

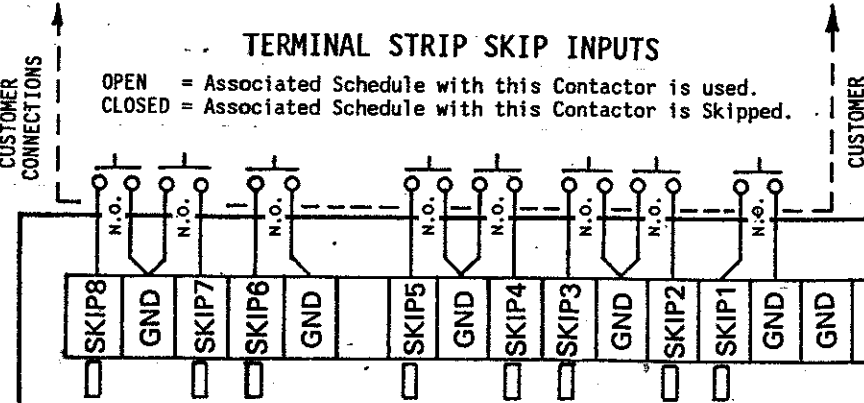
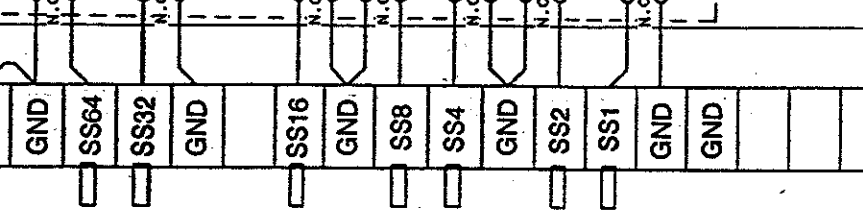
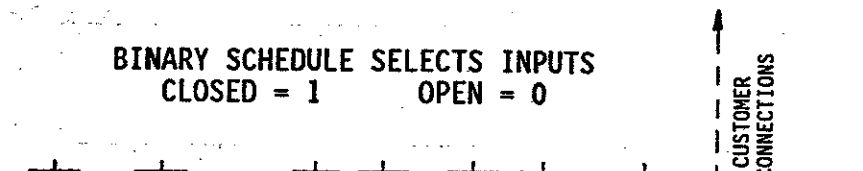
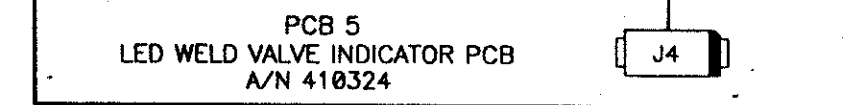
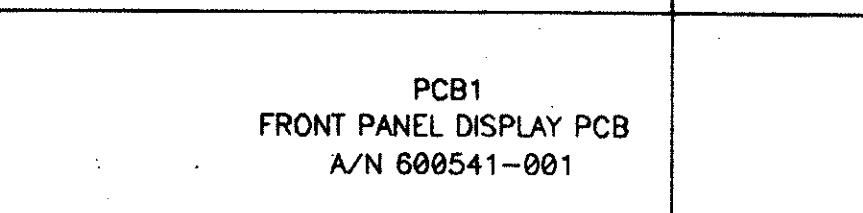
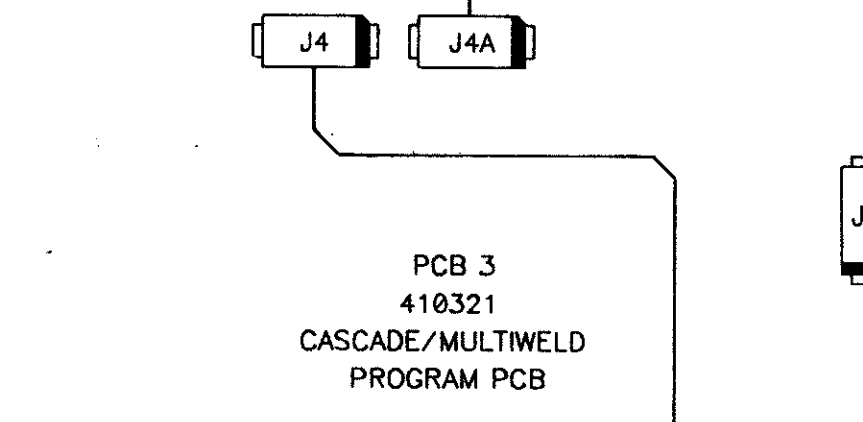
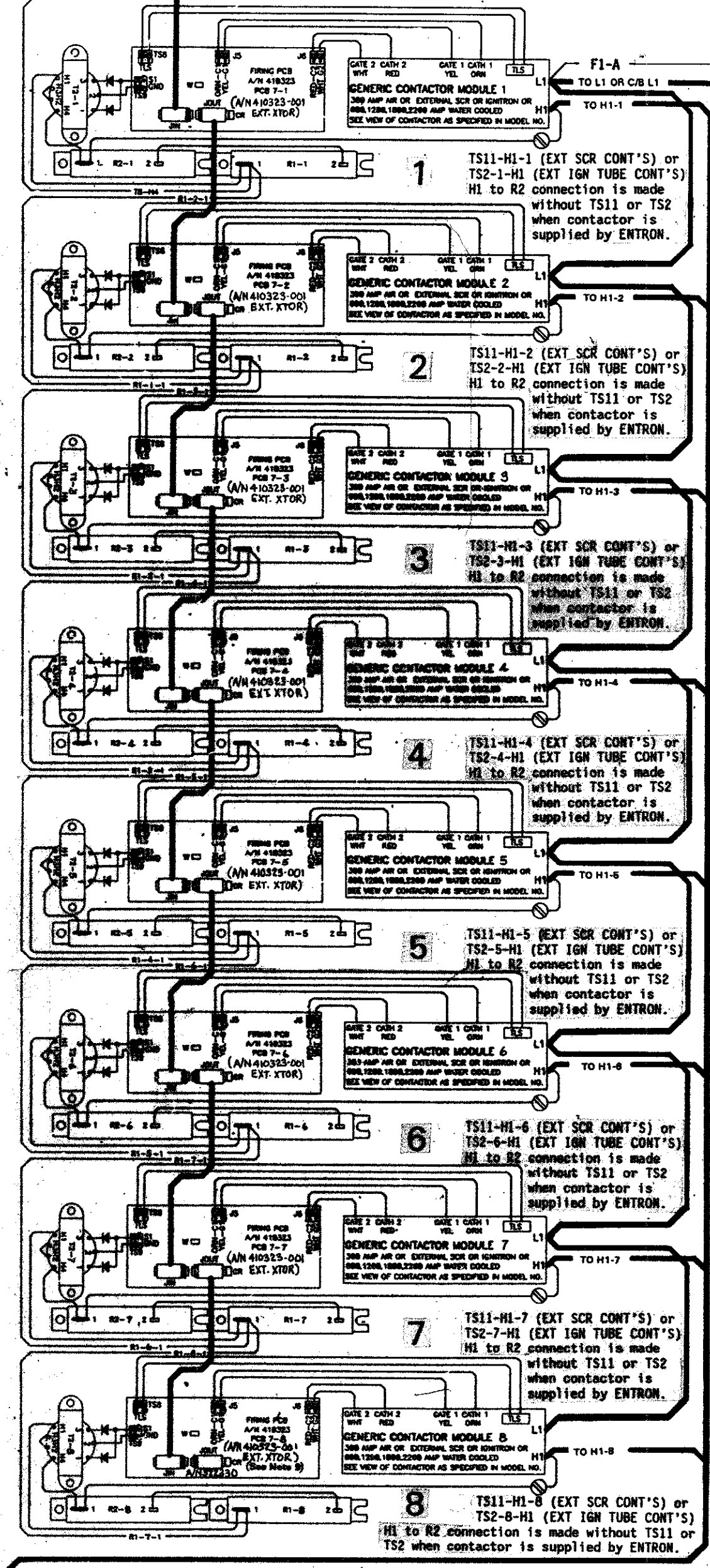
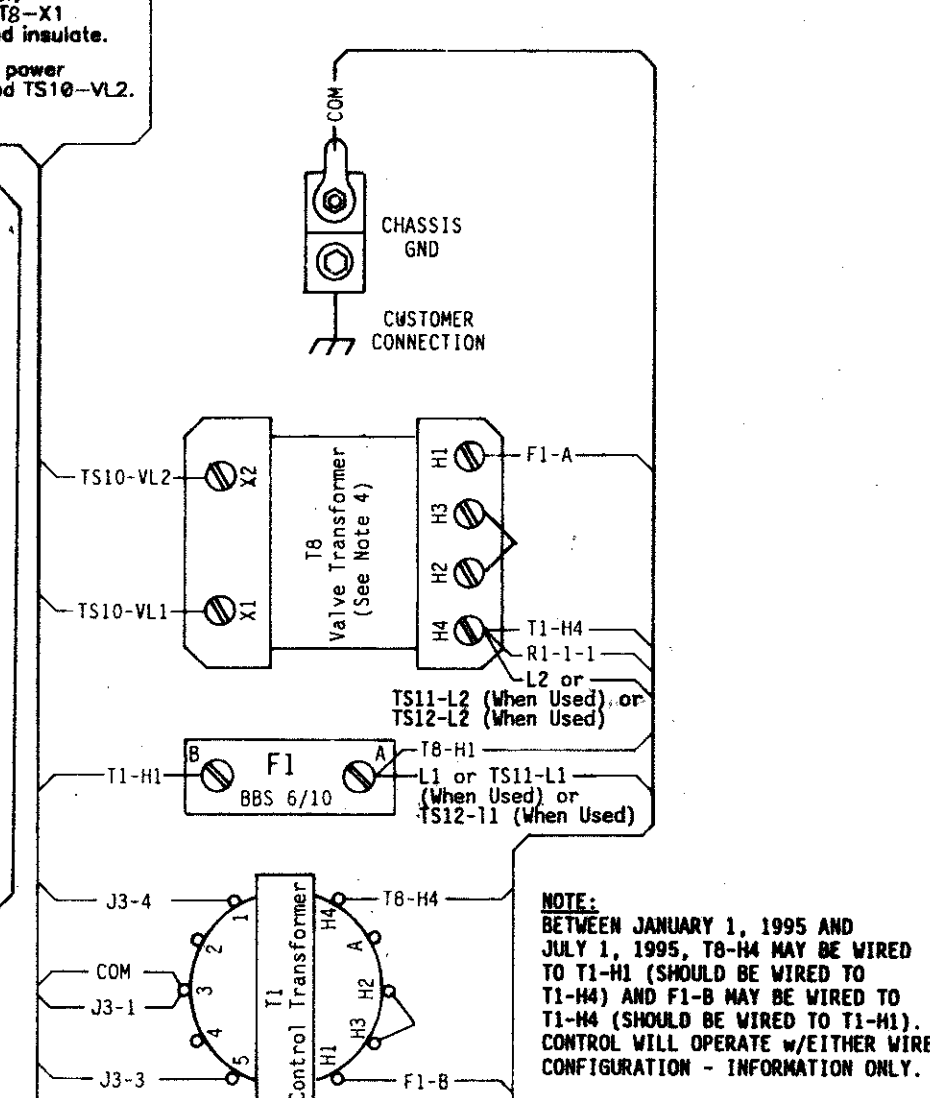
VOLTAGES PRESENT IN THIS CONTROL CAN CAUSE SEVERE OR FATAL INJURIES.
NOTE: EVEN THOUGH SUPPLY POWER TO THIS UNIT HAS BEEN DISCONNECTED, THERE MAY BE VOLTAGES IN THIS CONTROL ORIGINATING FROM OTHER SOURCES.
FOR ALL VOLTAGE POTENTIAL TO BE REMOVED FROM THIS CONTROL, POWER MUST BE REMOVED FROM ALL EXTERNAL CONTROL CIRCUITS CONNECTED TO TERMINALS IN THIS CABINET.

QTY.	DESIG.	PART NO.	DESCRIPTION
1	600558	600558	ASSEM. DIAL PLATE, EN1000, CONSISTING OF-
1	PCB1	600541-001	ASSEM. SWITCH, SEQUENCE CONTROL & DISPLAY BOARD
1	SW1	540248	ILLUSTRATED PANEL, DIAL PLATE, EN1000, CASC/MULTI-
2		515094	PANEL, DISPLAY WINDOW, EN1000
2		515104	PANEL, DISPLAY WINDOW, RED FILTR, EN1000
1		565003	HOLE PLUG, 3/4" DIA., BLACK
1	PCB5	410324	ASSEM. PCB, CONTACTOR/VALVE, 1-8, LED INDICATOR
1	PCB3	410321	PROGRAM BOARD, EN1000, CASCADE/MULTI-VALVE

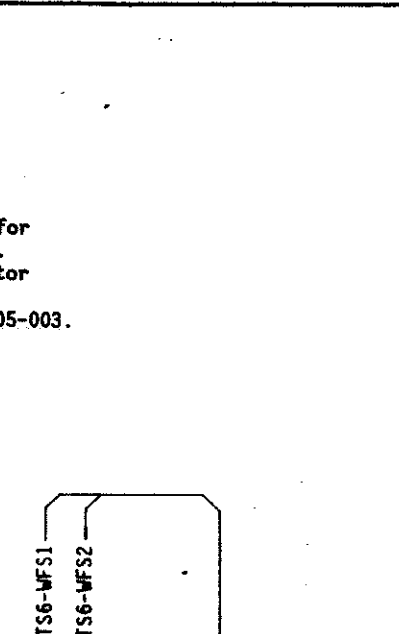
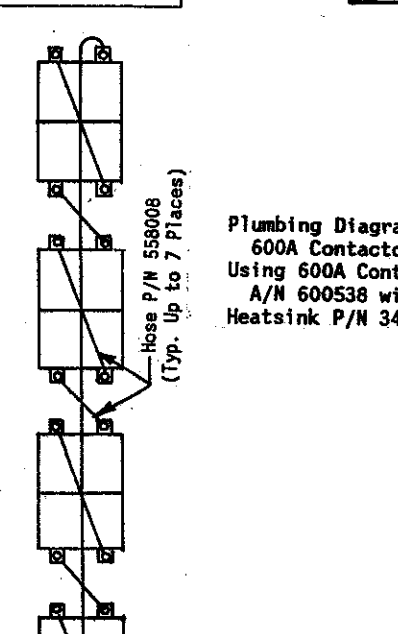
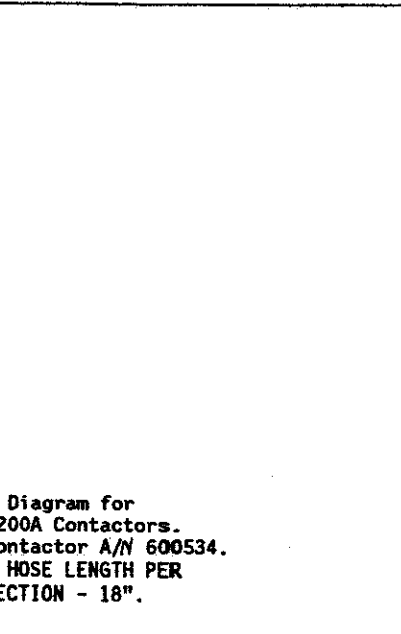
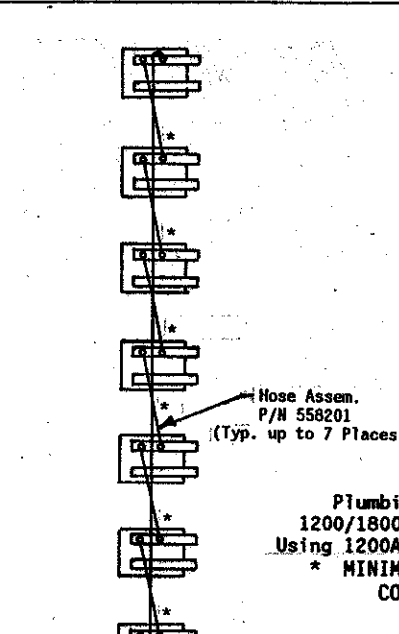
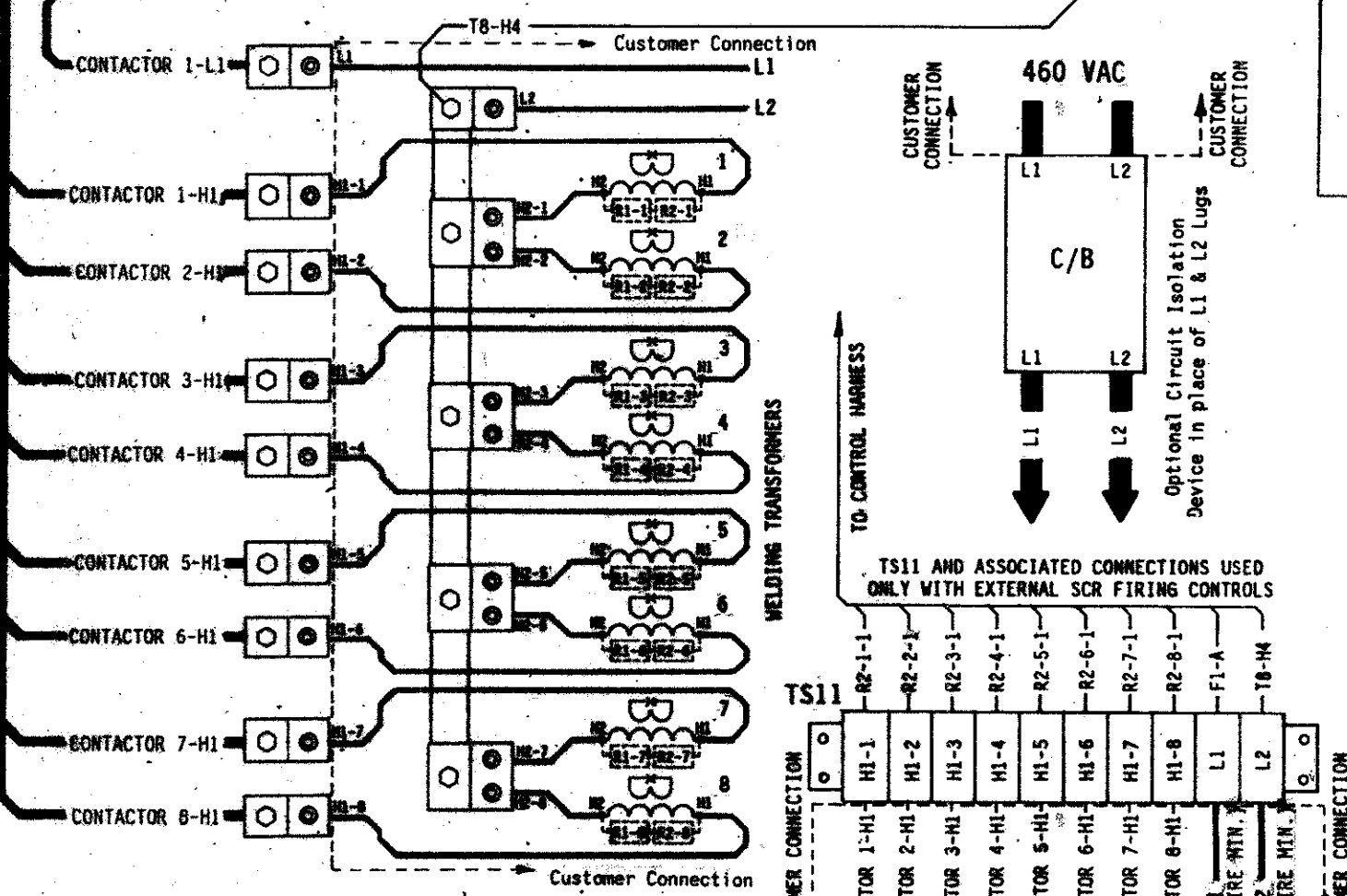
CAUTION
Control Shipped Wired for 460 VAC
Unless otherwise specified.

CAUTION
DO NOT OPERATE WITHOUT WATER ON
POWER ON WITHOUT WATER FLOW MAY CAUSE DAMAGE TO CONTROL. TURN POWER OFF WHEN CONTROL IS NOT IN USE.

FOR SERVICE ON THIS CONTROL CONTACT YOUR MACHINE DEALER
ENTRON CONTROLS INC.
DIRECTLY: (630) 882-8800
465 EAST RANDY ROAD
CAROL STREAM, IL 60188
FAX # (630) 882-3374



- NOTES: 1. It is recommended that control wiring (i.e.: initiation, pressure switch, etc.) be physically separated from the high voltage wiring (115 volts or higher).
- 2. For Single Stage Pilot Operation - Connect pilot switch to TS1-FS3 & TS1-GND. No jumpers required across TS1-FS1 & TS1-GND. For Dual Count/Dual Current (Dual Weld/Dual Heat) or TRIPLE COUNT/TRIPLE CURRENT (Triple Weld/Triple Heat) or External Schedule Selection - SEE MANUAL.
- 3. 300A, 600A, 1200A, 1800A, & 2200A CONTACTORS: ENTRON supplies Temperature Limit Switch (TLS) P/N 300202 and provides connections to TS8 on supplied PCB Firing Board(s). NOTE: TLS SCR will open at temperatures greater than or equal to 150°F. EXTERNAL ION TUBE & EXTERNAL SCR CONTACTORS: When used, connect customer provided Normally Closed (N.C.) Temperature Limit Switch (TLS) across TS8 on ENTRON supplied PCB Firing Board(s). Contactor 1 TLS connects to PCB7-1, Contactor 2 TLS connects to PCB7-2, etc.
- 4. When external valve power is supplied to the control. Remove and insulate leads TS10-VL1 & TS10-VL2 on the Terminal Strip Board (PCB4), (from T8-X1 & T8-X2). Connect external AC power supply (24-240 VAC) to TS10-VL1 & TS10-VL2.
- 5. When Optional Program Lockout is specified by customer. Add Switch P/N 600531-001 and Escutcheon P/N 460128 & Remove Plug P/N 565003.
- 6. When Optional Water Flow Switch (WFS) is required, add Terminal Strip TSS (P/N 335017) and wire as shown. Remove jumper between TS1-WFS1/AUX1 & TS1-GND. NOTE: WFS will open with flows less than .75 GPM.
- 7. When Optional Circuit Isolation Device is required, list P/N and size of Circuit Isolation Device, and appropriate cabinet A/N.
- 8. This drawing is for all EN1000 Cascade & Multi-Valve Controls 1-8 Cascade, with 8 Valves. Please Note, Electrical Connections in the Contactor Section "Daisy Chain" from the first contactor down. In the Parts List, parts with varying quantities listed, correspond to different numbers of cascade.
- 9. The Termination Plug, A/N 322330 will ALWAYS be located in the OUT socket of the last Firing Board.



CASCADE #	300A REAR PANEL	CAB.	600/1200A REAR PANEL	CAB.	HOSE LENGTH P/N 900045	1800A REAR PANEL	CAB.	HOSE LENGTH P/N 900045	EXT. SCR REAR PANEL	CAB.	EXT. ION REAR PANEL	CAB.	2200A REAR PANEL	CAB.	HOSE LENGTH P/N 900045
1	D/T	510247-001	D/T	45"	510247-001	D/T	494423	47"	494141	D/T	494141	D/T	510247-001	D/T	63"
2	D/T	510247-001	D/T	46"	494422	D/T	494141	47"	494141	D/T	494141	D/T	494633	H	
3	D/T	494232	H	46"	494422	L	494141	47"	494141	D/T	494141	D/T	494644	H	
4	D/T	494243	H	46"	494422	L	494141	47"	494141	D/T	494141	D/T	494655	H	
5	D/T	494254	H	46"	494422	L	494141	47"	494141	D/T	494141	D/T	494666	H	
6	D/T	494265	H	46"	494422	L	494141	47"	494141	D/T	494141	D/T	494677	H	
7	D/T	494276	H	46"	494422	L	494141	47"	494141	D/T	494141	D/T	494688	H	
8	D/T	494287	H	46"	494422	L	494141	47"	494141	D/T	494141	D/T	494699	H	
9	D/T	494298	H	46"	494422	L	494141	47"	494141	D/T	494141	D/T	494710	H	

REV	AUTH	DESCRIPTION	DATE	CHK BY	DATE
1		ORIGINAL RELEASE			
2					
3					
4					

ENTRON CONTROLS INC. logo and product information.

SOLE SOURCE APPROVED BY: [Signature]

DATE: 3-22-00

DECISIONS: 1/04

FRACTIONS: 1/64

DATE: []

REV	AUTH	DESCRIPTION	DATE	CHK BY	DATE
1		WIRING DIAGRAM, EN1000/S99/TSS-SERIES, CASCADE/MULTI-VALVE CONTROL, 460 VAC OPERATION, 1-8 CONTACTORS/8 VALVE OUTPUT CIRCUITS			
2					
3					

ENTRON 470046