

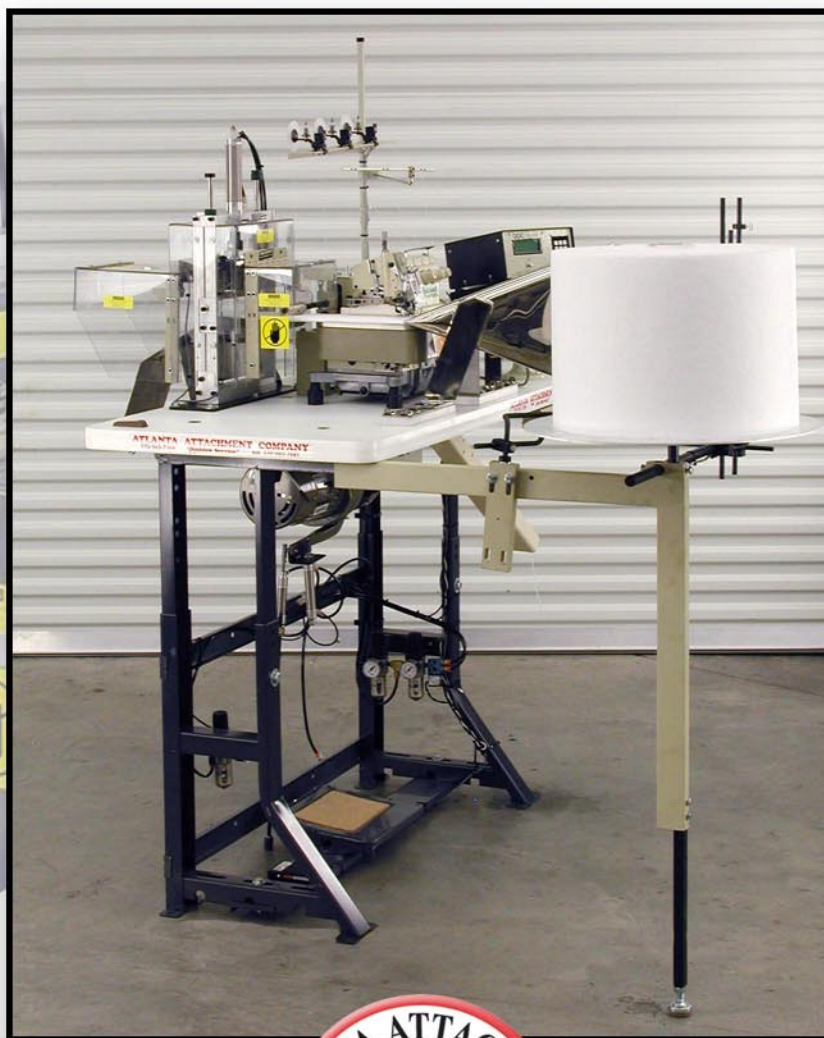
Innovative Technology For The Sewn Products Industry World Wide

ATLANTA ATTACHMENT

11940

Automatic Serging Station

TECHNICAL MANUAL



Web Site: www.atlatt.com

Email: aac@atlatt.com

MANUAL NO. ZZ11940
SETUP INSTRUCTIONS, LIST OF PARTS AND PNEUMATIC DIAGRAMS FOR
11940
Automatic Serging Workstation

COPYRIGHT© 2000-2001
BY
ATLANTA ATTACHMENT COMPANY, INC.
ALL RIGHTS RESERVED
IN ALL COUNTRIES
THIS DEVICE IS COVERED BY ONE OR MORE
U.S. AND/OR FOREIGN PATENTS

The sale of this product does not sell or otherwise transfer any license or other rights under U.S. Patents 5,159,889 or 5,203,270 or under any corresponding foreign patents.

ATLANTA ATTACHMENT CO., INC.
LAWRENCEVILLE, GEORGIA 30045
(770) 963-7369 • FAX (770) 963-7641

PRINTED IN U.S.A.

This equipment is protected by one or more of the following patents:

US patents:4,038,933; 4,280,421; 4,432,294; 4,466,367; 4,644,883; 4,886,005; 5,134,947; 5,159,889;
5,203,270; 5,307,750; 5,373,798; 5,437,238; 5,522,332; 5,524,563; 5,562,060; 5,634,418; 5,647,293;
5,657,711; 5,743,202; 5,865,135; 5,899,159; 5,915,319; 5,918,560; 5,924,376; 5,979,345; 6,035,794

Foreign patents - 2,084,055; 2,076,379;

2,177,389; 2,210,569; 4-504,742; 8-511,916; 9-520,472; 0,537,323; 92,905,522.6; 95,935,082.8;
96,936,922.2.

Other U.S. and Foreign Patents Pending.
2000 Atlanta Attachment Company.



I M P O R T A N T

It is important to read and understand the information contained within this manual before attempting to operate the machine. Atlanta Attachment Co., Inc. shall not be held liable for damage resulting from misuse of the information presented within, and reserves the right to change the information contained within, without prior notification.

Table Of Contents

- 4000D Control Box Operating Instructions 1
- The 4000D controls the sewing machine and threadstops 1
- AT116K-810 Control Box Operating Instructions 1
- Only function #3 is active. 1
- Trouble Shooting 3
- Thread Sensor Instructions 4
- Electric Eye Installation and Adjustments 5
- Wiring Instructions 6
- Wiring Diagram 7
- Pneumatic Diagram 8

4000D Control Box Operating Instructions

The 4000D controls the sewing machine and threadstops

To operate the machine, press and hold the START button until the SENSOR lamp goes off. Release the button. If a thread brakes the sewing will stop and the SENSOR lamp will light. The material present detector is also connected to this circuit and when the material runs out the machine will stop and the lamp will light. The machine will not start a new cut cycle unless the AT116K-810 cutter control box has been Reset and it's TOT counter is at "0". If the machine stops in the middle of a cycle for a thread break or if the material has run out, repair the problem and START to restart the cycle. When the machine has stopped at the end of a cycle the Binding Saver cylinder will be on and the motor break will be locked. To unlock the break press Manual Cut/Reset on the cutter control box or turn off the main power switch.

AT116K-810 Control Box Operating Instructions

Only function #3 is active.

CUT & COUNT PIECES cuts pieces to uniform length and counts them as they are cut.

After setting the counters and pressing the CUT/RESET button, start the machine and the machine will count stitches and cut pieces to length. When the QTY. count equals the TOT count the machine will stop and no more pieces will be cut until the CUT/RESET button is again pressed. The TOT (total) counter counts the pieces and cannot be preset. It resets to "0" when the CUT/RESET button is pressed.

The FUNCTION button (#1) on the keyboard is normally used to change the Function #, but this box only has Function #3 so this button has no active use

Function #3 can store up to ten sets of preset values of Length and Qty. These are stored as programs. To change programs press the PROGRAM key (#2 button) and observe that the program number digit is blinking.

Change the program number by typing the number on the keyboard or pressing the NEXT key until the desired program number is displayed. Press ENTER when finished to leave keyboard mode.

To change the counter settings press the COUNTER key (#3 button) and observe that the first counter digit is blinking. Enter the desired numbers into the counter and press ENTER to save the new setting or press NEXT to move to the next counter. When all the counters have been set as desired press ENTER to save the settings.

The B.S. (Binding Saver) counter in Program #1 sets the delay time between stopping sewing and the cutter activating. It should be adjusted so the machine comes to a complete stop before the cutter activates. Each digit equals about ¼ second.

The B.S. counter in Program #2 sets the delay time between the cutter activating and the threadstops becoming active again. (The threadstops are disabled during stopping and cutting.) It should be adjusted to allow enough time for the sewing head to reach full speed (after stopping to cut) before the threadstops are active again. Each digit equals about ¼ second.

The B.S. counters in Programs #3 - #10 have no function and can be left at “0”.

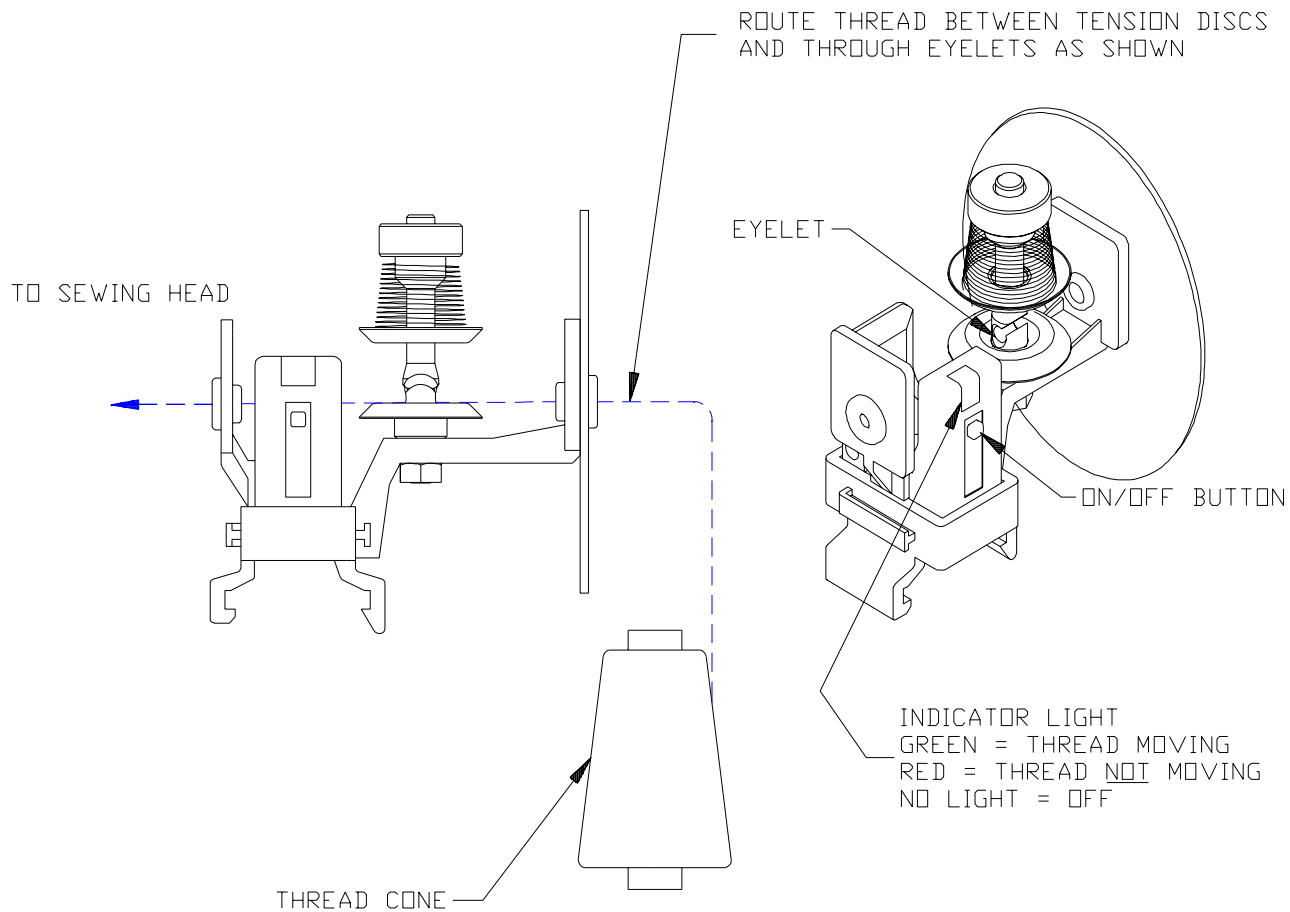
Pressing the Cut/Reset button while in the middle of a cycle will reset the control box to the beginning of a new cycle and causes the cutter to activate.

The cutter will not activate while the cursor on the display is blinking. Always press ENTER to leave keyboard mode and return to normal operation.

Trouble Shooting

Problem	Possible Solution
The control box ON/OFF switch is ON but the unit does not function.	<p>A. Check fuse in rear of the control box. Replace if necessary.</p> <p>B. Check for power at switch box.</p> <p>C. Be sure sewing machine is ON.</p>
The Cutter does not cut when the CUT/RESET button is pressed.	<p>A. Make sure the Control Box ON/OFF switch is ON.</p> <p>B. Make sure the control box power indicator lamp is lit.</p> <p>C. Make sure the Cutter is getting air from the regulator. Also verify that the regulator is set to 70-80 PSI.</p> <p>D. Make sure the Cutter is plugged into the KNIFE SOLENOID socket on the back of the control box.</p>
The Cutter cuts manually but not automatically.	<p>A. Check the reflective tape on the handwheel for wear or damage. Replace if necessary. You may need to readjust the sensitivity.</p> <p>B. Check the electric eye for dust or lint. Clean if necessary.</p> <p>C. Make sure the electric eye is pointing at the reflective tape. Also, check that sensitivity adjustment is correct.</p> <p>D. Check the eye for damage. Also check the cable connecting the electric eye to the control box for cuts, bends, or other damage. Replace electric eye unit if necessary.</p>
The Binding Saver does not function	<p>A. Make sure the binding saver solenoid is getting air and that the regulator is set to 30-40 PSI.</p> <p>B. Make sure the electrical connector from the solenoid assembly is plugged into the BINDING SAVER socket on the back of the control box.</p> <p>C. Make sure the treadle assembly is installed and adjusted correctly.</p> <p>D. The Binding Saver timing is controlled by the B.S. counter in Function 3, Program #1. Check this counter is not zero.</p>
The binding saver functions but does not stop the sewing machine fast enough.	<p>A. Check the mechanical adjustment of the treadle assembly.</p> <p>B. Check the sewing machine motor clutch for wear. Adjust if necessary.</p> <p>C. Check the sewing machine belt tension. Adjust if necessary.</p>
The SENSOR lamp does not go out when the START button is pressed.	<p>A. Check the material out detector for proper operation.</p> <p>B. Check the threadstops are properly threaded. The small red LED on the sensor should turn green while the machine is sewing. If a faulty sensor is suspected, turn each one off one at a time and run the machine.</p> <p>C. Turn off the main power switch for 10 seconds and then try to run the machine again. This will "Reset" the thread break sensors".</p> <p>D. Check the setting of the B.S. counter in Function #3, Program #2. This should be set to about 3 or 4 to allow enough time for the sewing head to accelerate to full speed before the threadstop sensors are activated.</p>

Thread Sensor Instructions



Electric Eye Installation and Adjustments

STITCH COUNTING AND POSITIONING SENSOR

MOUNT THE SENSOR SO THAT IT IS AT LEAST 3" FROM THE HANDWHEEL. THE SENSOR DOES NOT HAVE TO BE PERPENDICULAR TO THE REFLECTIVE TAPE. AN ANGLE OF UP TO 30° CAN BE USED. SEE VIEW "A"

THE SENSOR MAY ALSO BE MOUNTED SO THAT THE TAPE IS MOUNTED ON THE INSIDE OF THE HANDWHEEL TO PROTECT IT FROM CONTAMINATION. SEE VIEW "B".

INSTALL A PIECE OF REFLECTIVE TAPE THAT IS 1" LONG AND 1/2" WIDE.
FOR HIGHER RESOLUTION COUNTING, MORE THAN ONE PIECE OF TAPE MAY BE PLACED ON THE HANDWHEEL, BUT THEY MUST BE 1" LONG, A MINIMUM OF 1" APART, AND EVENLY SPACED.

EDGE SENSING SENSOR

MOUNT THE SENSOR SO THAT IT IS AT LEAST 3" FROM THE SURFACE OF THE MACHINE BED. THE SENSOR DOES NOT HAVE TO BE PERPENDICULAR TO THE REFLECTIVE TAPE. AN ANGLE OF UP TO 30° CAN BE USED. SEE VIEW "C"

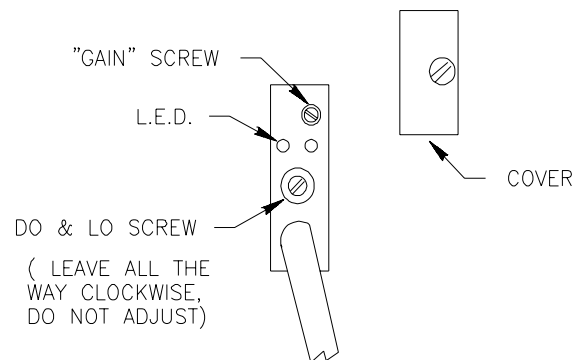
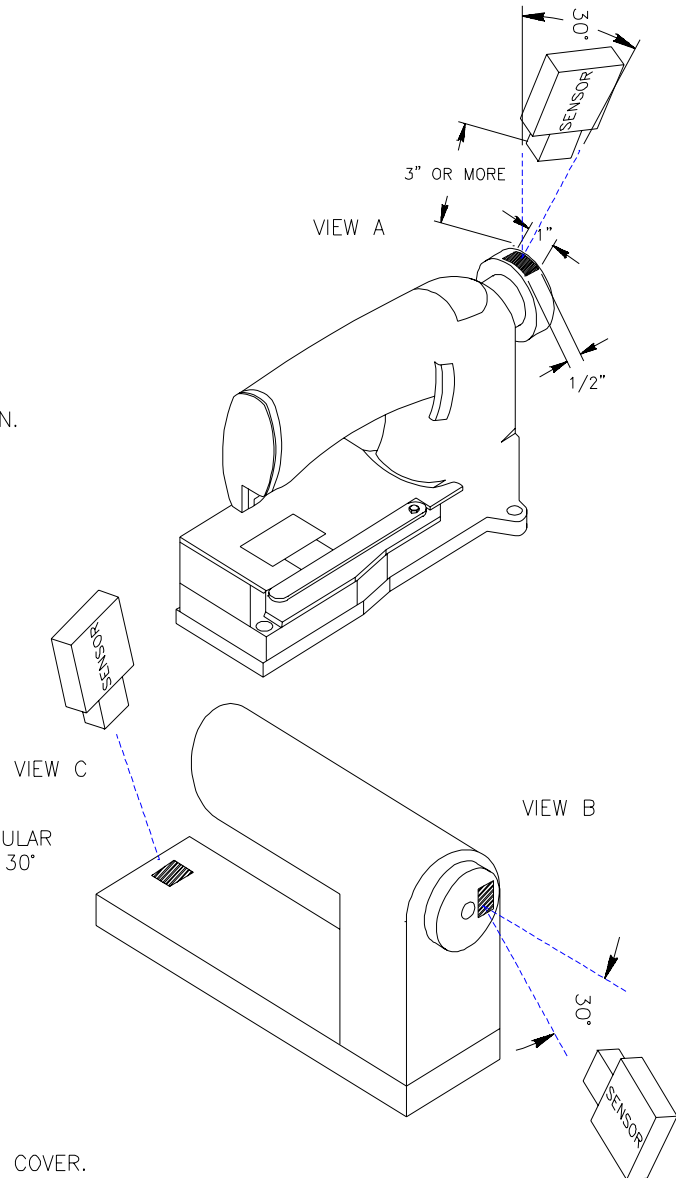
INSTALL A PIECE OF REFLECTIVE TAPE THAT IS AT LEAST 1/2" SQUARE.

SENSITIVITY ADJUSTMENT

THERE ARE TWO ADJUSTING SCREWS UNDER THE COVER. TO ADJUST THE SENSOR FIRST REMOVE THE CLEAR PLASTIC COVER FROM THE END OF THE SENSOR.

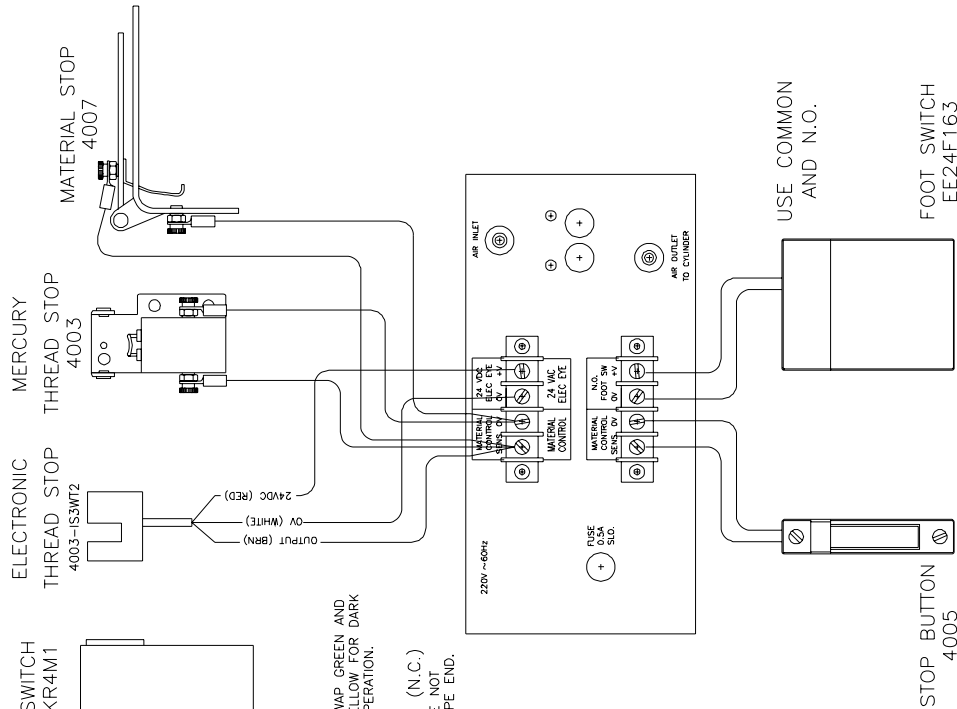
ONE SCREW IS LABELED "GAIN" AND IS USED TO SET THE SENSITIVITY OF THE SENSOR. THE OTHER SCREW IS LABELED "DO & LO" AND SHOULD ALWAYS BE FULL CLOCKWISE.

ADJUSTMENT: WITH THE END OF THE SENSOR POINTING AT THE CENTER OF THE REFLECTIVE TAPE, TURN THE "GAIN" SCREW COUNTER-CLOCKWISE UNTIL THE RED L.E.D. INDICATOR IS NOT ON. THEN TURN THE "GAIN" SCREW CLOCKWISE UNTIL THE L.E.D. INDICATOR COMES ON. THEN TURN THE "GAIN" SCREW ONE FULL TURN CLOCKWISE. THE L.E.D. INDICATOR SHOULD BE BLINKING SLOWLY. TURN THE HANDWHEEL SO THAT THE SENSOR IS NOT POINTING AT THE TAPE OR COVER THE TAPE WITH WHITE PAPER AND THE L.E.D. SHOULD GO OFF.

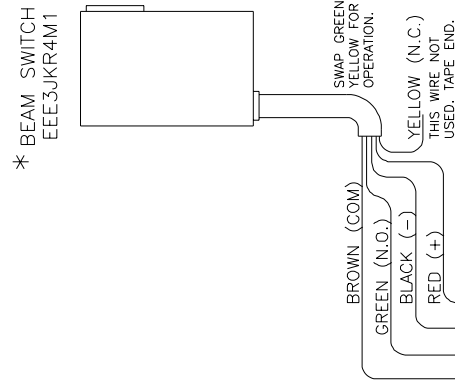


Wiring Instructions

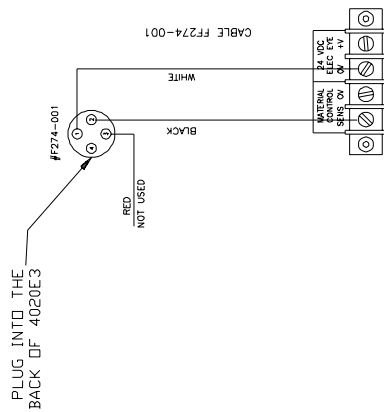
WIRING INSTRUCTIONS - MATERIAL STOP



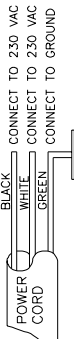
WIRING INSTRUCTIONS - BEAM SWITCH



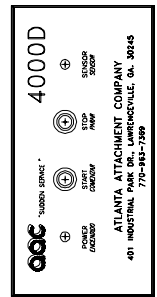
* BEAM SWITCH
EEE3JKR4M1



WIRING FOR 230 VAC SINGLE PHASE



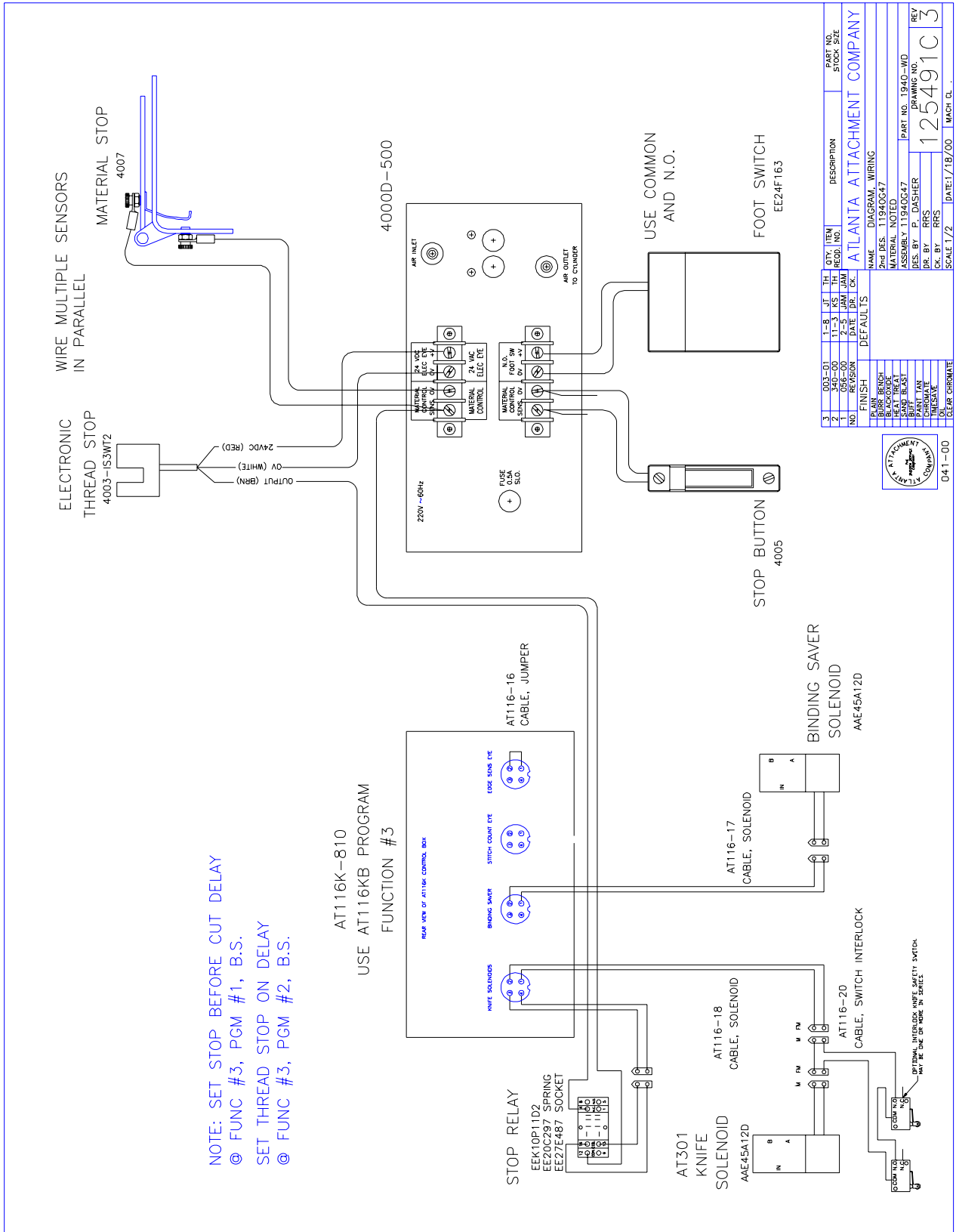
WIRING FOR 115 VAC



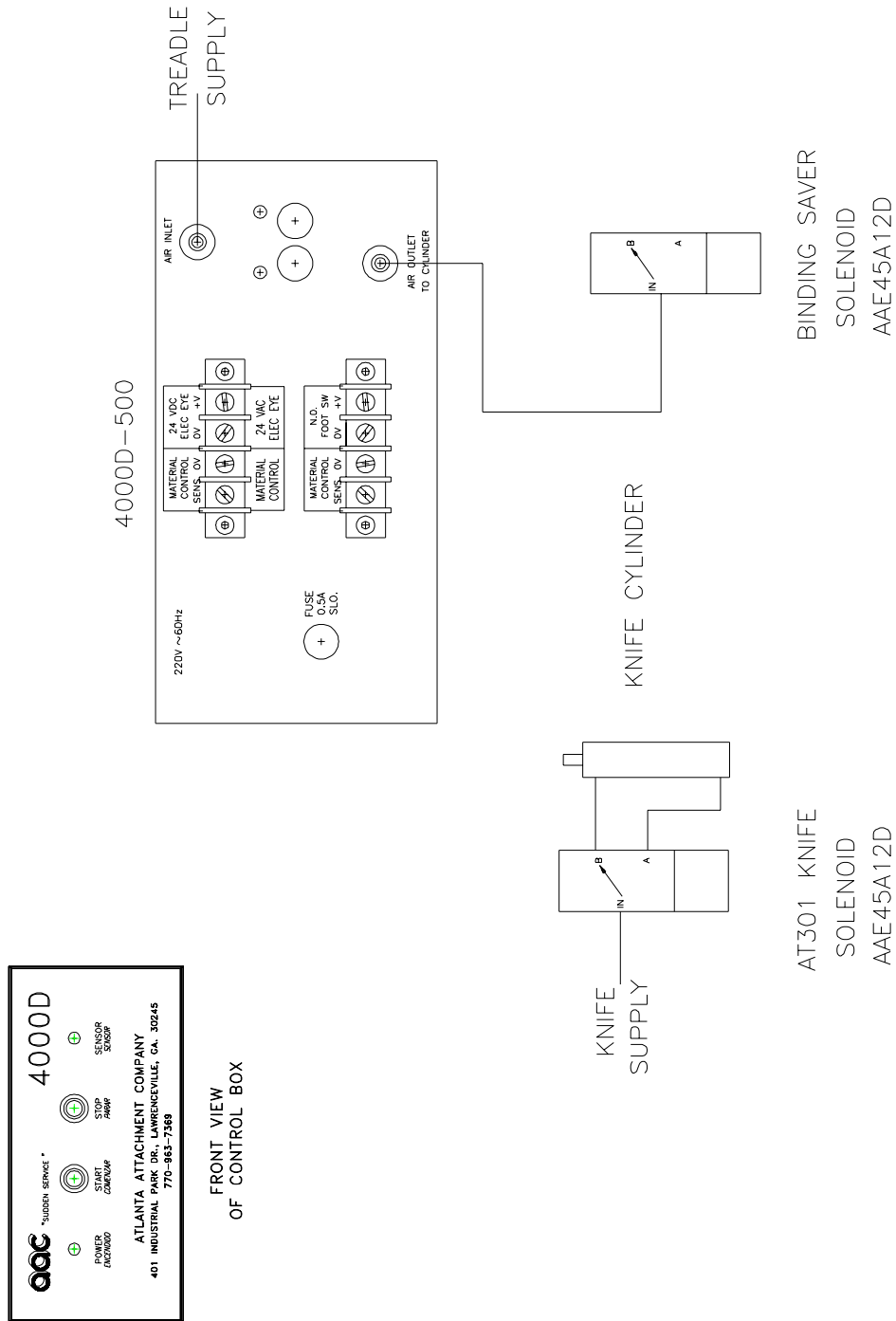
* BEAM SWITCH
EE7232D2D5
WIRES THE SAME
EXCEPT WHITE WIRE
REPLACES RED WIRE

FRONT VIEW
OF CONTROL BOX

Wiring Diagram



Pneumatic Diagram





**Innovative Technology
for the Sewn Products Industry
World Wide**

ATLANTA ATTACHMENT CO., INC.
401 Industrial Park Dr. Lawrenceville, GA 30045
(770) 963-7369 FAX (770) 963-7641
Web Site: www.atlatt.com Email: aac@atlatt.com