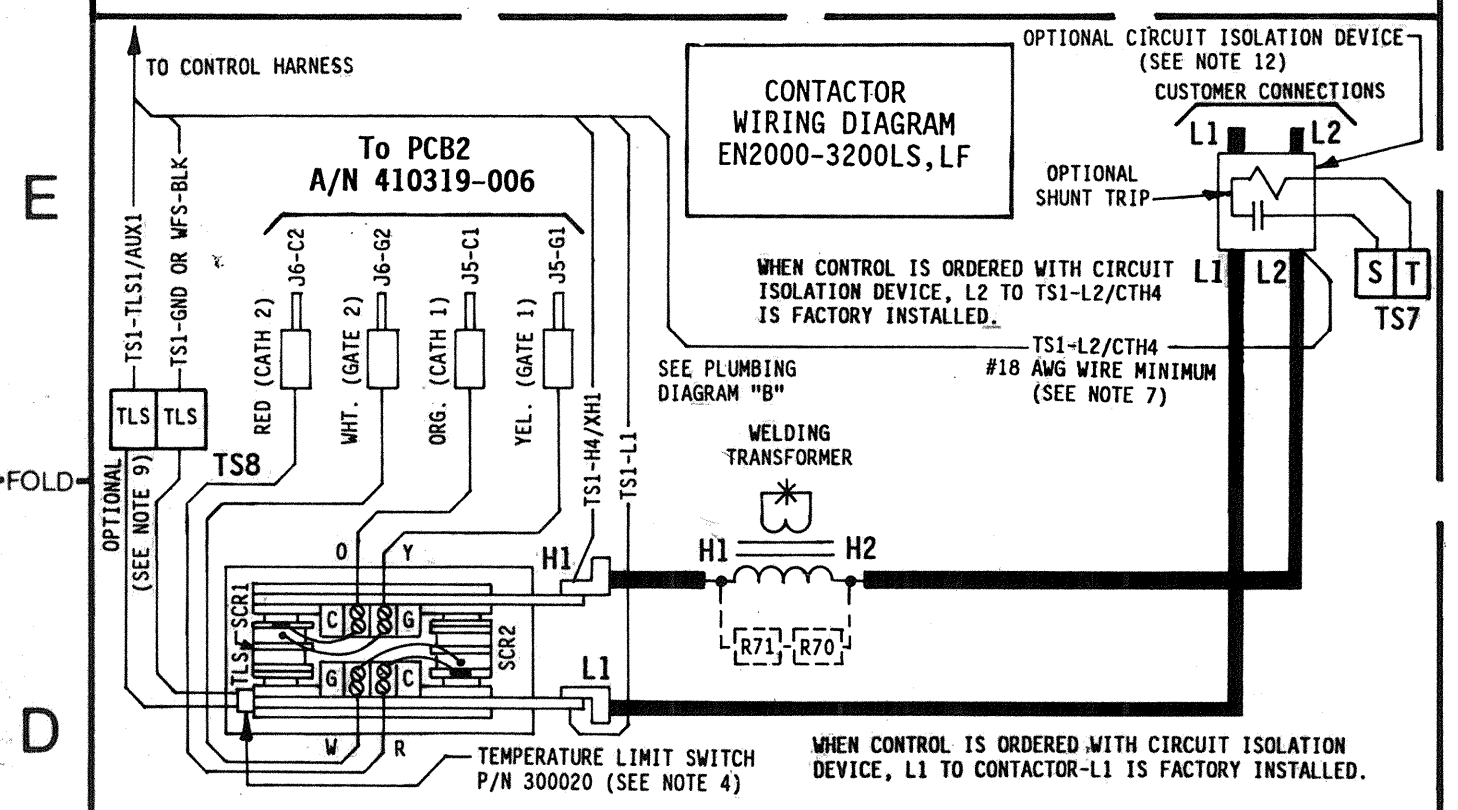
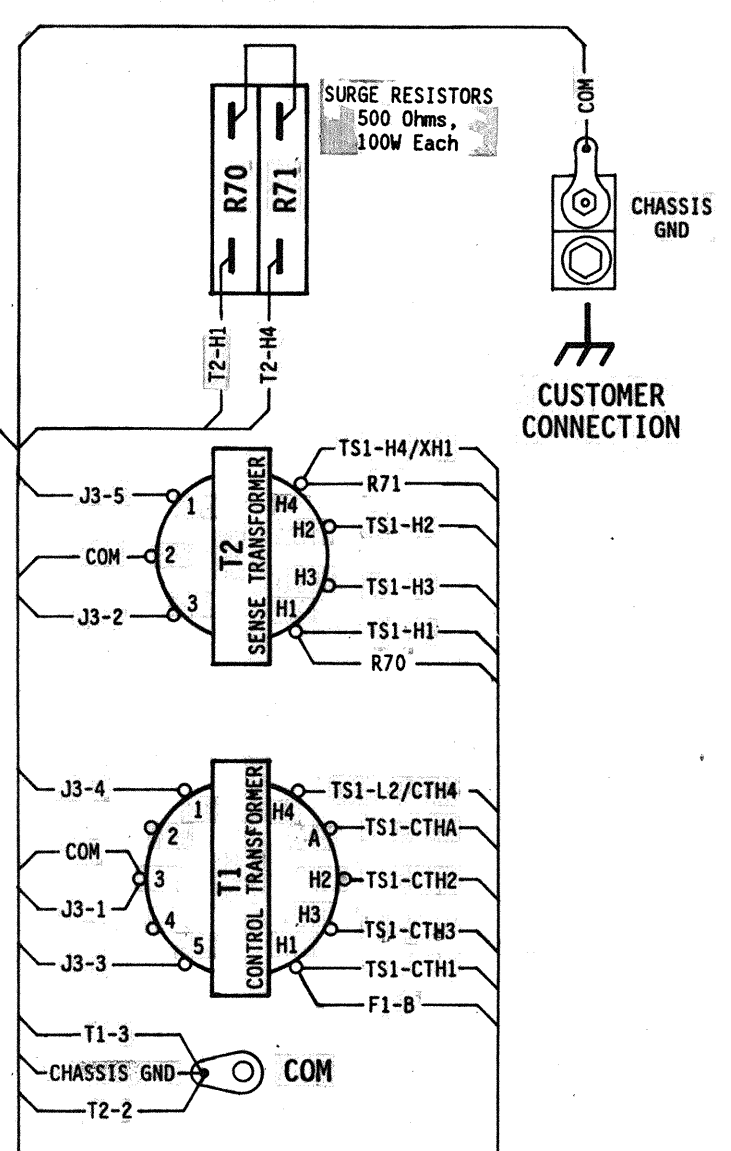
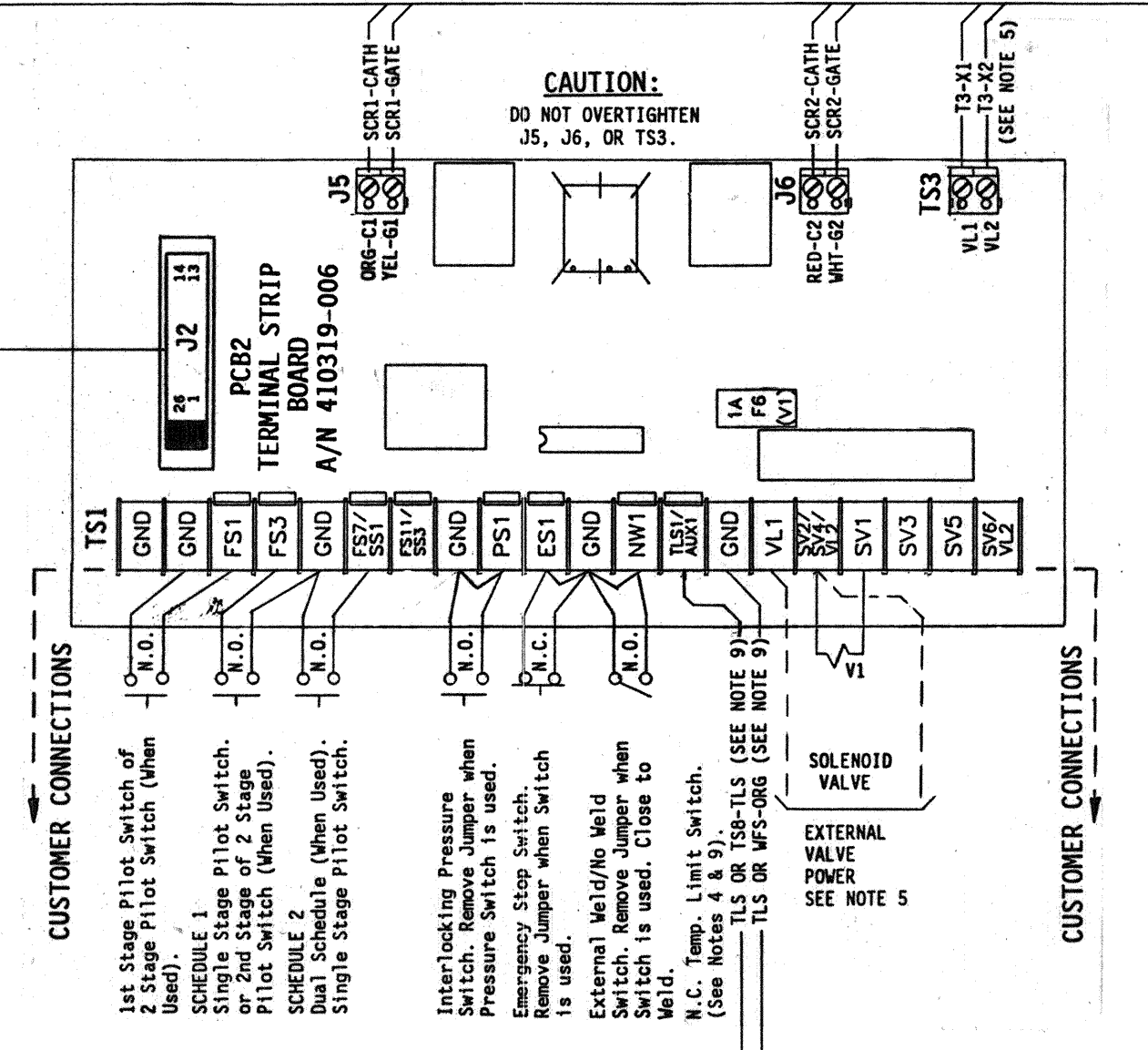
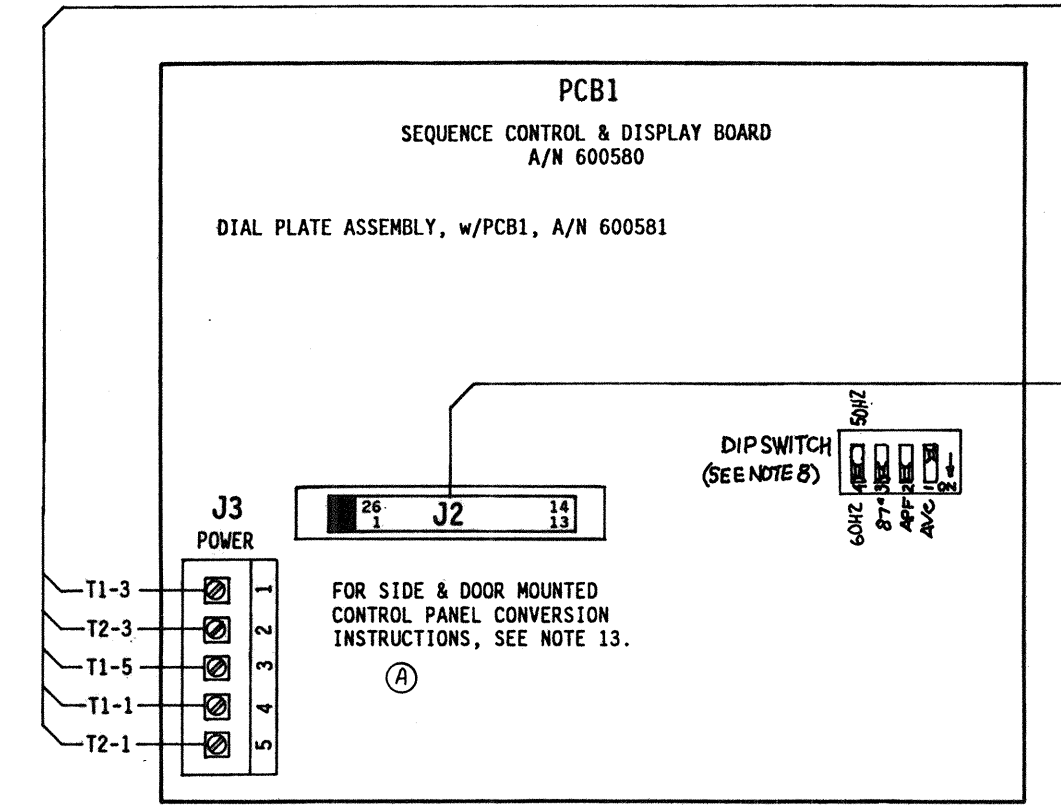


CAUTION - READ MANUAL & ALL NOTES BEFORE INSTALLING OR OPERATING CONTROL. SEE NOTE 1.

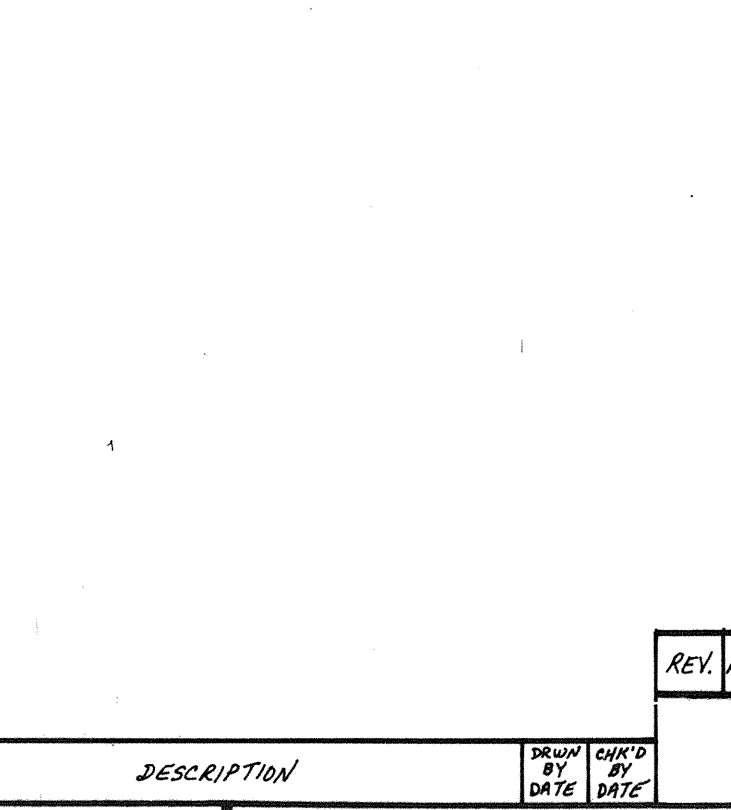
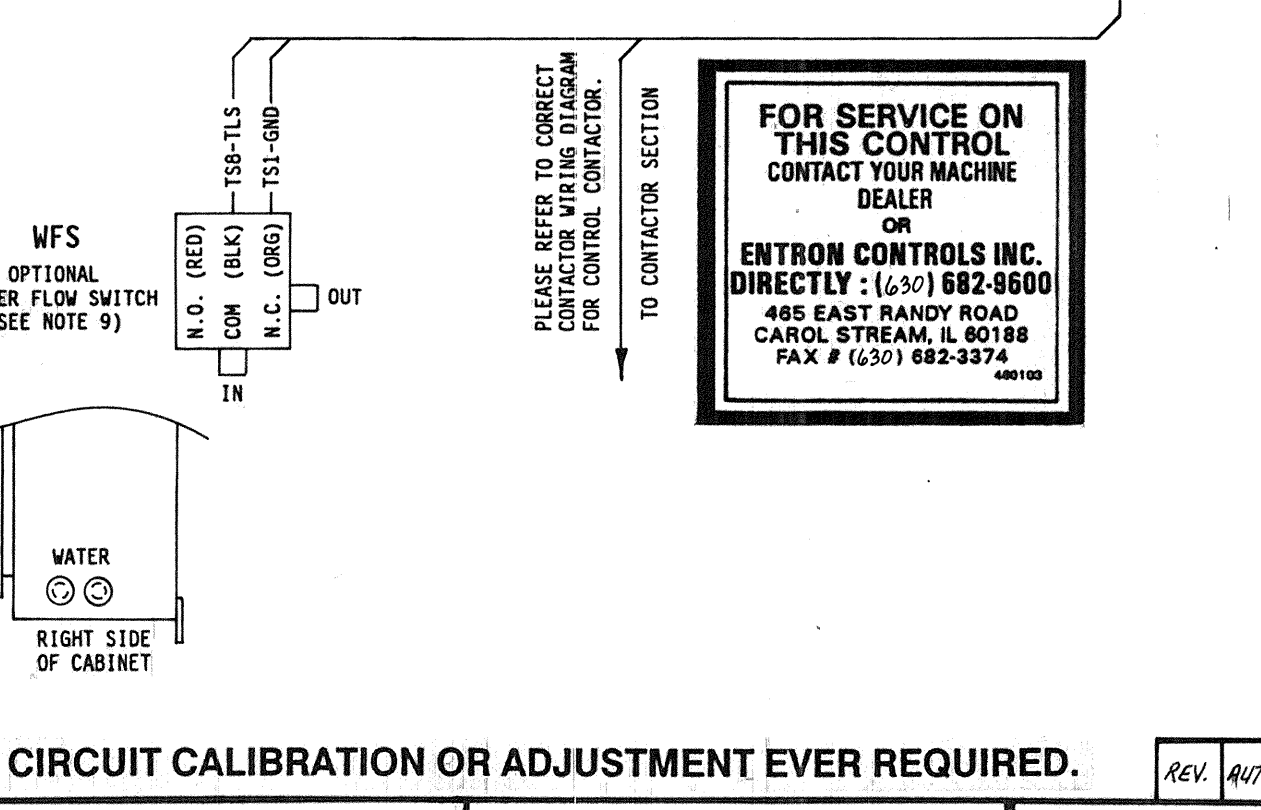
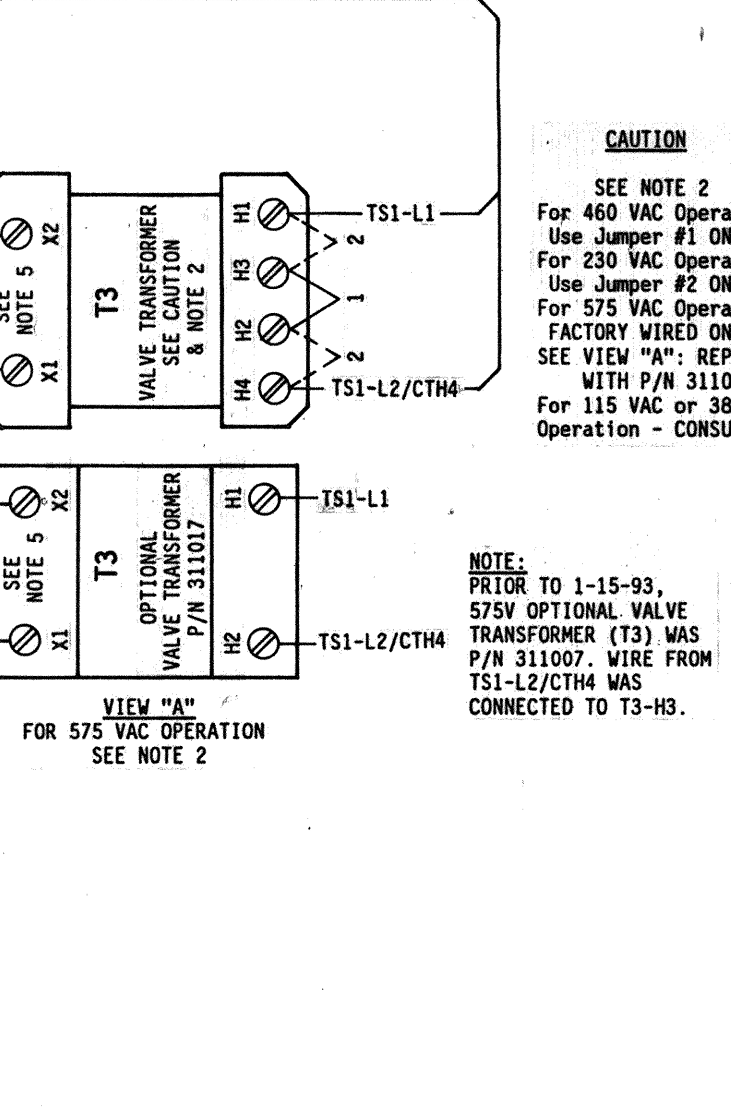
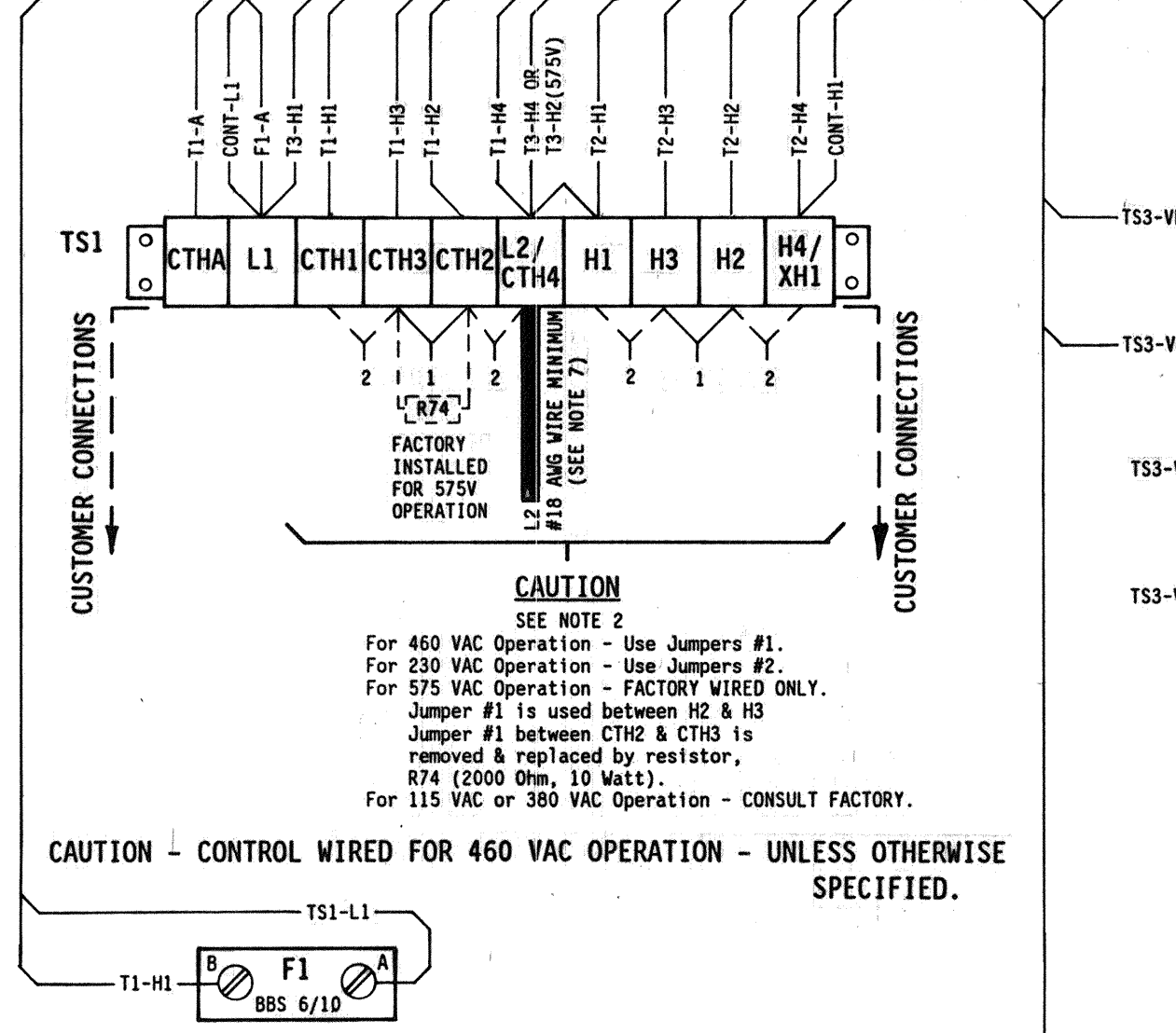
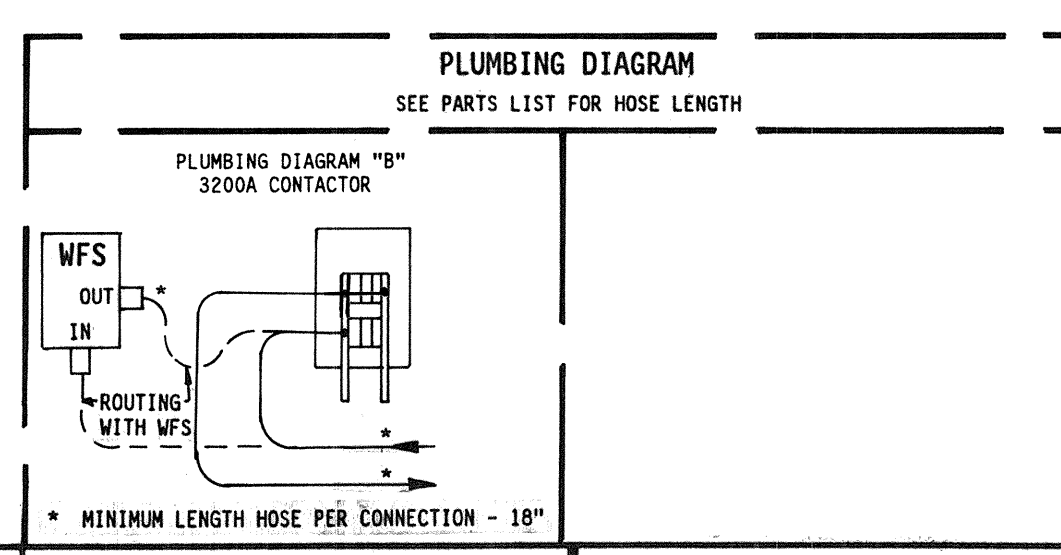
WARNING: HIGH VOLTAGE
 VOLTAGES PRESENT IN THIS CONTROL CAN CAUSE SEVERE OR FATAL INJURIES.
 NOTE: EVEN THOUGH SUPPLY POWER TO THIS UNIT HAS BEEN DISCONNECTED, THERE MAY BE VOLTAGES IN THIS CONTROL ORIGINATING FROM OTHER SOURCES.
 FOR ALL VOLTAGE POTENTIAL TO BE REMOVED FROM THIS CONTROL, POWER MUST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

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.

CAUTION
 Control Shipped Wired for 460 VAC
 Unless otherwise specified - See Note 2.



- NOTES:
- It is recommended that control wiring (i.e.: initiation, pressure switch, etc.) be physically separated from the high voltage wiring (115 volts or higher).
 - For 460 VAC Operation - Use Jumper #1 on T3 & T51. As shipped unless otherwise specified.
 For 230 VAC Operation - Use Jumper #2 on T3 & T51.
 For 575 VAC Operation - FACTORY WIRED ONLY. SEE VIEW "A".
 Replace T3 with P/N 311017. Wire per View "A". Use Jumper #1 between H2 & H3 on T51. Use Resistor R74 (2000 Ohm, 10 Watt) in place of Jumper #1 between CTH2 & CTH3 on T51.
 For 115 VAC or 380 VAC Operation - CONSULT FACTORY.
 - For Single Stage Pilot Operation - Connect pilot switch to T51-F53 & T51-GND. No jumpers required across T51-F51 & T51-GND.
 For Two Stage Pilot Operation - Connect 1st stage pilot switch to T51-F51 & T51-GND. Connect 2nd stage pilot switch to T51-F53 & T51-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.
 - EN2000-3200 "LS/LF" CABINET:
 ENTRON supplies Temperature Limit Switch (TLS) P/N 300020 and provides connections to T51-TLS1/AUX1 & T51-GND. Jumper not required between T51-TLS1/AUX1 & T51-GND. NOTE: TLS SCR will open at temperatures greater than or equal to 150° F.
 When external valve power is supplied to the control. Remove and insulate leads T53-VL1 & T53-VL2 on the Terminal Strip Board (PCB2), (from T3-X1 & T3-X2). Connect external AC power supply (24-240 VAC) to T51-VL1 & T51-SV2/SV4/VL2.
 CAUTION: Do not overtighten TS3.
 - Connect T51-L2/CTH4 to L2/H2 side of Welding Transformer Primary. (Factory wired on controls supplied with Circuit Isolation Device).
 - The Automatic Voltage Compensation (AVC), Automatic Power Factor (APF), 87° Delayed Firing, and 50Hz/60Hz functions are determined by the settings of the four position DIP switch on PCB1 (A/N 600580). As shipped from the factory, AVC is off, APF is on, 87° Delayed Firing is on, and 60Hz operation is selected. To change any of these functions, see instructions in the manual.
 - When TLS and WFS are used together, add WFS P/N 600297 & Terminal Strip TS8 P/N 335017. Wire as shown below. Jumper not required between T51-TLS1/AUX1 & T51-GND. WFS will open with flows less than .75 GPM.



PARTS LIST - CONTROL SECTION			
QTY.	DESIG.	PART NO.	DESCRIPTION
1		600581	Assem., Dial Plate, w/Sw. Assem., EN2000, Consisting of:
1	PCB1	600580	Assem., Switch, Sequence Control & Display Board
1		540244	Illustrated Panel, Dial Plate, EN2000
1		515104	Panel, Display Window, Red Filter, EN2000
1	PWR.LT.	305001	Lamp, Neon, Red, 230V
1	M.LD.LT.	305002	Lamp, Neon, Clear, 230V
1	J2-J2	322326	Assem., Harness, Ctrl Bd. to Term. Bd.
1	J3	322325-004	Assem., Harness, Power, EN2000

PARTS LIST - CONTACTOR SECTION			
QTY.	DESIG.	PART NO.	DESCRIPTION
1	TS1	335034	Terminal Strip, 10 Pin, (Part of J3 Harness)
1	TS2	335044	Terminal Strip, 2 Pin
1	TS8	335017	Terminal Strip, 2 Pin, (Part of 1200/1800/2200A Cont. Assem.)
1	T1	310001	Transformer, Control, (Part of J3 Harness)
1	T2	310002	Transformer, Sense, (Part of J3 Harness)
1	T3	311027	Transformer, Valve, 150VA
1	T3	311017	Transformer, Valve, 150VA, 575V
2	R70,71	225016	Resistor, Power, Surge, 500 Ohm, 100W
1	R74	600048	Assem., Resistor, Power, 2000 Ohm, 10W, (For 575V)
1	F1	308010	Fuseholder, 1 Pole, Mini, 600V
1	F1	307018	Fuse, Control, 6/10A, BBS 6/10
1	F6(PCB2)	307022	Fuse, 1 Amp, Slow Blow, 2AG, (Part of 410319-006)
1	(R70,71)	325024	Assem., Wire, Surge Resistor, 18 Ga., Black
2	(T3)	325149	Assem., Wire, Valve Transformer, 22 Ga., Black
1		600533-007	Assem., Contactor, SCR, Water, 3200A, 460/575V, w/TLS
1		346004	Lug, Screw, Chassis GND, 2/0 Wire
1	PCB2	410319-006	Assem., PCB, Terminal Strip Board, EN2000
1	(PCB2)	510236	Plate, Mounting, Terminal Strip Board
1	TLS	525136	Bracket, Mounting, 3200A Contactor
1	TLS	300020	Switch, Temperature Limit, (N.C.), (Part of 3200A Cont. Assem.)
X		900045	Hose, 3/8" I.D.
4		565010	Hose Clamp, 3/8" Hose
4		600179	Assem., Water Fitting, 3/8" Hose
+	WFS	600297	Assem., Water Flow Switch, 3/8" Hose
1		550014	Vault Closing Door Mechanism, "D"/"LS"/"LF" Cabinet
1		510103	Cabinet, Control, Style "LS"/"LF", w/CB
1	C/B	700121	Manual, EN2000
1		421275	Logic Diagram, EN2000 Control
1		421283-001	Wiring Diagram, EN2000-3200, "LS"/"LF" Cabinet

Optional, See Note 12.

* Substitution or addition of parts when 575V control is specified.
 # Supplied when optional Shunt Trip (ST), 115V is specified.
 + Optional Water Flow Switch Assembly & TS8. An additional Thirty-Six inches (36") of hose, P/N 900045 and two (2) hose clamps, P/N 565010 are to be supplied. See Note 9.
 X For all contactors in "LS"/"LF" cabinet supply 60" of hose.

MANUFACTURING INSTRUCTIONS:
 See Drawings #440365, #515112, #515114, & #600552 for Mechanical Assembly Instructions of EN2000 "LS"/"LF" Cabinet.
 See Drawing #440190-001 for Mechanical Layout of "LS"/"LF" Cabinet Rear Panel.
 See Drawing #440093 for Crating Instructions of "LS"/"LF" Cabinet.

See Drawing #440437 for Circuit Breaker to Contactor L1 Cable Connection.
 See Drawing #600526 for Layout/Assem. of Front Panel.

FOR SERVICE ON THIS CONTROL CONTACT YOUR MACHINE DEALER OR ENTRON CONTROLS INC. DIRECTLY: (630) 682-9600 485 EAST RANDY ROAD CAROL STREAM, IL 60188 FAX # (630) 682-9374

REV	AUTH	DESCRIPTION	DATE	CHK'D BY	DATE
1		ORIGINAL RELEASE			
2		DESCRIPTION			

SCALE DATE DRAWN BY CHK'D BY APPROVED BY
 23 Dec 23-95
 TOLERANCE UNLESS SPECIFIED ± 1/64
 ANGLES: ± 1/2°
 DECIMALS: ± .010
 FRACTIONS: ± 1/64
 DATE 7/3/96 RHL

WIRING DIAGRAM, EN2000-3200, "LS" or "LF" CABINET
 NEXT ASSM/USED ON DRAWING NUMBER REV
 EN2000-3200LS, LF 421283-001 A

NO CIRCUIT CALIBRATION OR ADJUSTMENT EVER REQUIRED.