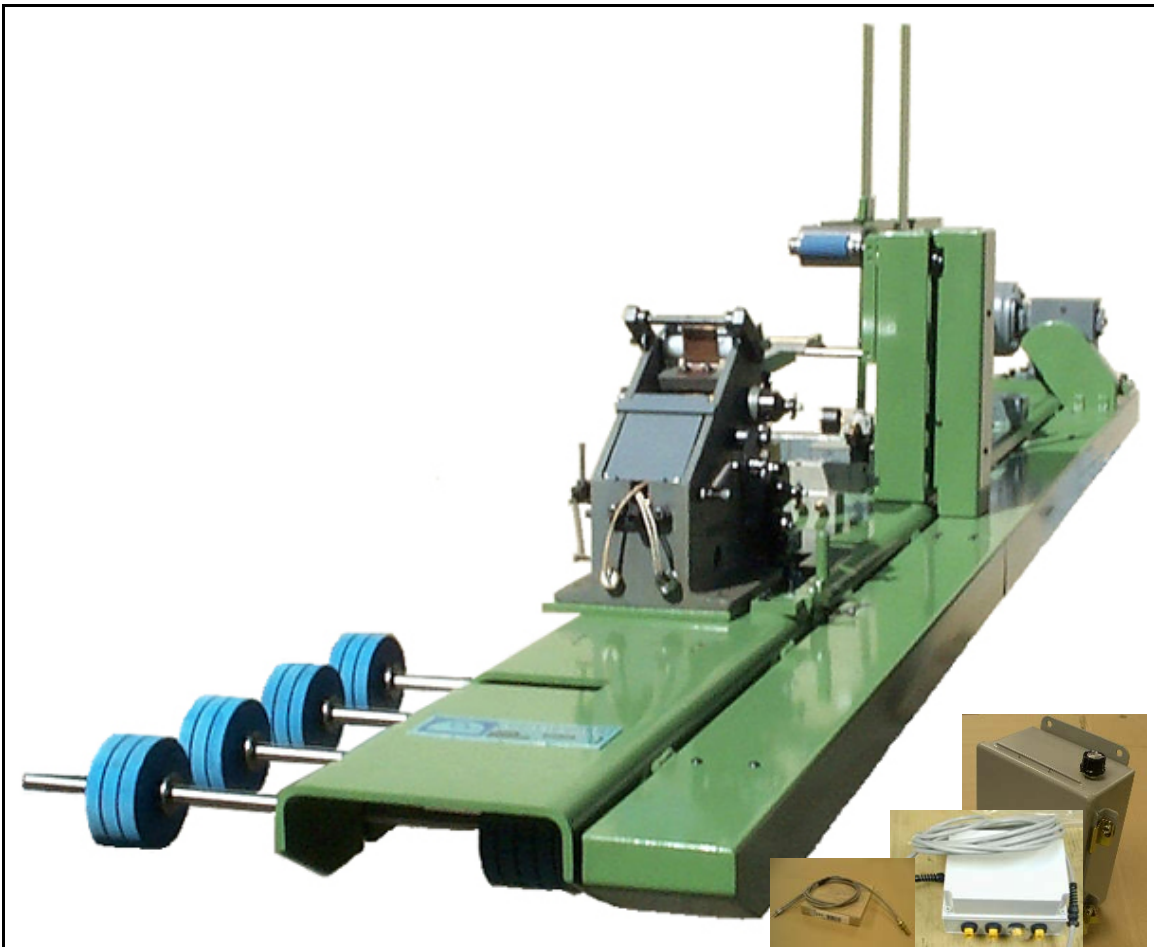




# CRITTENDEN CONVERSION CORPORATION

30380 S.E. HIGH POINT WAY  
PRESTON, WASHINGTON 98050  
1-800-755-7894

## TC300 TAPER & GLUER CONTROL SYSTEM



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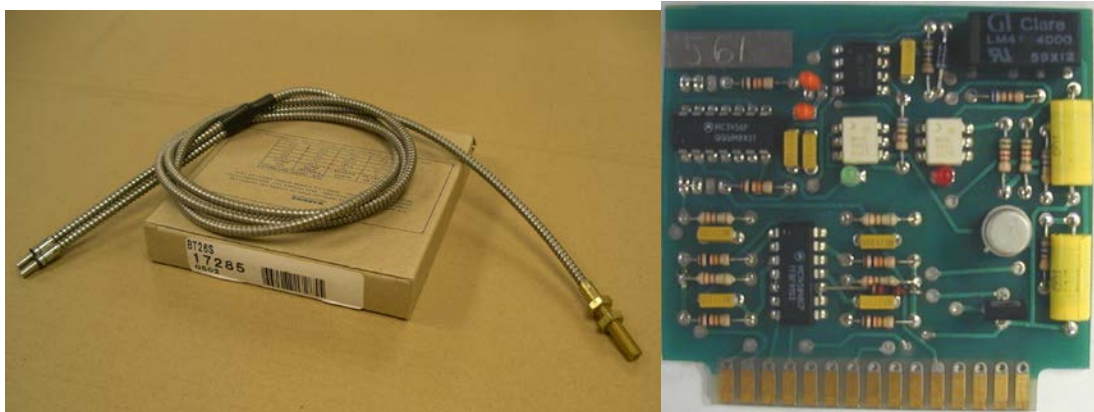
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Figure 1. Control box.



**Figure 2. Photo sensors 2 and 4 boxes.**



**Figure 3. Fiber optic cable and TC-300 PCB.**

**PROCEDURE FOR CONVERTING  
GENERAL SEMI-AUTO TAPER TO  
THE CRITTENDEN CONTROL SYSTEM**

- 1. Turn off power at disconnect.**
- 2. Remove the original feed/cutoff solenoid or air cylinder bracket along with knife arm return spring.**
- 3. Place the new 1 1/2 x 5/8 air cylinder and clevis on the top rail, positioned so that when the cylinder rod is extended and retracted, the knife arm weldment moves the same distance as when operated by the original solenoid or air cylinder. This should be about 9/16" at the point of the original plunger contact.**
- 4. With clevis clamped in position, drill and tap 3 - 3/8-16 mounting holes in rail then secure with 3/8-16 x 1 1/4 cap screws. Drill a 5/16" diameter clearance hole through the knife arm weldment and attach rod clevis with pin supplied.**
- 5. Mount the 4-way solenoid on top rail near the cylinder and original electrical junction box.**
- 6. Mount the filter-regulator-lubricator unit on frame near air supply line.**
- 7. Remove DC components from original control panel leaving the 16 terminal strip that will be used only as a junction point for wires.**
- 8. Mount the photosensor box underneath the bottom rail midway along its length.**
- 9. Mount the main control box on frame of taper somewhere near the original limit switch receptacles.**
- 10. Remove the receptacle from one of the boxes, using this as a junction box to access the wires leading up to the old DC component box.**
- 11. Locate the 117VAC line wires, the hot wire goes to terminal no. 1, the neutral or common wire goes to terminal no. 2, which should be grounded at the original transformer (see schematic). 3 wires will be needed to go from the control box up through the old DC component box on to the junction box near the head. The common wire goes from terminal no. 2 to one wire on each of the solenoid valve coils, the remaining 2 wires are connected as follows: terminal no. 10 wire goes to stop coil wire, terminal no. 7 wire goes to start coil wire.**
- 12. Connect air lines as shown, adjust main regulator pressure to 40-50 psi. Turn on main power disconnect.**

**13. Adjust the heavy-duty knife blade and air cylinder rod length as needed to attain proper tape feed and cutoff action.**

**14. The knob on top of control box is for switching between tape and glue mode (if so equipped). In position "T," the start photoeye closure causes a momentary signal to be sent to 4-way air valve start coil that shifts valve causing air cylinder to extend and start tape feed operation.**

**Closure of the stop photoeye shifts valve to stop position causing cylinder rod to retract and cut off the tape. With "2 out" type tape controls, 2 pieces of tape can be placed on each box as desired. When single taping on "2 out" systems, the 2nd set of photoeye fiberoptic sensors must be covered with the 2 red cap plugs supplied.**

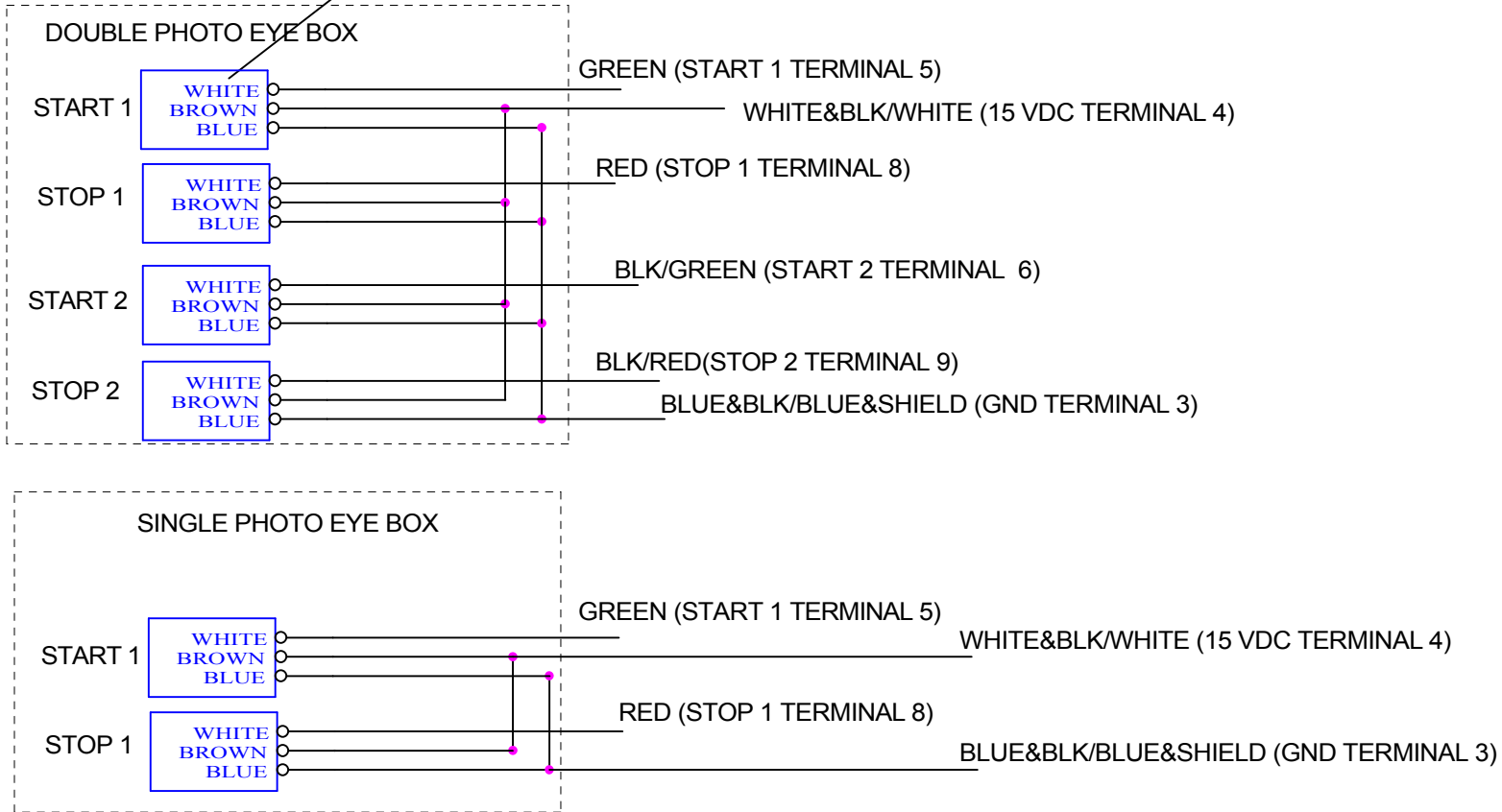
**With switch in "G" position, the tape function is disabled. When start switch is closed, an N.O. 2A relay is activated, which completes a circuit through contacts 11 and 12 sending power from customer supplied source to the glue valve. Relay remains closed until stop photoeye is activated. Terminals 11 and 12 are switched open or closed by relay, there is no power from them.**

**15. The fiberoptic cables with mounting brackets are to be mounted on the original limit switch rail.**

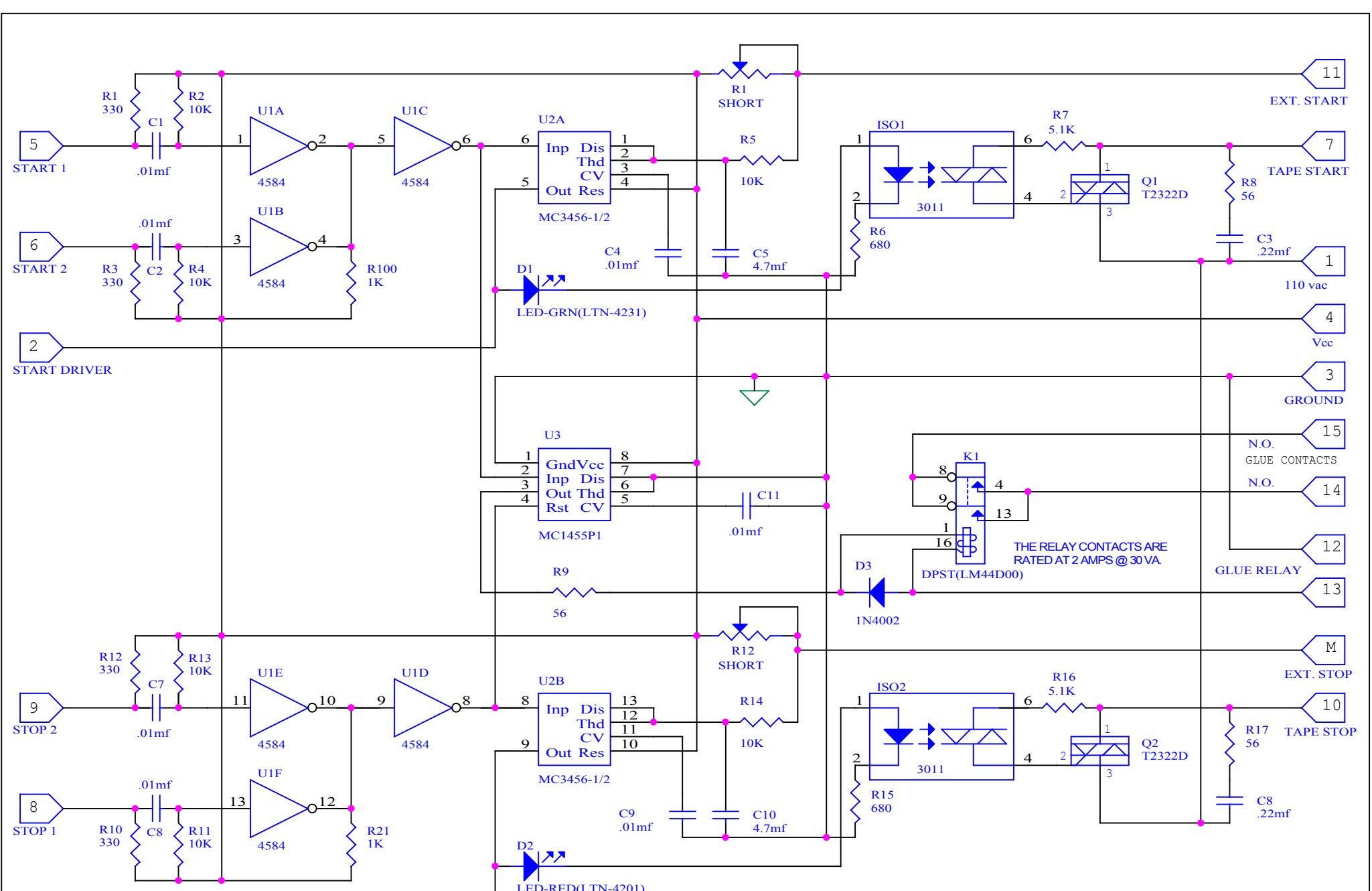
**Adjust the cable vertically in bracket so that it is approximately 1/2" below box passing through compression section. The darker the shade of box liner, the closer the end of cable will need to be to the box. The right angle brackets are used only when running very small boxes. These brackets are used to mount the cable in a horizontal position so the edge of the small boxes can be detected by the infrared beam. The photoeye adjustment dials are factory preset and should not be changed by operators or maintenance personnel.**

CARLYLE INC. P0824F18GRY E106583 24 AWG TYPE CM SHIELDED CABEL 20 ft. long  
 HOFFMAN PLASTIC ENCLOSURE CAT. NO. Q-181310PCE TYPE 4.4X.6.12.13 IP 66.67  
 LIQUID TIGHT NON-METALLIC CONNECTOR WITH SPIRAL STRAIN RELIEF "OLFLEX" PN. S2307 (BLACK) (CASCADE CONTROLS)

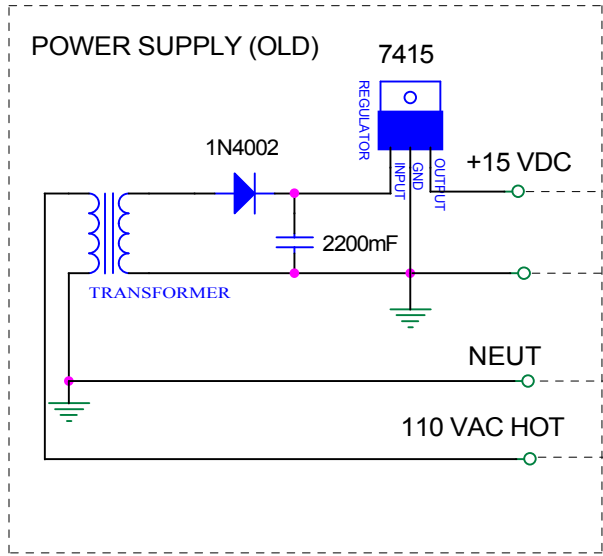
BANNER MINI-BEAM SM312F



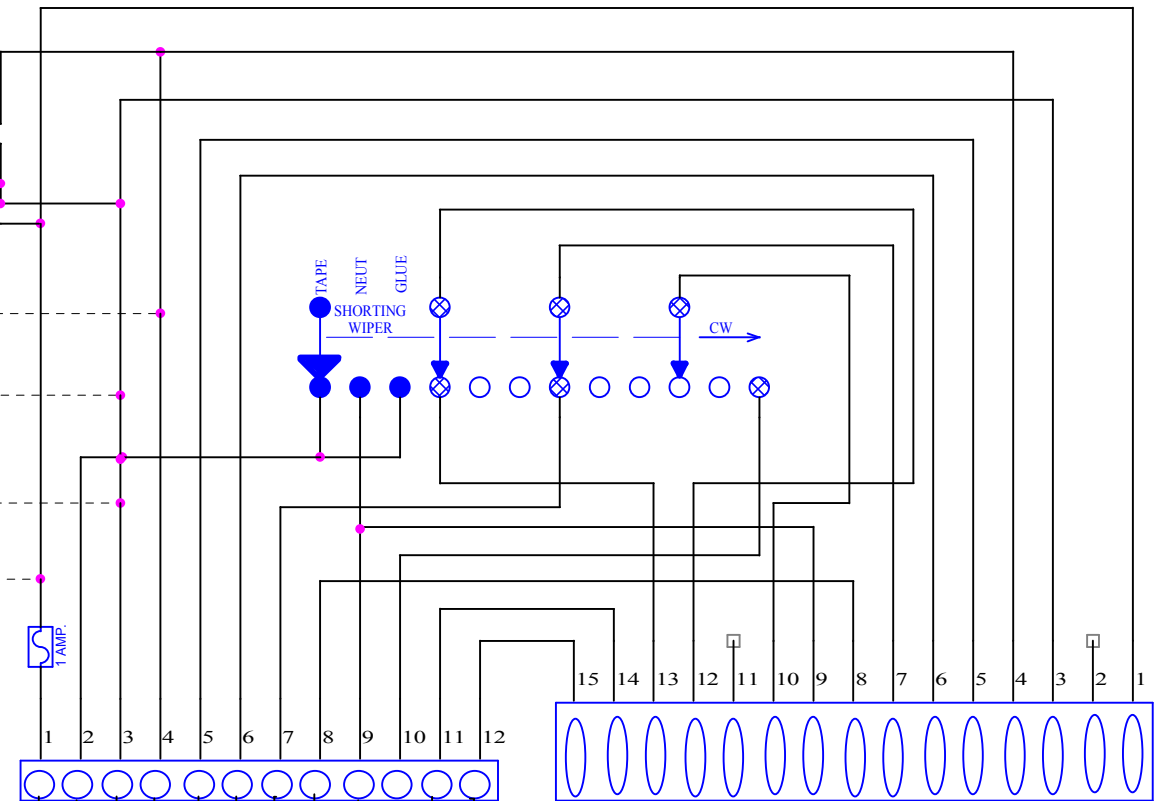
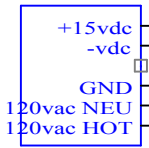
CRITTENDEN CONVERSION CORPORATION		
Title PHOTOEYE BOX WIRING DIAGRAM		
Size A	Document Number TC300.DSN	Rev A
Date: Tuesday, June 10, 2008	Sheet 3	of 3



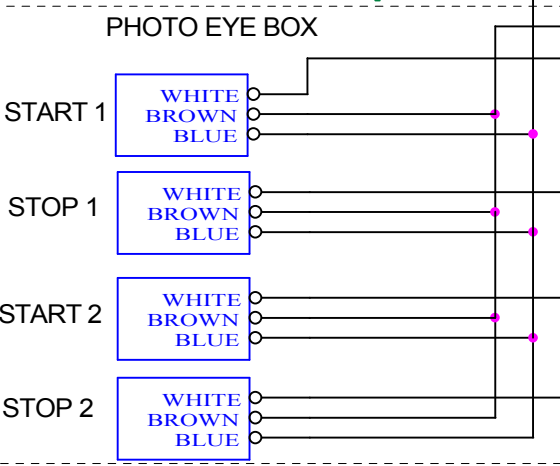
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Size <b>A</b>	Document Number <b>TC300.DSN-E813C</b>	Rev <b>A</b>
Date: Tuesday, June 10, 2008	Sheet 1	of 3



**POWER SUPPLY**

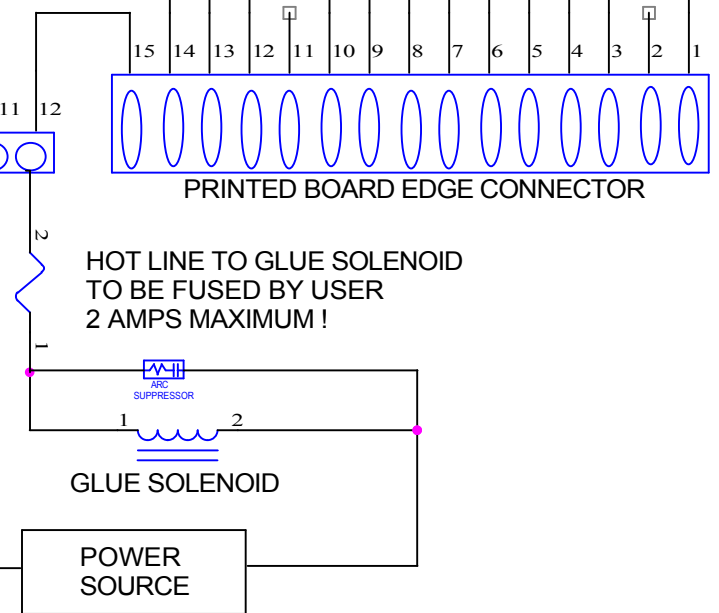
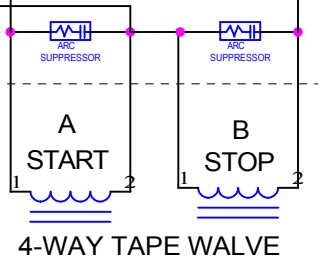


LINE IN NEEDS TO BE  
CONVENTIONAL 110 VAC  
LINE HOT 110 VAC  
LINE NEUT  
GND



BLUE&BLK/BLUE&SHIELD  
WHITE&BLK/WHITE  
GREEN  
RED  
BLK/GREEN  
BLK/RED

ARC SUPPRESSORS  
(QUENCH ARC)  
ARE MOUNTED  
ON COIL LEADS  
AT VALVE !

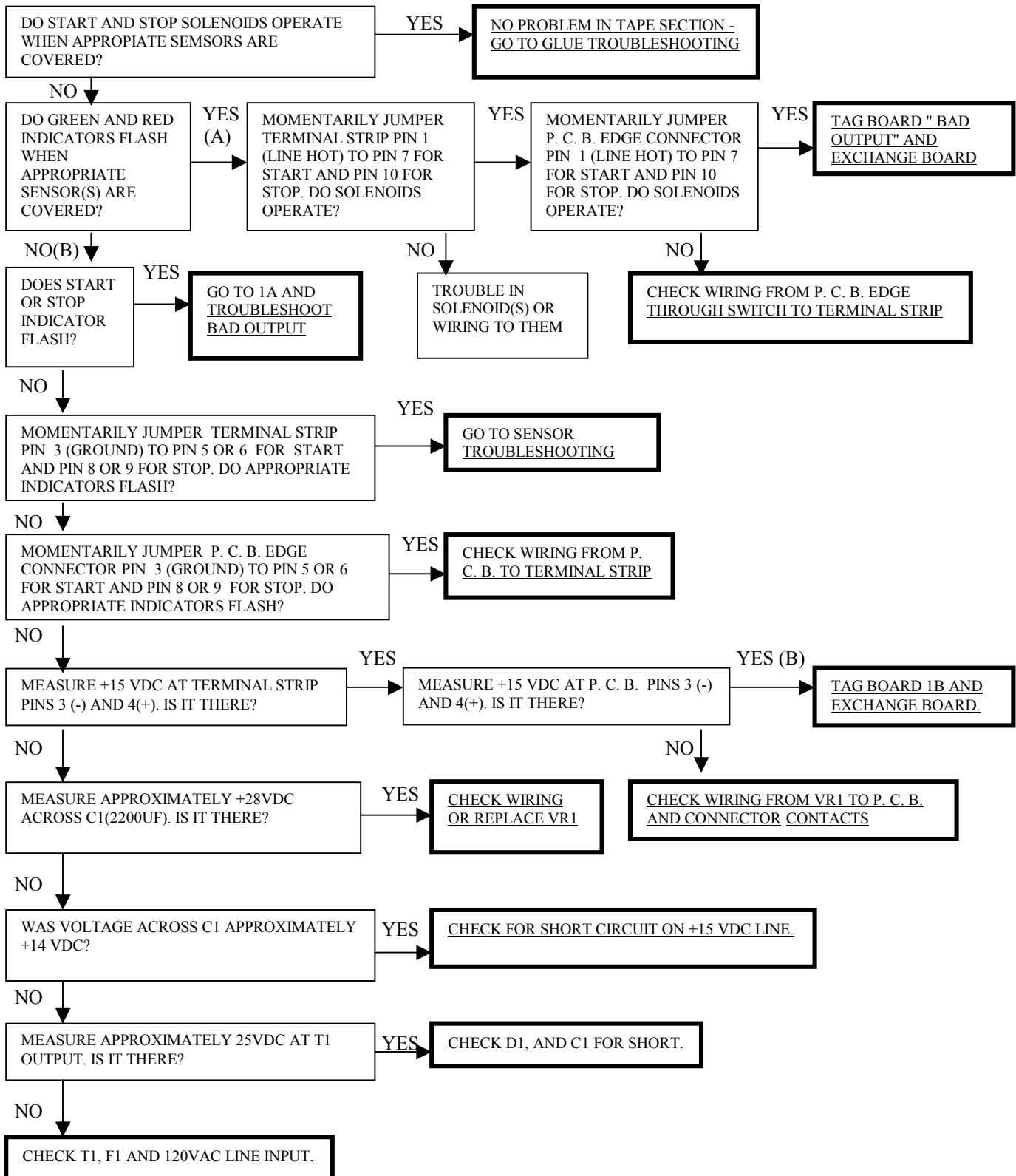


CRITTENDEN CONVERSION CORPORATION		
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Size A	Document Number TC300.DSN	Rev A
Date:	Tuesday, June 10, 2008	Sheet 2 of 3

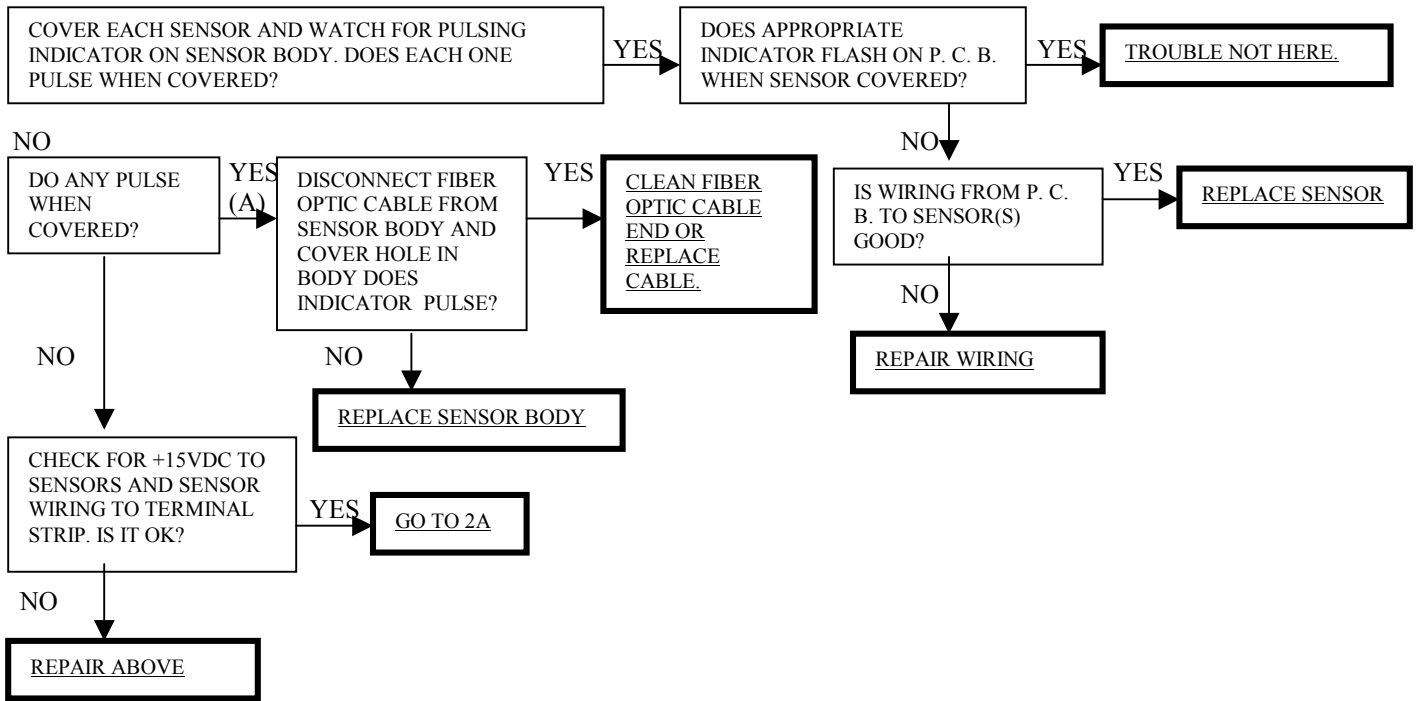


## TC - 300 TROUBLESHOOTING

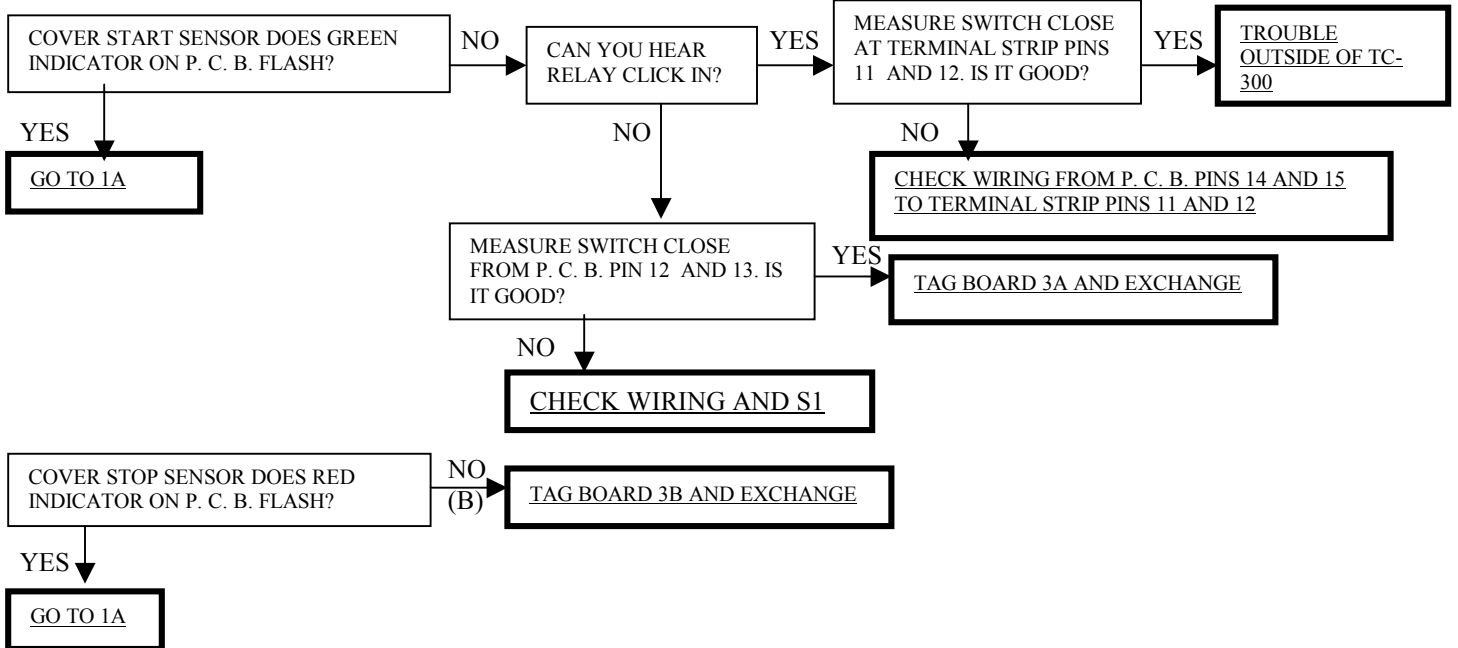
### 1) BOX AND BOARD TROUBLESHOOTING (TAPE/GLUE SWITCH SET TO TAPE (LIGHT OFF))



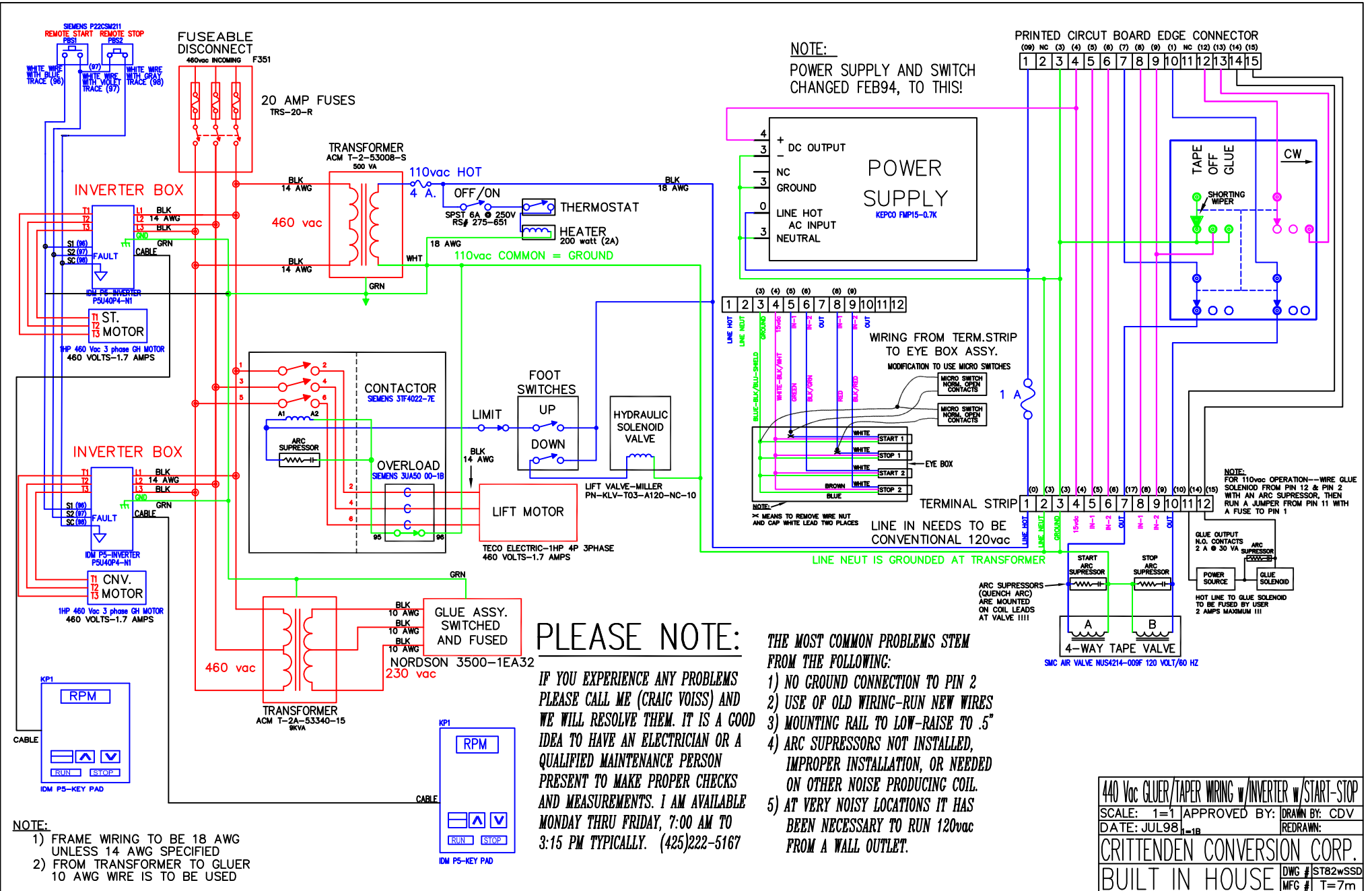
2) SENSOR TROUBLESHOOTING - (NOTE: SENSOR SENSITIVITY IS ADJUSTABLE, PLEASE SEE DATA SHEET).



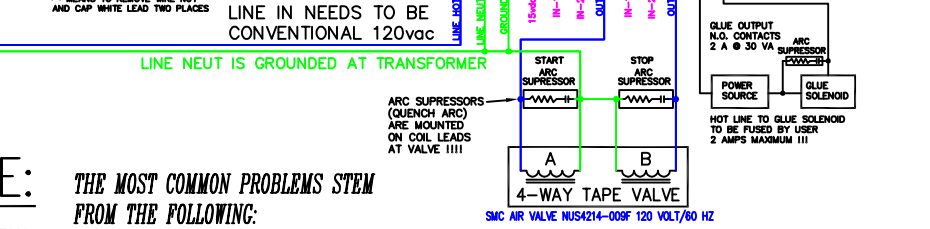
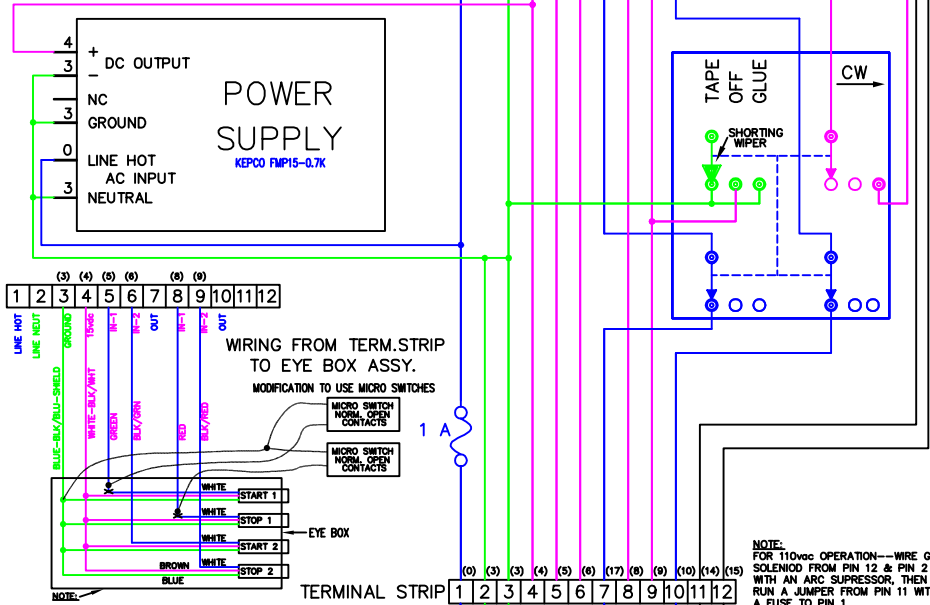
3) GLUE TROUBLESHOOTING (SWITCH TAPE/GLUE SWITCH TO GLUE (LIGHT ON))



4) IF YOU ARE STILL HAVING PROBLEMS PLEASE CALL VITALIY @ CRITTENDEN (425) 222-5167. OR CHECK OUR WEB SITE WWW.WPORT.COM/~CRITT1/.



**NOTE:**  
POWER SUPPLY AND SWITCH  
CHANGED FEB94, TO THIS!



**PLEASE NOTE:**

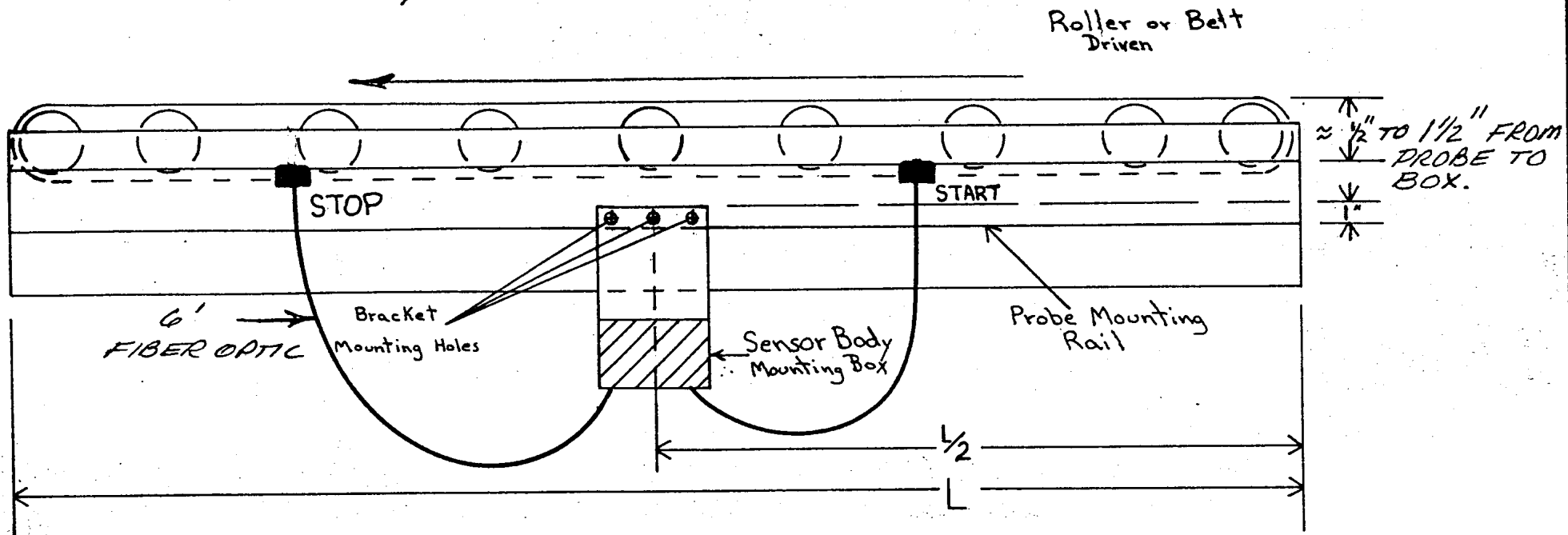
IF YOU EXPERIENCE ANY PROBLEMS  
PLEASE CALL ME (CRAIG VOISS) AND  
WE WILL RESOLVE THEM. IT IS A GOOD  
IDEA TO HAVE AN ELECTRICIAN OR A  
QUALIFIED MAINTENANCE PERSON  
PRESENT TO MAKE PROPER CHECKS  
AND MEASUREMENTS. I AM AVAILABLE  
MONDAY THRU FRIDAY, 7:00 AM TO  
3:15 PM TYPICALLY. (425)222-5167

- THE MOST COMMON PROBLEMS STEM  
FROM THE FOLLOWING:**
- 1) NO GROUND CONNECTION TO PIN 2
  - 2) USE OF OLD WIRING—RUN NEW WIRES
  - 3) MOUNTING RAIL TO LOW—RAISE TO 5"
  - 4) ARC SUPPRESSORS NOT INSTALLED,  
IMPROPER INSTALLATION, OR NEEDED  
ON OTHER NOISE PRODUCING COIL.
  - 5) AT VERY NOISY LOCATIONS IT HAS  
BEEN NECESSARY TO RUN 120vac  
FROM A WALL OUTLET.

- NOTE:**
- 1) FRAME WIRING TO BE 18 AWG  
UNLESS 14 AWG SPECIFIED
  - 2) FROM TRANSFORMER TO GLUER  
10 AWG WIRE IS TO BE USED

440 Vac GLUER/TAPER WIRING w/INVERTER w/START-STOP  
SCALE: 1=1 APPROVED BY: DRAWN BY: CDV  
DATE: JUL98 REDRAWN:  
CRITTENDEN CONVERSION CORP.  
BUILT IN HOUSE DWG # ST82wSSD  
MFG # T=7m

Compression Section of Taper  
TYPICAL BOTTOM RAIL



NOTES:

1. PROBE MOUNTING RAIL MAY NEED TO BE SPACED OUT FROM ITS ORIGINAL POSITION IN ORDER FOR PROBES TO CLEAR BEARING COLLARS.
2. RAISE RAIL IF NECESSARY TO ATTAIN 1/2" TO 1 1/2" DISTANCE FROM PROBE TO BOX. A BOX WITH DARK PRINT IN THE SENSING AREA WILL NOT ACTIVATE THE SENSORS IF PROBES ARE MOUNTED TOO LOW.
3. IF GUARDS, ETC. ARE ACTIVATING THE SENSORS, CONTACT CRITTENDEN FOR INSTRUCTIONS ON ADJUSTING THE SENSITIVITY.

TC 300 Probe Mounting		
SCALE: None Reference Only	APPROVED BY:	DRAWN BY: C. VOISS
DATE: JUN 87		REVISED
Crittenden Conversion Corp.		
		DRAWING NUMBER