

HEIDELBERG

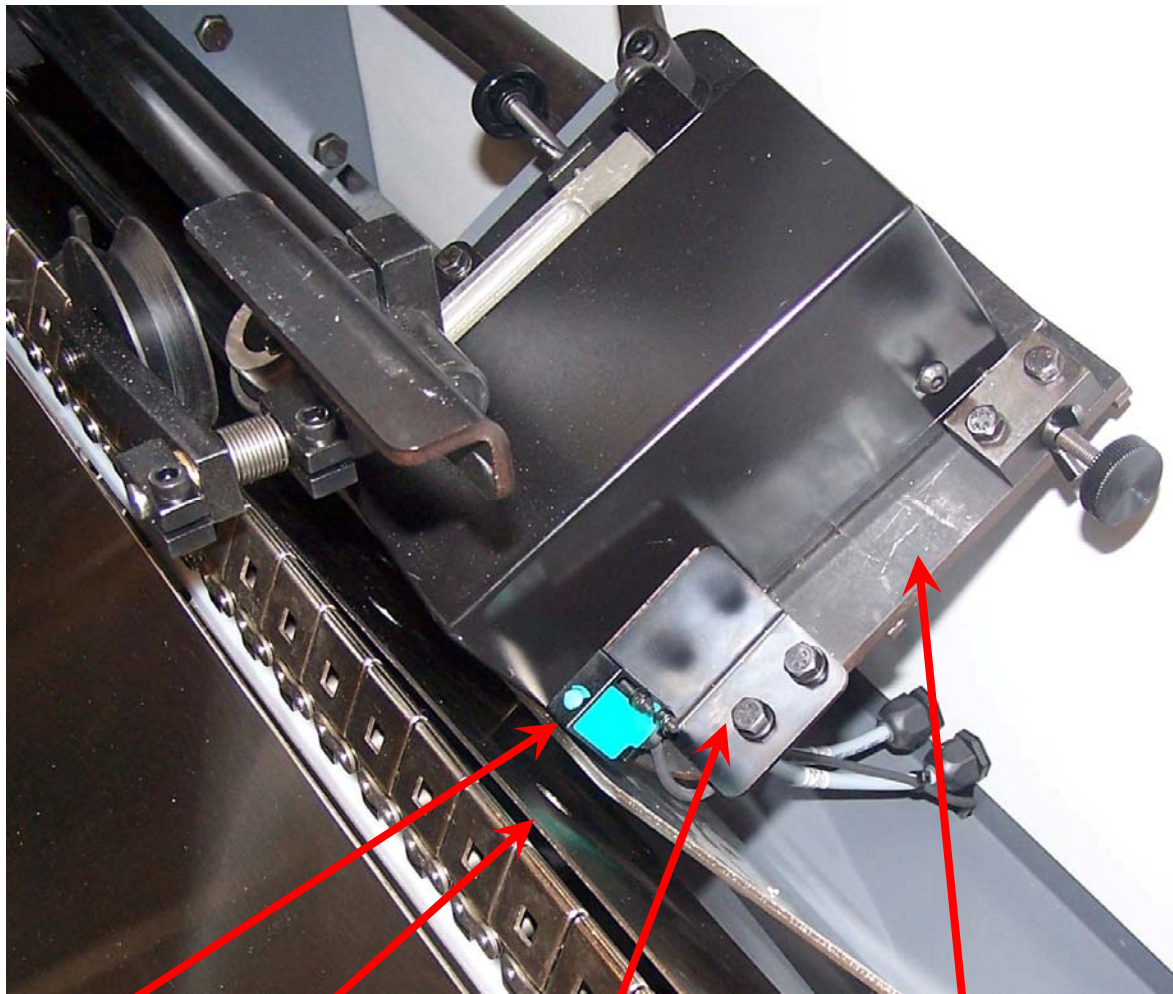


ST90 SADDLE STITCHER
TP10563
LONG & SKEWED BOOK
INSTALLATION MANUAL

LONG & SKEWED BOOK INSTALLATION GUIDE

OVERVIEW

The Long & Skewed Book option is an add-on to the ST-90 saddle stitcher. This unit mounts to the inspector mounting bracket so that the sensor sees the edges of each book by looking through a hole in the sheet guide. The PLC counts the encoder pulses between the edges of the book and compares it to a register in the PLC. If the book count is larger than the setup count a long and skewed book error is registered and the book is not stitched and is rejected. Below is a picture of the Long & Skewed Book unit assembly.



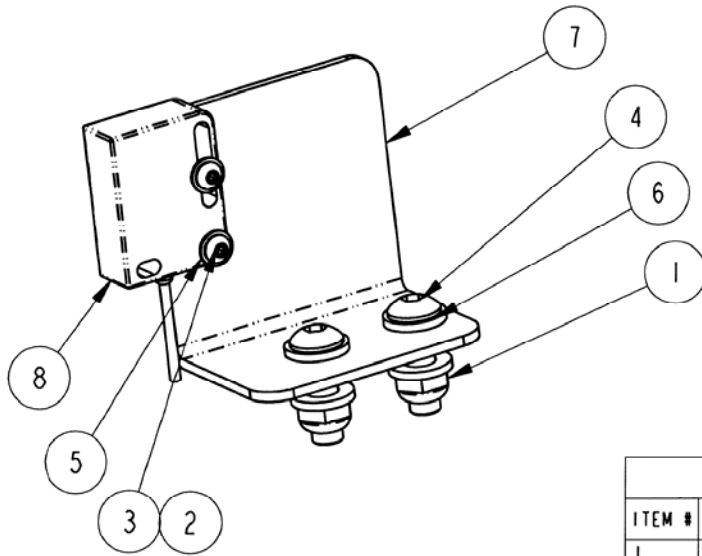
Sensor

Sheet Guide

Sensor Bracket

Inspector Bracket

PARTS LIST – LONG & SKEWED BOOK SENSOR ASSEMBLY



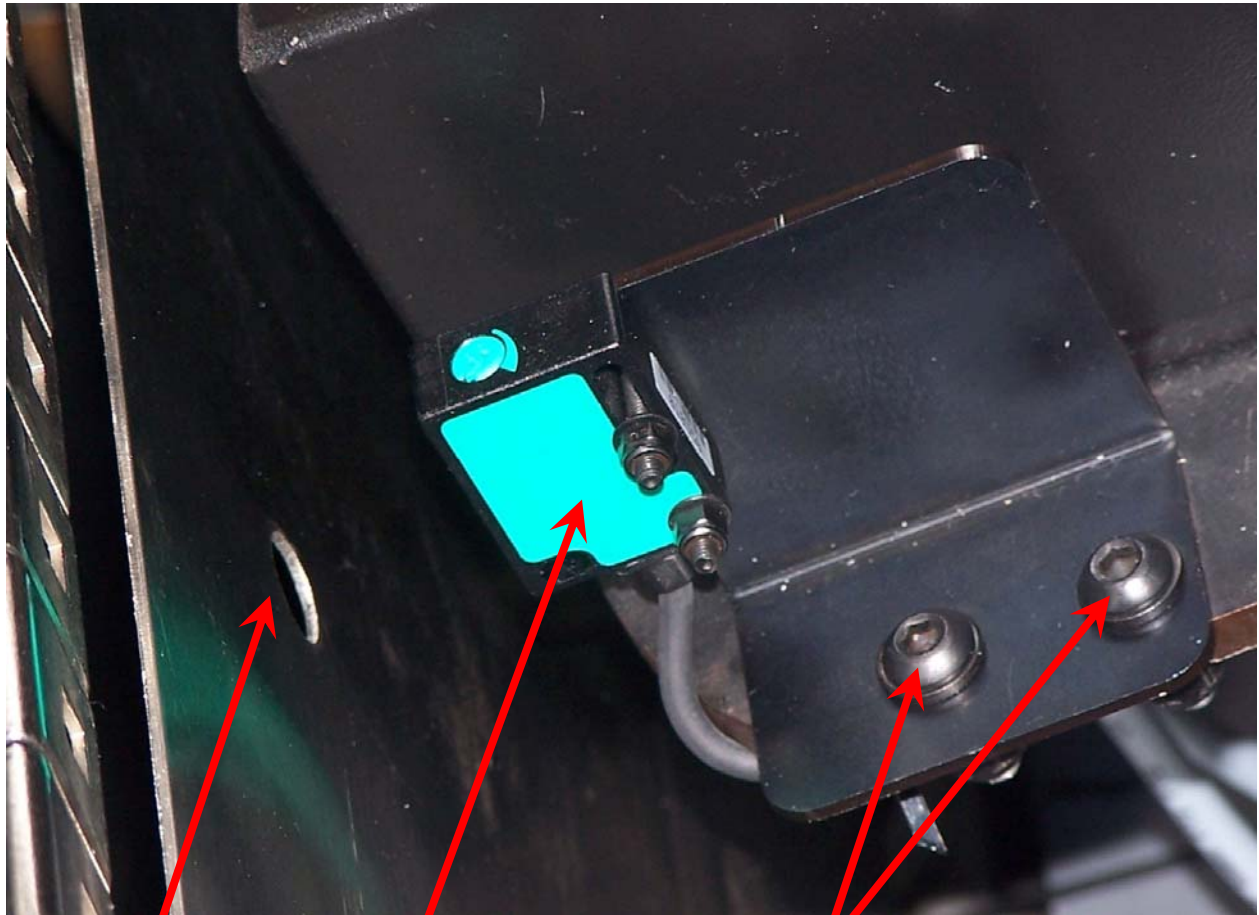
FK5000995			
ITEM #	PART DESCRIPTION	PART #	QTY.
1	NUT-LOCK,ELASTIC STOP M6 REG	213-296-01-00	2
2	NUT-LOCK,ELASTIC STOP M3 REG	213-296-03-00	2
3	SCREW-BUT HD CAP M3X20 BLK	260-439-07-00	2
4	SCREW-BUT HD CAP M6X20 BLK	261-053-05-00	2
5	WASHER-PLAIN M3 3.2X7X0.5 BLK	262-709-01-00	4
6	WASHER-PL. M6 6.4X12.5X1.6 BLK	262-709-04-00	4
7	BRACKET-MOUNTING, LNG. SHT. SENSOR	FK3002194	1
8	SENSOR, MICROPHOTO	FK7002033	1

PARTS LIST – LONG & SKEWED BOOK OPTION

MODEL: FK5000996		DATE: 24-Jul-09	
DESCRIPTION: ASSY- OPTION LONG & SKEWED BOOK		REV: 24-Jul-09	
ASSEMBLY: FK5000996		MASTER PARTS LIST	
		PRINTED: 13-Aug-09	
ASSEMBLY LEVEL			U/M = FT, OZ, EA, RL
SEQ	1	2	3
NO.	COMPONENT	DESCRIPTION	QTY. REQD. U/M
1	FK5000996	ASSY- OPTION LONG & SKEWED BOOK	
2	FK5000995	ASSY- LONG & SKEWED BOOK SENSOR	1 EA
3	24322	ANCHOR- WIRE	2 EA
4	30986	WIRE- TIE	6 EA
5	260-659-01-00	STRAIN RELIEF- CABLE PG9	1 EA
6	TP10563	LONG & SKEWED BOOK OPTION- INSTALLATION MAN	1 EA

INSTALLATION PROCEDURE

- 1) Mount long and skewed book assembly (FK5000951) on the right side of the inspector mounting bracket (See Picture Below). Use the two existing holes in inspector mounting bracket to mount assembly. Aim sensor toward the hole in the sheet guide and snug up mounting hardware at this time. Final location of sensor will be made after electrically connecting sensor.

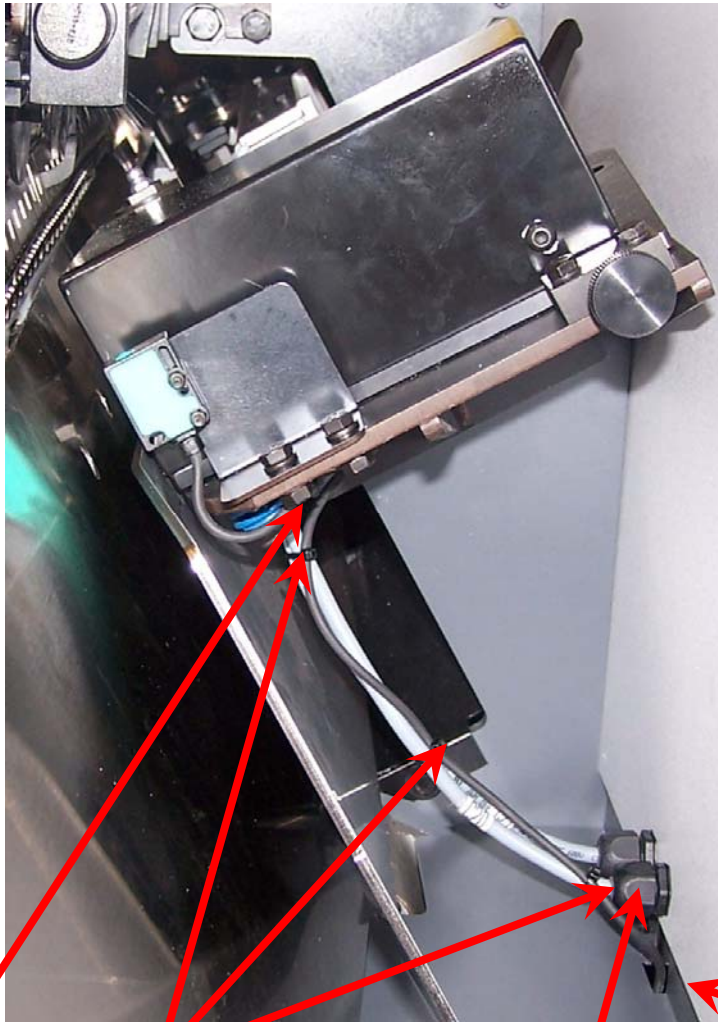


Hole

Sensor Assembly

Mounting Hardware

- 2) Mount one of the wire anchors on the backside of the inspector mounting bracket, under the long and skewed book assembly mounting (See Picture Below). Use a wire tie to secure the sensor cable to the anchor. Run sensor cable with the inspector switch cables and use wire ties to hold cable in place. Cable will need to be sent through slot in guard just below the inspector cable strain relief.



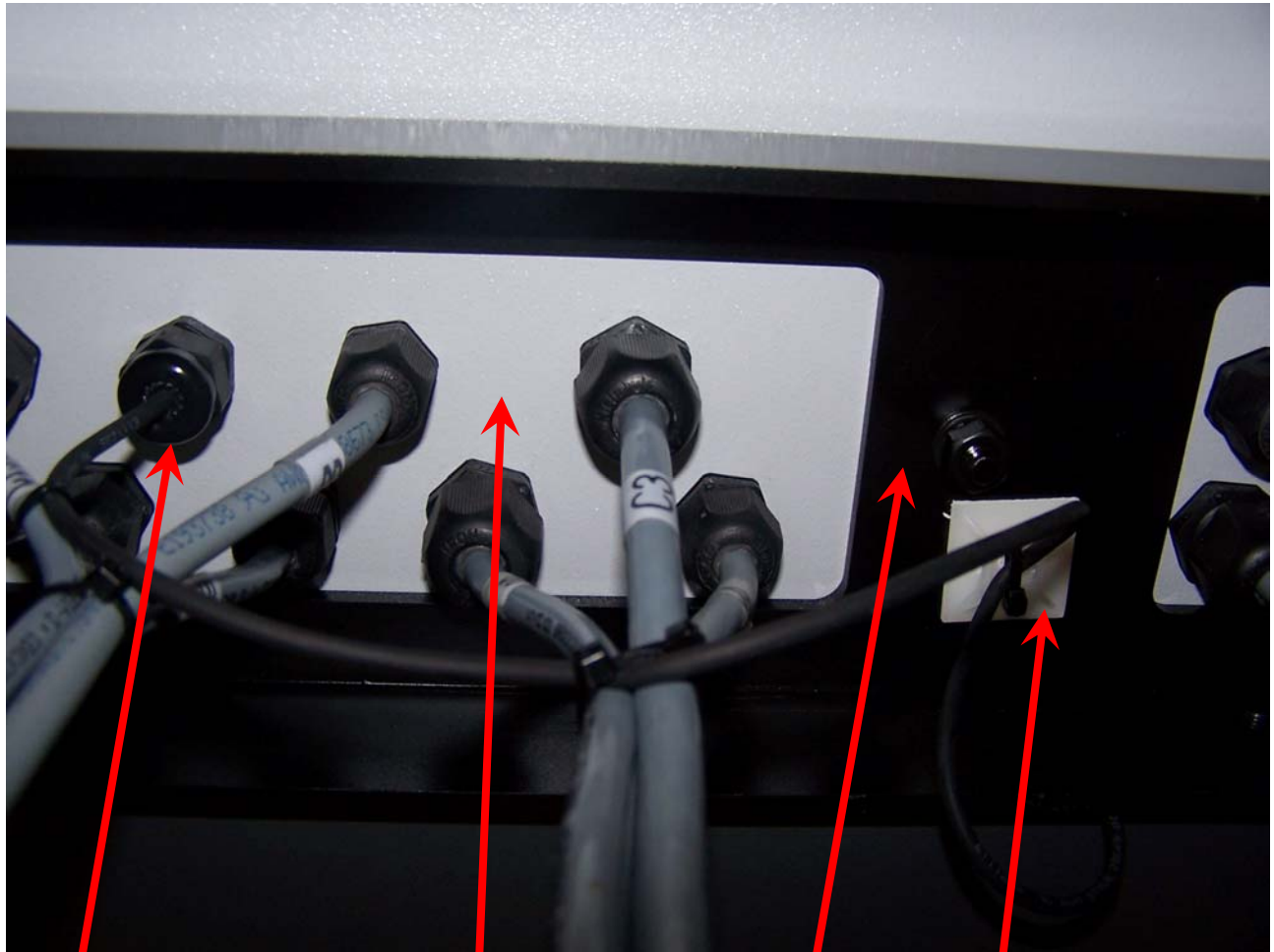
Anchor

Wire Ties

Inspector Cable Strain Relief

Guard Slot

- 3) Mount cable anchor to bottom of main electrical enclosure mounting bracket (See Picture Below). Remove hole plug and replace with strain relief. Wire tie sensor cable to the anchor. NOTE: leave cable loop so that sensor cable will not rub against the edges of the guard slot, or the main electrical enclosure mounting bracket edges. Run sensor cable through the cable strain relief into the main electrical enclosure. Wire tie sensor cable loop to existing cables for support.



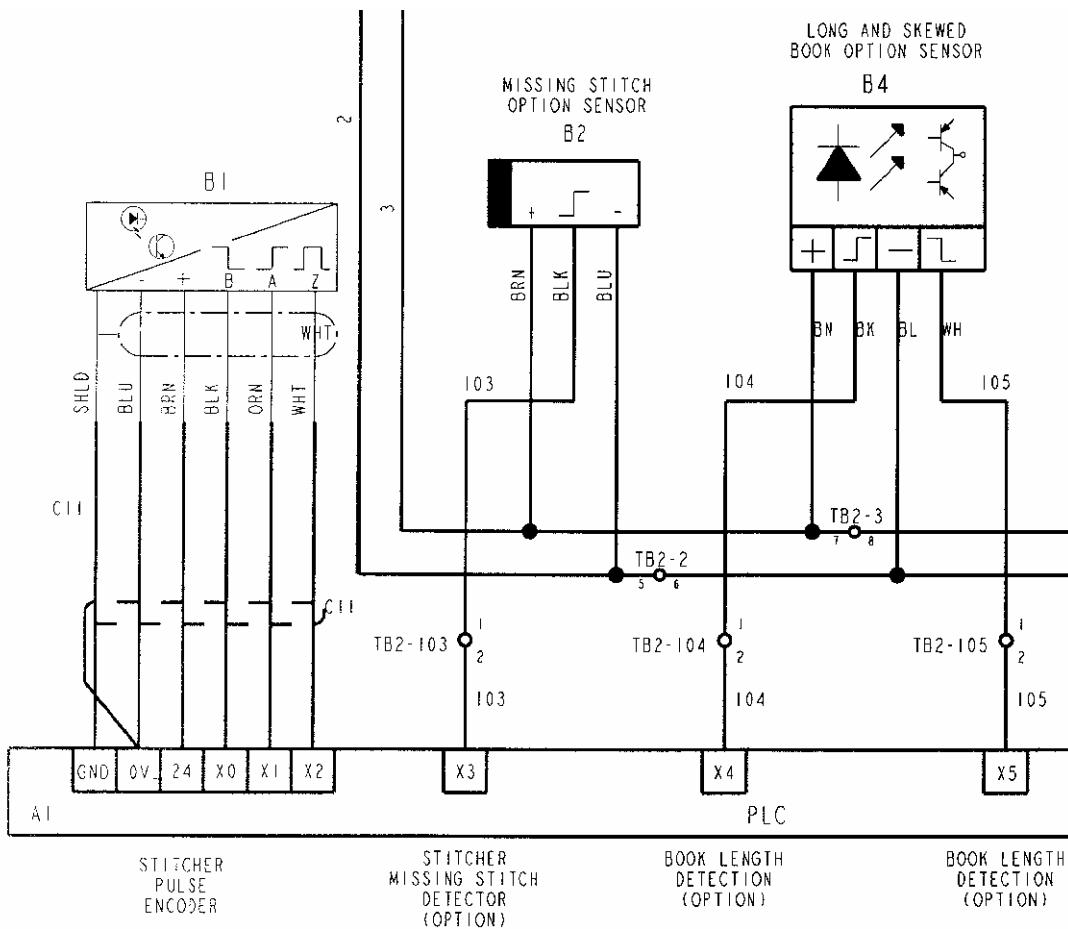
Strain Relief

Electrical Enclosure

Bracket

Anchor

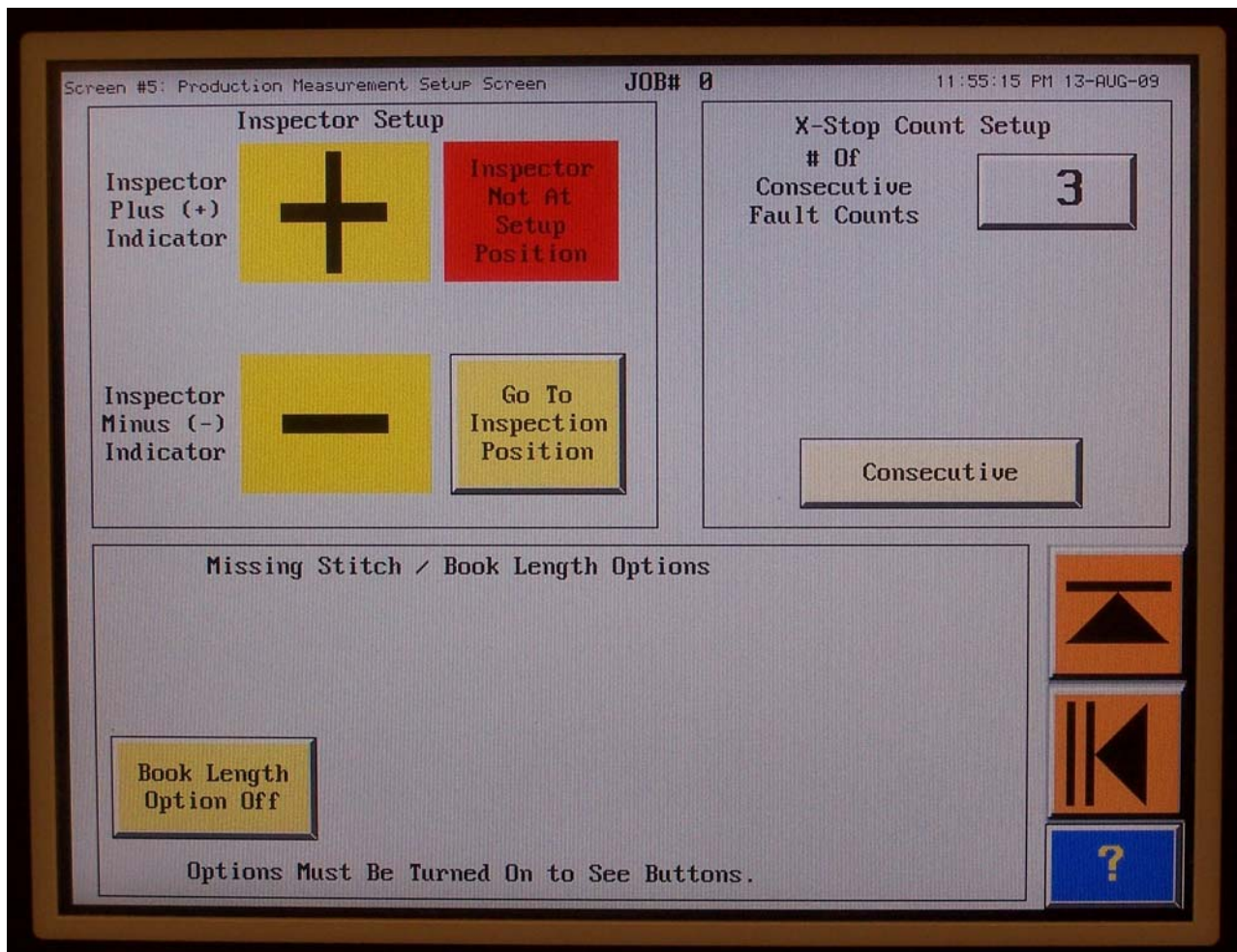
- 4) Assure that the ST-90 machine is powered down before wiring in the sensor into the terminal block in the main enclosure. Remove the lower wire channel cover and run cable into channel towards the terminal blocks in the lower right hand corner of enclosure. Strip back the cable jacket by 6 to 8 inches. The brown wire attaches to the terminal block circuit number 3. The blue wire attaches to the terminal block circuit number 2. The black wire attaches to the terminal block circuit number 104. The white wire attaches to the terminal block circuit number 105. (See circuit schematic below).



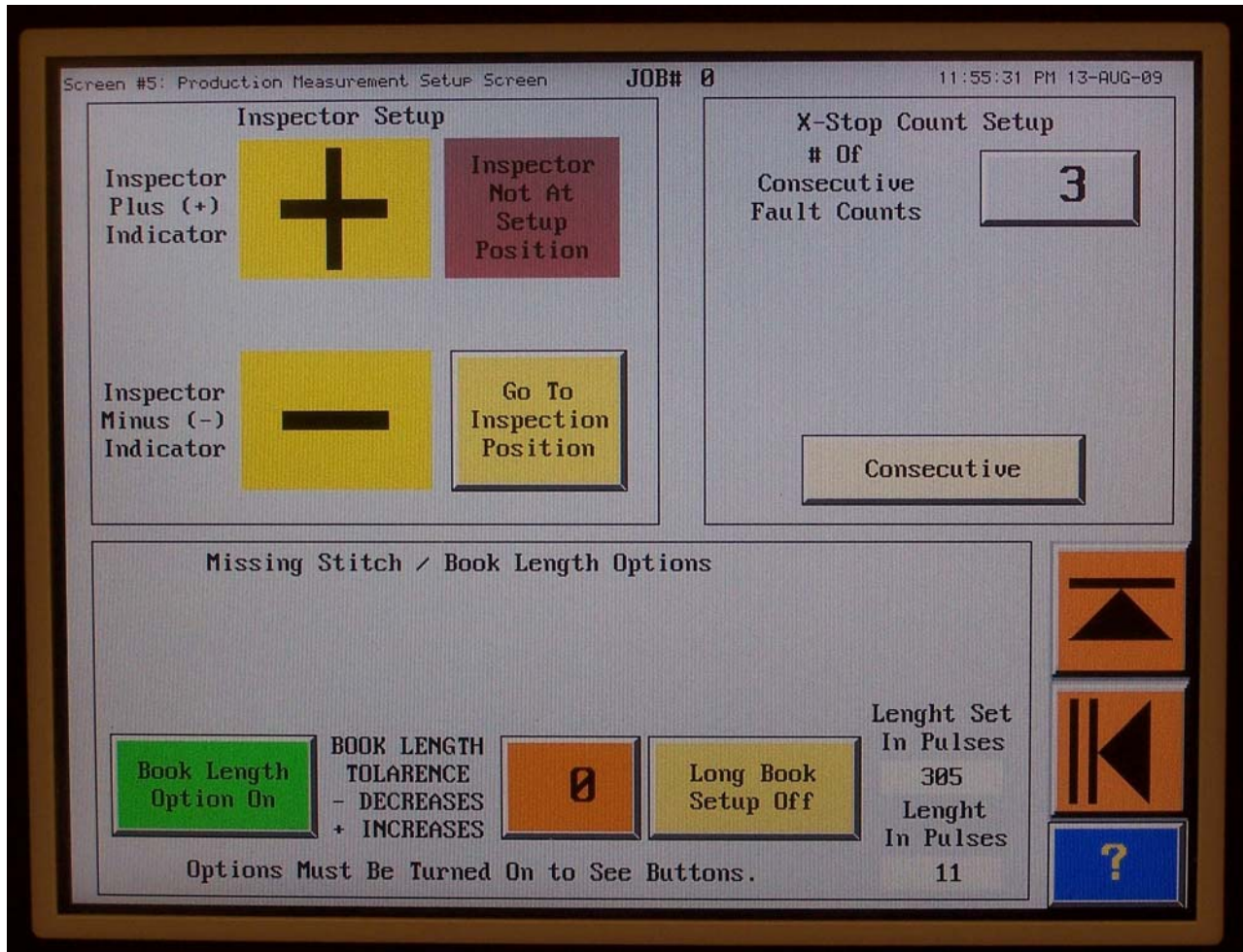
- 5) Close up wire channel and the main enclosure. Power up ST-90, the sensor power on (Green LED) should be on at this time. If amber LED is on, adjust sensitivity down. NOTE: Assure that sensor is pointing into the hole in the sheet guide. A single sheet of paper should be used to test the sensor sensitivity. Go into interface troubleshooting screen and look at X4 and X5 inputs, they should change states as you run a single sheet in front and away from the sensor. When sensor is in position and set – tighten mounting screws to lock sensor into position.
- 6) To activate the Long and Skewed Book sensor in the program, go to the Heidelberg service screen and press the long & skewed book button and enter password 56354 and press enter, the long & skewed book button should now be green.

OPERATIONAL PROCEDURES

- 1) All other normal machine setups should have already taken place before setting up the long and skewed book sensor.
- 2) To turn on or off the long and skewed book inspection, go to the Production Measurement Setup Screen and press the book length Option button in the Missing Stitch / Book Length Options area. When the button is green the rest of the book length Option control displays and the fault count displays on the Production Screen (See Pictures Below).



- 3) To set the Book Length Option, press the Long Book Setup Button. This button should display green. Take a sample book and place it on the saddle chain before the sensor. Press the start sequence and start the saddle chain. The chain will run at low speed and will measure the book and stop automatically when the sensor sees the trailing edge. This sets the length set in pulses register and will display on screen. The long book setup button will then turn off.



- 4) The length in pulses register will display the pulse value of the book that had just been measured. The software automatically sets a +1 pulse tolerance for all measured books. 1 pulse = .036" (.91mm). The orange box with a number in it is the book length tolerance. This number can be as low as -4 to a maximum of +8. This can be changed while the machine is running production books. A smaller number (-1 to -4) will tighten the tolerance and will allow less good books through. A larger number (1 to 8) will open up the tolerance to let more good books through. The software automatically compensates for speed. Normal setting to start measurements should be 0.