CAUSE: The Bag Edge Photo-eye did not detect the trailing edge of the film as the web was backing up.

REMEDY: Check that the Photo-eye is correctly sensing the film in front of it.

It should only turn on when it sees the film in front of it. It should turn off just as the trailing edge of the film unblocks the eye. The eye may need to be taught from the service screen or it might need to be cleaned.

Jaw Failed To Home

CAUSE: The Jaw Homing Cycle could not be completed or the cycle was stopped by the Operator.

REMEDY: The Jaw Closed sensor may be inoperative or there may be a physical obstruction between the Jaw and the bagger frame that does not activate the Jaw Obstruction sensors.

HMI Alert Management

Alert Messages

Alert messages are displayed in yellow and will not generally stop a bagger cycle, though they can inhibit starting the cycle. Alerts are intended to inform the operator of an event or status of the machine. Alerts can be considered minor faults in some cases and may require the operator to intervene.

Batch Counter Done

CAUSE: The batch counter actual value has reached the target count. This alert will not interrupt the bagger cycle, but subsequent cycles are not possible until the Alert has been reset.

REMEDY: Batch is done. Reset and bagger is free to cycle again.

Waiting On Filler

CAUSE: The bagger has signaled the filler machine that it is ready to accept product and is waiting for the filler to trigger the next bagger cycle.

REMEDY: Filler must complete the delivery of product and turn on the Filler Trigger input.

Waiting On Printer

CAUSE: The bagger requested a print from the printer, but the printer has not responded with "Printer Busy"

REMEDY: Printer does not have a label loaded or there is an I/O communications problem between the PLC and the Printer. Check "Printer Data Ready" Input 02

Jaw Not Homed

CAUSE: The Jaw Stepper Motor must be homed before it can operate

REMEDY: Remove bag from Sealing Area. Press "Home Jaw" button located on Dashboard Screen. Jaw will go through homing cycle and when completed, this message will automatically clear.

Cycle Bagger To Activate Filler

CAUSE: The bagger is in Filler Mode. The operator must cycle out the first bag to activate the filler cycle.

REMEDY: Cycle Start input required by operator. This can be from the HMI screen, Foot Switch, etc.

Machine Not Tested

CAUSE: The bagger has not passed the QA Test of 1000 cycles without a fault.

REMEDY: Assembly must complete QA Test. Message will clear when test has passed.

Printer Faults

All printer functions are internally monitored. When a problem (Fault) or a potential problem (Warning) is detected, a corresponding message will appear in the display. Fault messages receive the highest display priority. If more than one fault is detected the display will cycle between messages.

Note : To return to normal operation following a fault, the fault must be corrected and then the 'FEED' key must be pressed to clear the condition.

Display Message	Description	Possible Solution (s)
24V OUT OFF TOLERANCE	The printer has detected a drop in the 24-volt power supply.	Try cycling the printer power 'Off' and 'On'. If the fault does not clear, call for service.
ADC FAULT	The printer has detected an analog to digital circuit converter failure	Cycling the printer power 'OFF' and 'ON'. If the fault does not clear, call for service.
DMA FAULT	The printer has detected a direct memory access failure	Cycling the printer power 'OFF' and 'ON'. If the fault does not clear, call for service.
TEMPERATURE FAULT	The printer has shutdown to allow the printhead temperature to cool	Turn off the printer and wait until the printhead cools to prevent permanent damage.
PRINT ENGINE FAULT	The printer has detected a problem within the print logic	Cycling the printer power 'OFF' and 'ON' if the fault does not clear call for service.
HEAD CLEANING FAULT	The scheduled printhead cleaning has been exceeded by the amount equal to three times the pre-programmed distance	Press and hold the 'TEST' key or select 'CLEAN HEAD NOW'
OUT OF STOCK	The printer cannot detect media.	Load Media. Ensure that the labels are passing through the media sensor.
POSITION FAULT	The printer was powered-off or reset during a ribbon, out of stock fault. The printer was unable to complete the media calibration.	Press the 'FEED' key attempt to identify and then clear the fault. If necessary, calibrate the printer.
RAM FAULT	The system has detected a RAM failure.	Try cycling the printer power 'OFF' and 'ON', if fault does not clear call for service.
GOODBYE	Power has been removed and shutdown is in progress.	The printer power switch was turned 'OFF'; the line fuse has been blown. Or AC line voltage has been lost.
HOST CHANGES PENDING	The host has pending configuration changes that will not take effect until a 'Host Reset Command' is issued.	To save your changes, send the host reset command (in DPL) or to discard changes press and hold 'CANCEL' key for 4 seconds.

Display Message	Description	Possible Solution (s)
DOT FAILURE	The printer has detected defective printhead elements.	Replace the printhead. If the print quality becomes unacceptable.
RTC RAM FAILURE	The printer was unable to save settings in permanent memory.	Possible faulty main logic card. If the condition persists, call for service.
LABEL SENT TO PRINTER. BUT PRINTER STILL SAYS 'READY'	No label sent to printer.	Check the cable between computer and printer control box.
PRINTER WILL NOT TURN ON	Power cable unplugged. Power switch off.	Plug-in power cable. Turn-on power switch on front of printer control box.
BAGGER DISPLAYS 'WAITING FOR PRINTER' MESSAGE	Printer not on. No labels in printer. Printer cables are loose.	Press reset on Bagger, and then turn on printer control box. Load labels into printer. Check printer cables.
PRINTER CONTROL BOX DISPLAY LIGHTS-UP. BUT NO TEXT ON SCREEN	Contrast turned down.	Push and hold the far left button on the printer control box until text is shown.
PRINTER CYCLES BUT NOTHING IS PRINTED ON BAG	1. Lose cables. 2. Ribbon empty. 3. Ribbon installed incorrectly.	Reseat printer cables. Replace ribbon. Install Ribbon Correctly.
RIBBON FAULT	1. Improperly sized ribbon spool. 2. Out of ribbon.	1. Use only 1"ID spools of ribbon. 2. Install new spool of ribbon.
PRINTER CONTINUALLY PRINTS LABELS	1. 'START OF PRINT' set to 'ACTIVE HIGH'. 2. Relay #2 or #4 in printer control box defective. 3. 'END OF PRINT' set to 'ACTIVE HIGH'.	Set 'START OF PRINT' to 'ACTIVE LOW'. Replace defective relay. Set 'END OF PRINT' to 'ACTIVE LOW'
PRINTER PRINTS ONE LABEL AND THEN FEEDS OUT MULTIPLE BAGS	Printer not set to 'CONTINUOUS' in printer control box or Labelview. 'END OF PRINT' set to 'ACTIVE HIGH'.	Set printer to 'CONTINUES' in printer control box and Labelview. Set end of print to 'ACTIVE LOW'.
LABEL LOADS IN PRINTER, BUT 'WAITING FOR PRINTER' ERROR SHOWN ON BAGGER	Printer cabling loose. Printer control box off. GPIO cable unplugged.	Check printer cabling. Turn printer control box on. Plug-in GPIO cable.
PRINTER CYCLES ,BUT LABEL IS BLANK	1. Printhead out of adjustment. 2. Check printer for ribbon.	Adjust printhead. Install new ribbon.

Display Message	Description	Possible Solution (s)
RIBBON FEEDS OUT THOUGH FRONT OF PRINTER	Ribbon take-up motor not spinning. Clutch Pressure. Heat setting in Labelview set too high. Loose printer cables.	Check ribbon take-up motor wiring. Increase clutch pressure. Decrease heat setting in Labelview. Make sure printer cables are secure.
PRINTER KEEPS PRINTING SAME LABEL	Old print jobs not canceled.	Cancel print job. Press 'Cancel', 'Yes', 'Pause' until printer control box displays 'READY'.
PRINTED LABEL MISSING LINES OF PRINT	Dirty Printhead. Loose printer cables. Printhead Defective. Dirty platen roller.	Clean printhead Make sure printer cables are secure. Clean platen roller.
LARGE PORTION OF LABEL MISSING	Printhead out of adjustment. Loose printer cables.	Adjust printhead. Check printer cables.

Appendix

Settings Summary

This section lists the range of each setting and an Initial value if applicable. Note: The initial settings are only applicable during the first time power up of the bagger.

Bag Length

4.00-20.00"

Initial: 6.0"

Seal Offset

Range: 0.00 – 2.00"

Initial: 0.00"

Seal Dwell

Range: 0.00 – 0.40 sec

Initial: 0.25 sec

Seal Cooling Time

Range: 0.00-2.00

Feed Speed

Range: 4.00 – 30.00 In/Sec

Initial: 10.00 In/Sec

Filler Drop Time

Range: 0.00 – 9.99 sec

Initial: none

Auto Load Dwell

Range: 0.00 – 5.00 sec

Initial: 0.00

Batch Counter

Range: 2 – 9999

Initial: 3

Parts Counter

Range: 1 – 999

Initial: 3

Print Speed

Range: 2.00 – 12.00 in/sec

Initial: 6 in/sec

Print Length

Range: 0.5-10.00 in.

Initial: 2 in.

Consecutive Bags

Range: 2-20

Initial: 2

Appendix

Terms & Condition

Pregis®

1. ACCEPTANCE AND TERMS AND CONDITIONS:

Seller may accept this Order and any amendments by signing the acceptance copy of the Order and returning it to Purchaser promptly. Even without such written acknowledgment, Seller's full or partial performance under this Order will constitute acceptance of these Terms. By acceptance of this Order, Seller agrees to be bound by, and to comply with all these Terms, which include any supplements to it, and all specifications and other documents referred to in this Order. These Terms apply to everything listed in this Order and constitute Purchaser's offer to Seller, which Purchaser may revoke at any time prior to Seller's acceptance. This Order is not an acceptance by Purchaser of any offer to sell, any quotation, or any proposal. Reference in this Order to any such offer to sell, quotation, or proposal will not constitute a modification of any of these Terms. Terms and conditions different from or in addition to these Terms, whether contained in any acknowledgment of this Order, or with delivery of any goods or services under this Order, or otherwise, will not be binding on Purchaser, whether or not they would materially alter this Order, and Purchaser hereby rejects them. These Terms may be modified only by a written document signed by duly authorized representatives of Purchaser and Seller.

2. DEFAULT:

Time is of the essence of this Order. Purchaser may by written notice of default to Seller (a) terminate all or any part of this Order if Seller fails to perform, or so fails to make progress as to endanger performance of this Order in accordance with its terms, and does not cure such failure within a period of ten (10) days (or such longer period as Purchaser may authorize in writing) after receipt of notice from Purchaser specifying such failure; and (b) procure, on such terms as it will deem appropriate, goods or services similar to those so terminated. Seller will continue performance of this Order to the extent not terminated and will be liable to Purchaser for any excess costs for such similar goods or services. As an alternate remedy, and in lieu of termination for default, Purchaser, at its sole discretion, may elect to extend the delivery schedule and/or waive other deficiencies in Seller's performance, in which case an equitable reduction in the Order price will be negotiated. If Seller for any reason anticipates difficulty in complying with the required delivery date, or in meeting any of the other requirements of this Order, Seller will promptly notify Purchaser in writing. If Seller does not comply with Purchaser's delivery schedule, Purchaser may require delivery by fastest way and charges resulting from the premium transportation must be fully prepaid and absorbed by Seller. The rights and remedies of Purchaser provided in this Section 2 will not be exclusive and are in addition to any other rights and remedies provided by the Uniform Commercial Code, by law, at equity or under this Order.

3. PRICE:

This Order must not be filled at a price higher than shown on the face of the Order. If no price is set forth on the front of the Order, the goods or services will be billed at the price last quoted or at the prevailing market price, whichever is lower, and, in any event, goods and services ordered under this Order will not be billed at a higher price than last quoted or charged without Purchaser's specific written authorization. Purchaser will be entitled at all times to set off any amount owed at any time by Seller or any of its affiliates to Purchaser or any of its affiliates against any amount payable at any time by Purchaser in connection with this Order. No extra charges of any kind will be allowed unless specifically agreed to in writing by the Purchaser. All applicable taxes arising out of transactions contemplated by the Order will be borne by Seller except as otherwise specified by the parties in writing. If Seller reduces its prices for such goods and/or services during the term of this Order, Seller shall correspondingly reduce the prices of goods and/or services sold thereafter to Purchaser under this Order.

4. INVOICES, PAYMENT, AND TAXES:

(a) Invoices shall be rendered on completion of services or delivery of goods and shall contain the Purchase Order Number, item number, description of goods or services, quantities, unit prices, date(s) rendered and total purchase price. Each invoice must refer to one, and only one, purchase order.
 (b) Invoices for contingent workers must contain all of the above where applicable and include a copy of the AAMC's time tracking document for each contingent worker for the time period being billed.
 (c) Payment shall be made on the terms of 2% 10 days, net 60 days from the date of invoice. Cash discount periods shall be computed from either the date of actual delivery of the goods or the date an acceptable invoice is received, whichever is later. All claims for money due or to become due from Purchaser shall be subject to deduction by Purchaser for any setoff or counterclaim arising out of this or any other of Purchaser's Orders with Seller.

5. PACKAGING:

All goods must be packaged in the manner specified by Purchaser and shipped in the manner and by the route and carrier designated by Purchaser. If Purchaser does not specify the manner in which the goods must be packaged, Seller shall package the goods so as to avoid any damage in transit. If Purchaser does not specify the manner of shipment, route, or carrier, Seller shall ship the goods at the lowest possible transportation rates, consistent with Seller's obligation to meet the delivery schedule set forth in this Order.

6. INSPECTION:

All goods and services will be subject to inspection and test by Purchaser at all times and places, including the period of manufacture and in any event prior to final acceptance. Final acceptance or rejection of the goods or services will be made as promptly as practical after delivery except as otherwise provided in this Order, but failure to inspect and accept or reject goods or services or failure to detect defects by inspection, will neither relieve Seller from responsibility for such goods or services as are not in accordance with this Order nor impose liabilities on Purchaser for them. Purchaser's payment for the goods shall not constitute its acceptance of the goods. Goods rejected and goods supplied in excess of quantities ordered may be returned to the Seller at Seller's expense. Payment, if any, made for any goods rejected hereunder shall be promptly refunded by Seller. Seller will provide and maintain an inspection and process control system acceptable to Purchaser covering the goods and services ordered. Records of all inspection work by Seller will be kept complete and available to Purchaser during the performance of this Order and for seven (7) years after Seller's completion of this Order. If any of the goods or services are found at any time to be defective in material or workmanship, or otherwise not in conformity with the requirements of this Order, including any applicable drawings and specifications, then Purchaser, in addition to such other rights and remedies it may have by contract or by law or equity, at its sole discretion may reject and return such goods at Seller's expense, require Seller to inspect the goods and remove nonconforming goods and/or require Seller to replace nonconforming goods or services with conforming goods or services. If Seller fails to make the necessary inspection, removal, and replacement in a time and manner satisfactory to Purchaser, Purchaser may at its option inspect and sort the goods; Seller will pay any related costs.

7. WARRANTIES:

Seller represents and warrants that (a) all goods and services are free of any claim of any nature by any third person and that Seller will convey clear title to Purchaser, (b) all services are performed in a manner acceptable in the industry and in accordance with generally accepted standards, are free from all defects, are fit for the particular purposes for which they are acquired, and are provided in strict accordance with the specifications or other requirements (including performance specifications) approved or adopted by Purchaser, (c) all goods sold will be of merchantable quality, free from all defects in design, workmanship and materials, and fit for the particular purposes for which they are purchased and that the goods and services are provided in strict accordance with the specifications, samples, drawings, designs or other requirements (including performance specifications) approved or adopted by Purchaser, (d) the prices for the goods or services sold to Purchaser under this Order are not less favorable than those currently extended to any other customer for the same or similar goods and/or services in equal or lesser quantities, and (e) Seller shall not act in any fashion or take any action that will render Purchaser liable for a violation of any applicable anti-bribery legislation (including without limitation, the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act 2010), which prohibits the offering, giving, or promising to offer or give or receiving, directly or indirectly, money or anything of value to any third party to assist it, them or Purchaser in retaining or obtaining business or in procuring the goods or services. Purchaser's inspection, test, acceptance, or use of the goods shall not affect Seller's obligations under these warranties. Seller shall replace or correct, at Purchaser's option and at Seller's cost, defects of any goods not conforming to these warranties. If Seller fails to correct defects in or replace nonconforming goods within ten (10) days from the date the Purchaser notifies Seller of the defect or defects, Purchaser may, on ten (10) days prior written notice to Seller, either (i) make such corrections or replace such goods and charge Seller for all costs incurred by Purchaser, or (ii) revoke its acceptance of the goods in which event Seller shall be obligated to refund the purchase price and make all necessary arrangements, at Seller's cost, for the return of the goods to Seller. All warranties of Seller herein or that are implied by law shall survive any inspection, delivery, acceptance, or payment by Purchaser. Any attempt by Seller to limit, disclaim, or restrict these warranties or any remedies of Purchaser, by acknowledgment or otherwise, in accepting or performing this Order, will be null, void, and ineffective without Purchaser's written consent.

8. INDEMNIFICATION:

Seller shall indemnify and hold Purchaser and its affiliates harmless and, on Purchaser's request, shall defend each of them from and against any or all third party claims, demands, litigation, or proceedings of whatever kind, whether based upon negligence, breach of express or implied warranty, strict liability, infringement of intellectual property rights, or any other theory, and from and against all direct, indirect,

special, exemplary, incidental or consequential damages of every kind whatsoever, arising out of, by reason of, or in any way connected with the goods and/or services, the design, manner of preparation, manufacture, construction, completion, or delivery or non-delivery of any goods and/or services by Seller, any breach by Seller of any of its obligations hereunder, or any other act, omission or negligence of Seller or any of Seller's employees, workers, servants, agents, subcontractors, or suppliers. Seller shall, on request, pay or reimburse Purchaser or any other party entitled to indemnification hereunder for all costs and expenses, including attorneys' fees, as incurred by Purchaser or such other party in connection with any such claim, demand, litigation, proceeding, loss, or damage. In addition, for infringing claims, Seller will, at its own expense and at Purchaser's option, either procure for Purchaser the right to continue using the allegedly infringing item, replace it with a non-infringing equivalent, or remove it and refund the purchase price and the transportation and installation costs thereof.

9. LIMITATION OF LIABILITY:

PURCHASER'S AGGREGATE LIABILITY ARISING FROM OR RELATING TO THIS ORDER IS LIMITED TO THE AMOUNT PAID BY PURCHASER FOR THE GOODS AND/OR SERVICES. TO THE MAXIMUM EXTENT ALLOWABLE UNDER APPLICABLE LAW, PURCHASER SHALL NOT BE LIABLE UNDER THIS ORDER FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, INDIRECT, OR PUNITIVE DAMAGES INCLUDING, WITHOUT LIMITATION, LOST REVENUES EVEN IF PURCHASER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

10. PURCHASER'S PROPERTY:

Tangible or intangible property of any nature furnished to Seller by Purchaser or specifically paid for in whole or in part by Purchaser, and any replacements or attachments, are the property of Purchaser and, unless otherwise agreed in writing by Purchaser, will be used by Seller solely to render services or provide goods to Purchaser. Seller will not substitute any property or take any action inconsistent with Purchaser's ownership of such property. While in Seller's custody or control such property will be held at Seller's risk, will be kept insured by Seller at its expense for its replacement cost with loss payable to Purchaser, and will be subject to removal at Purchaser's written request, in which event Seller will prepare such property for shipment and redelivery to Purchaser in the same condition as originally received by Seller, reasonable wear and tear excepted, all at Seller's expense.

11. CHANGES:

At all times Purchaser will have the right to make changes to this Order, including changes to drawings, designs, configurations, specifications, quantities, methods of shipment or packing and delivery schedules or location of delivery. If any such changes cause an increase or decrease in the cost of or the time required for the performance of any work under this Order, an equitable adjustment will be made in the contract price or delivery schedule, or both, and this Order will be modified in writing accordingly. Nothing in this Section, including any disagreement with Purchaser as to any claimed adjustment, will excuse Seller from proceeding with this Order as changed. Any claim by the Seller for adjustment under this Section 11 must be in a detailed writing and delivered to Purchaser within five (5) days after the date Seller receives notification of change. Any change will be authorized only by a duly executed amendment to this Order. Information, such as technical information or guidance provided to Seller by representatives of Purchaser, will not be construed as a change within the meaning of this Section. If Seller considers that the conduct of any of Purchaser's employees has constituted a change under this Order, Seller will immediately notify Purchaser in writing, as to the nature of the change and any proposed adjustment, which will then be subject to this Section 11.

12. COMPLIANCE WITH LAWS:

Seller represents and warrants that it is in compliance with and all goods and/or services supplied hereunder have been produced or provided in compliance with the applicable provisions of all federal, state, or local laws or ordinances and all related lawful orders, rules and regulations. Seller shall comply with any provisions, representations, or agreements or contractual clauses required to be included or incorporated by reference or operation of law in any Order. Seller shall be required to obtain and pay for any license, permit, inspection or listing by any public body or certification organization required in connection with the manufacture, performance, completion or delivery of any good and/or service.

13. CONFIDENTIAL OR PROPRIETARY INFORMATION:

Notwithstanding any document marking to the contrary, any knowledge or information that the Seller has disclosed or may later disclose to Purchaser, and which in any way relates to the goods or services covered by this Order will not, unless otherwise specifically agreed to in writing by Purchaser, be deemed to be confidential or proprietary information, and will be acquired by Purchaser, free from any restrictions. Seller will not transmit to Purchaser any sensitive personal information, including, but not limited to, identified health information, financial information, social security numbers, biometrics or other personally identified or identifiable information of like sensitivity. Seller will keep confidential any

technical, process, economic, or other information derived from drawings, specifications and other data furnished by Purchaser in connection with this Order (in whatever form or format) and will not divulge, export, or use, directly or indirectly, such information for the benefit of any other party without obtaining Purchaser's prior written consent. Except as required for the efficient performance of this Order, Seller will not use such information or make copies or permit copies to be made of such drawings, specifications, or other data without the prior written consent of Purchaser. If any reproduction is made with prior consent, this notice will be provided. Upon completion or termination of this Order, Seller will promptly return to Purchaser all materials incorporating any such information and any copies, except for one record copy. Seller agrees that no acknowledgment or other information concerning this Order and the goods or services provided will be made public by Seller without the prior written agreement of Purchaser.

14. WORK ON PURCHASER'S PREMISES:

If Seller's work under this Order requires Seller to be on the premises of Purchaser or at Purchaser's direction, Seller will take all necessary precautions to prevent any injury to persons or damage to property, including following any rules, procedures or other requirements of Purchaser.

15. INSURANCE:

Seller will maintain Comprehensive General Liability (including Contractual Liability coverage insuring the liabilities assumed in these Terms), Automobile Liability and Employers' Liability insurance with limits as reasonably required by Purchaser, as well as appropriate Workers' Compensation insurance as will protect Seller from all claims under any applicable workers' compensation and occupational disease acts. At Purchaser's request, Seller will furnish to Purchaser a Certificate of Insurance completed by its insurance carrier(s) certifying that the required insurance coverage is in effect, with waiver of subrogation, naming Purchaser as an additional insured, and containing a covenant that such coverage and will not be canceled or materially changed until ten (10) days after prior written notice has been delivered to the Purchaser.

16. TERMINATION:

Purchaser may terminate all or any part of this Order for convenience at any time by written notice to Seller. Upon such termination, Purchaser's liability will be limited to reasonable termination charges mutually agreed by Seller and Purchaser, provided that Seller must specify any proposed charges in writing within fifteen (15) days after termination. This Order shall terminate automatically, without notice, if Seller becomes insolvent or the subject of any proceeding under the laws relating to bankruptcy or the relief of debtors.

17. GOVERNMENT CONTRACTS:

If this Order bears a government contract number on the face of this Order, Seller shall comply with all pertinent provisions of said government contract and pertinent executive orders and directives to the extent that they apply to the subject matter of this Order and all such pertinent contract provisions, orders and directives are hereby incorporated by reference into this Order. A copy of the government contract's pertinent terms and conditions will be given to Seller on request.

18. MISCELLANEOUS:

(a) NON-ASSIGNMENT: Assignment of this Order or any interest in it or any payment due or to become due under it, without the written consent of the Purchaser, will be void. An assignment will be deemed to include not only a transfer of this Order or such interest or payment to another party but also a change in control of Seller, whether by transfer of stock or assets, merger, consolidation, or otherwise.

(b) TRANSPORTATION: All the prices are established as F.O.B. Seller and/or Origin Dock, Freight Prepaid, unless otherwise specifically provided on the front of this Order. Title and risk of loss shall not pass to Purchaser until delivery of the goods to the location designated on the face of this Order and acceptance by Purchaser. If Purchaser rightfully rejects the goods, receives a non-conforming tender, or revokes its acceptance, risk of loss and title shall be deemed to have remained with Seller. The responsibility for freight damaged merchandise will be assumed by Seller. No charges for unauthorized transportation will be allowed. Any unauthorized shipment, which will result in excess transportation charges, must be fully prepaid by the Seller. Seller will not declare any value on such materials shipped via United Parcel Service, Rail Express, Air Express, Air Freight or Parcel Post. Seller will release rail or truck shipments at the lowest released valuation permitted in the governing tariff or classification.

(c) ANTICIPATION OF DELIVERY SCHEDULE: Unless otherwise agreed in writing, Seller will not make material commitments or production arrangements in excess of the amount or in advance of the time necessary to meet Purchaser's delivery schedule. Goods shipped to Purchaser in advance of schedule may be returned to Seller at Seller's expense.

(d) **SELLER'S INVENTORY:** Purchaser will have no obligation to request quotations or place Orders with Seller, both of which will be in Purchaser's sole discretion. Purchaser acting in its sole discretion will determine the actual quantity of goods or services to be purchased. The quantity of goods or services, if any, specified in forecasts supplied by Purchaser from time to time, or otherwise, is an estimate only. Seller bears sole responsibility for managing Seller's raw material, work in process, and inventory, and Purchaser will have no liability with respect thereto (whether upon termination of this Order or otherwise) other than in connection with termination as provided in Section 16.

(e) **FORCE MAJEURE:** Purchaser may delay delivery and/or acceptance occasioned by causes beyond its control.

(f) **REMEDIES:** Each of the rights and remedies reserved to Purchaser in this Order shall be cumulative and additional to any other remedies provided in law or equity. No delay or failure by Purchaser in the exercise of any right or remedy shall affect any such right or remedy and no action taken or omitted by Purchaser shall be deemed to be a waiver of any such right or remedy.

(g) **PUBLICITY:** Seller will not use Purchaser's name or logo in publicity, advertising, or similar activity, except with Purchaser's prior written consent. Seller will not disclose the existence of this Order or any of its respective terms to any third party without Purchaser's prior written consent.

(h) **DOCUMENTATION:** It is agreed that all technical documentation and other literature necessary for the proper use of the goods or services will be provided to Purchaser with the goods or services, unless otherwise directed by Purchaser, and its cost is included in the price.

(i) **GOVERNING LAW:** This Order, these Terms, and all related transactions, will be interpreted under and governed by the laws of the United States of America.

(j) **DISPUTE RESOLUTION:** Disputes arising under this Agreement will be resolved by the parties through good faith negotiations in the ordinary course of business. Any dispute not so resolved will be submitted for binding arbitration, at the written request of either party, before an arbitrator. Selection of the arbitrator will be by mutual agreement of the parties. The amount and responsibility for payment of arbitration costs will be one of the issues decided by the arbitrator, whose decision will be in accordance with the terms and conditions of this Agreement. No damages excluded by or in excess of the damage limitations set forth in this Agreement shall be awarded. During any such arbitration, the parties will continue diligent performance of this Agreement. The arbitrator will render a written decision stating reasons therefore in reasonable detail within ninety (90) days after the respondent receives the Commencement Letter. The provisions of this section, and any award issued by an arbitrator, may be enforced by either party in any court of competent jurisdiction. Arbitration is the exclusive remedy for disputes arising under this Agreement; the parties hereby waive their rights to bring a lawsuit to resolve a dispute arising under this Agreement. (k) **SURVIVAL:** Seller's obligations under Sections 6, 7, 8, 9, 10, 12, 13, and 18 (f), (i), (j), (k), (l), (o), and (q) will survive any termination of this Order.

(l) **WAIVER; MODIFICATION:** No claim or right arising out of a breach of this Order can be discharged in whole or in part by a waiver or renunciation of the claim or right unless supported by consideration and in a writing signed by the aggrieved party. The failure of Purchaser to enforce at any time or for any period of time any of the provisions hereof will not be construed to be a waiver of such provisions or of the right of Purchaser thereafter to enforce each and every such provision. This Order can be modified or rescinded only by a writing signed by authorized representatives from both parties.

(m) **NOTICES:** All notices, consents, waivers, and other communications required or permitted to be given pursuant to this Order, shall be in writing and shall be deemed to have been delivered either (i) on the delivery date, if personally delivered, or if delivered by confirmed facsimile or e-mail, (ii) one (1) business day after delivery to any national overnight courier directing delivery on the next business day, receipt requested, or (iii) three (3) business days after deposit in the United States mail, registered or certified mail, return receipt requested, with adequate postage affixed thereto.

(n) **SEVERABILITY:** If any provision of this Order shall be held or deemed to be or shall, in fact, be illegal, inoperative or unenforceable, this provision shall not affect any other provision or provisions contained in this Order.

(o) **PARAGRAPH TITLES:** The paragraph titles are solely for convenience of reference and shall not affect the meaning or construction of any provision of this Order.

(p) **ENTIRE AGREEMENT:** Provided that there is no written agreement, duly executed by both parties, applying to the transaction, this Order, with such documents as are expressly incorporated by reference, is intended by the parties as a final expression of their agreement with respect to such terms as are included in it, and is intended also as a complete and exclusive statement of the terms of their agreement. No course of prior dealings between the parties and no usage of the trade will be relevant to determine the meaning of this agreement even though the accepting or acquiescing party has knowledge of the nature of the performance and opportunity for objection.

Replacement Parts

Replacement Parts Order Form

Spare or replacement parts can be purchased directly through Pregis or your local distributor. If faxing or mailing in an order it must be accompanied by a hard copy purchase order. Please follow up with a confirming telephone call. Cut off time for next day air shipments is 2:30 p.m. CST.

Pregis N59W22387 Silver Spring Dr, Sussex, WI 53089 Parts: +1 800-634-6359 (Please Fill in Boxes Below)	RECOMMENDED SPARE PARTS Check to Order																																																															
Customer Name:	<table border="1"> <thead> <tr> <th data-bbox="695 535 824 577"><u>PART NO.</u></th> <th data-bbox="857 535 928 577"><u>QTY.</u></th> <th data-bbox="1091 535 1279 577"><u>DESCRIPTION</u></th> </tr> </thead> <tbody> <tr> <td>1036696</td> <td>___</td> <td>Fuse, 6.25A, 250V, 5 x 20mm</td> </tr> <tr> <td>3041179</td> <td>___</td> <td>Spare Parts Kit, Basic</td> </tr> <tr> <td>1022055</td> <td>___</td> <td>Printhead, Thermal, 4" 203 dpi</td> </tr> <tr> <td>1032948</td> <td>___</td> <td>Ribbon, Standard</td> </tr> <tr> <td>3042845</td> <td>___</td> <td>Ribbon, Standard w/Core</td> </tr> <tr> <td>1036695</td> <td>___</td> <td>Roller, Printer Platen</td> </tr> <tr> <td>4080479</td> <td>___</td> <td>Sealer Kit, w/out Tools</td> </tr> <tr> <td>1036701</td> <td>___</td> <td>Spring, Compression, Gripper Button</td> </tr> <tr> <td>1036579</td> <td>___</td> <td>Spring, Compression, Nip Roller</td> </tr> <tr> <td>1022073</td> <td>___</td> <td>Spring, Compression, Sealer</td> </tr> <tr> <td>1022072</td> <td>___</td> <td>Spring, Compression, Stripper Plate</td> </tr> <tr> <td>1022087</td> <td>___</td> <td>Spring, Printhead Cradle Latch</td> </tr> <tr> <td>1030685</td> <td>___</td> <td>Spring, Unwind</td> </tr> <tr> <td>1022134</td> <td>___</td> <td>Sensor, Inductive</td> </tr> <tr> <td>1022164</td> <td>___</td> <td>Timing Belt, Motor (170XL037)</td> </tr> <tr> <td>1036691</td> <td>___</td> <td>Timing Belt, Pressure Jaw (560-8MGT-20)</td> </tr> <tr> <td>1036686</td> <td>___</td> <td>Sensor, Retro-Reflective (WLG4S-3E1134)</td> </tr> <tr> <td>1036680</td> <td>___</td> <td>Timing Belt, Platen and Drive Roller (80XL037)</td> </tr> <tr> <td>1036694</td> <td>___</td> <td>Roller, Film Feed Drive</td> </tr> <tr> <td>1022168</td> <td>___</td> <td>Timing Belt, Ribbon Rewind, Rewind Shaft Side (88MXL025)</td> </tr> </tbody> </table>	<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>	1036696	___	Fuse, 6.25A, 250V, 5 x 20mm	3041179	___	Spare Parts Kit, Basic	1022055	___	Printhead, Thermal, 4" 203 dpi	1032948	___	Ribbon, Standard	3042845	___	Ribbon, Standard w/Core	1036695	___	Roller, Printer Platen	4080479	___	Sealer Kit, w/out Tools	1036701	___	Spring, Compression, Gripper Button	1036579	___	Spring, Compression, Nip Roller	1022073	___	Spring, Compression, Sealer	1022072	___	Spring, Compression, Stripper Plate	1022087	___	Spring, Printhead Cradle Latch	1030685	___	Spring, Unwind	1022134	___	Sensor, Inductive	1022164	___	Timing Belt, Motor (170XL037)	1036691	___	Timing Belt, Pressure Jaw (560-8MGT-20)	1036686	___	Sensor, Retro-Reflective (WLG4S-3E1134)	1036680	___	Timing Belt, Platen and Drive Roller (80XL037)	1036694	___	Roller, Film Feed Drive	1022168	___	Timing Belt, Ribbon Rewind, Rewind Shaft Side (88MXL025)
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