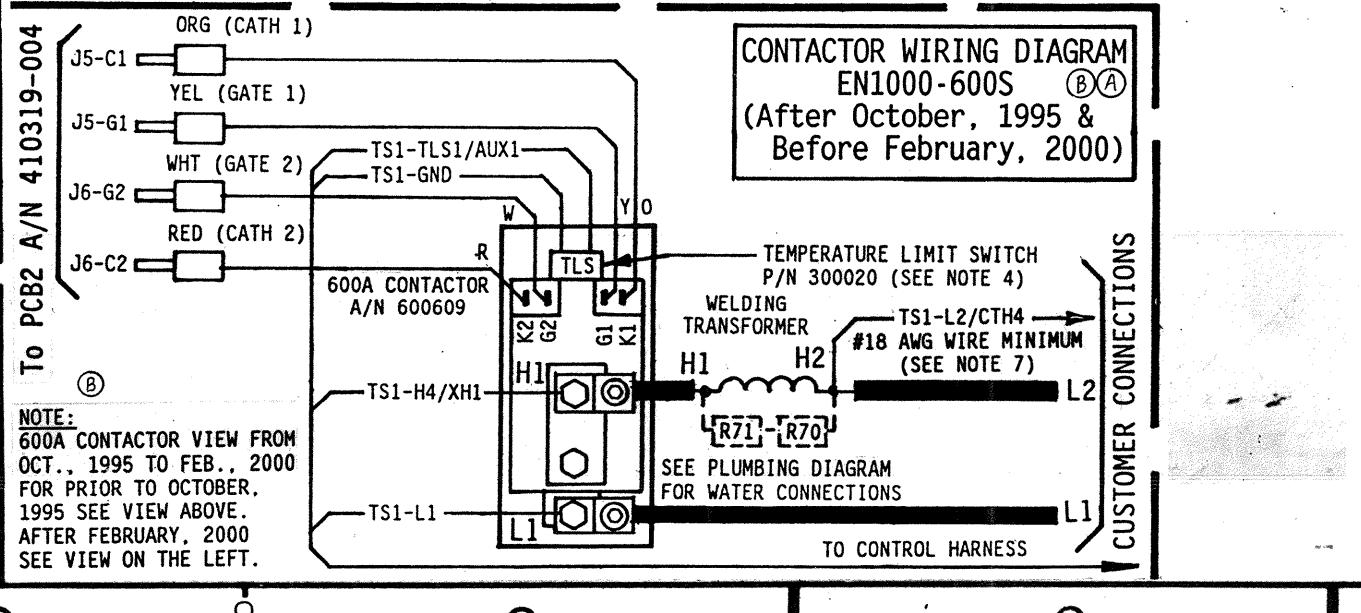
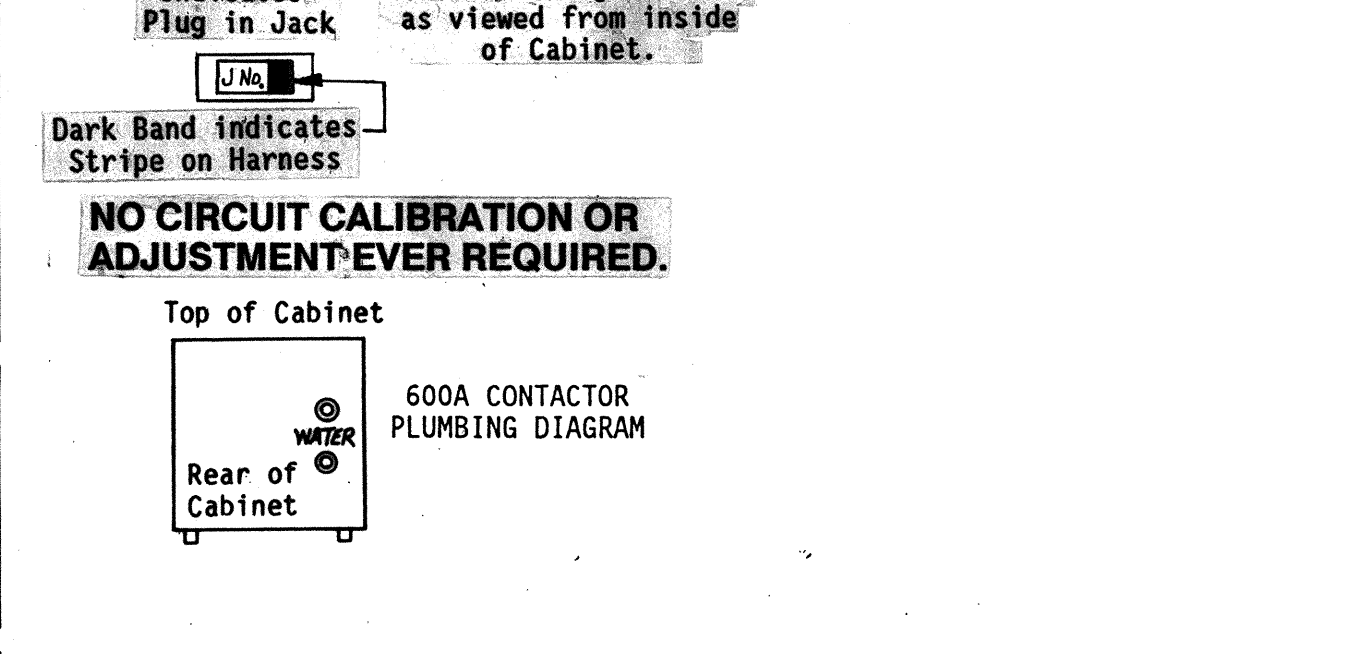
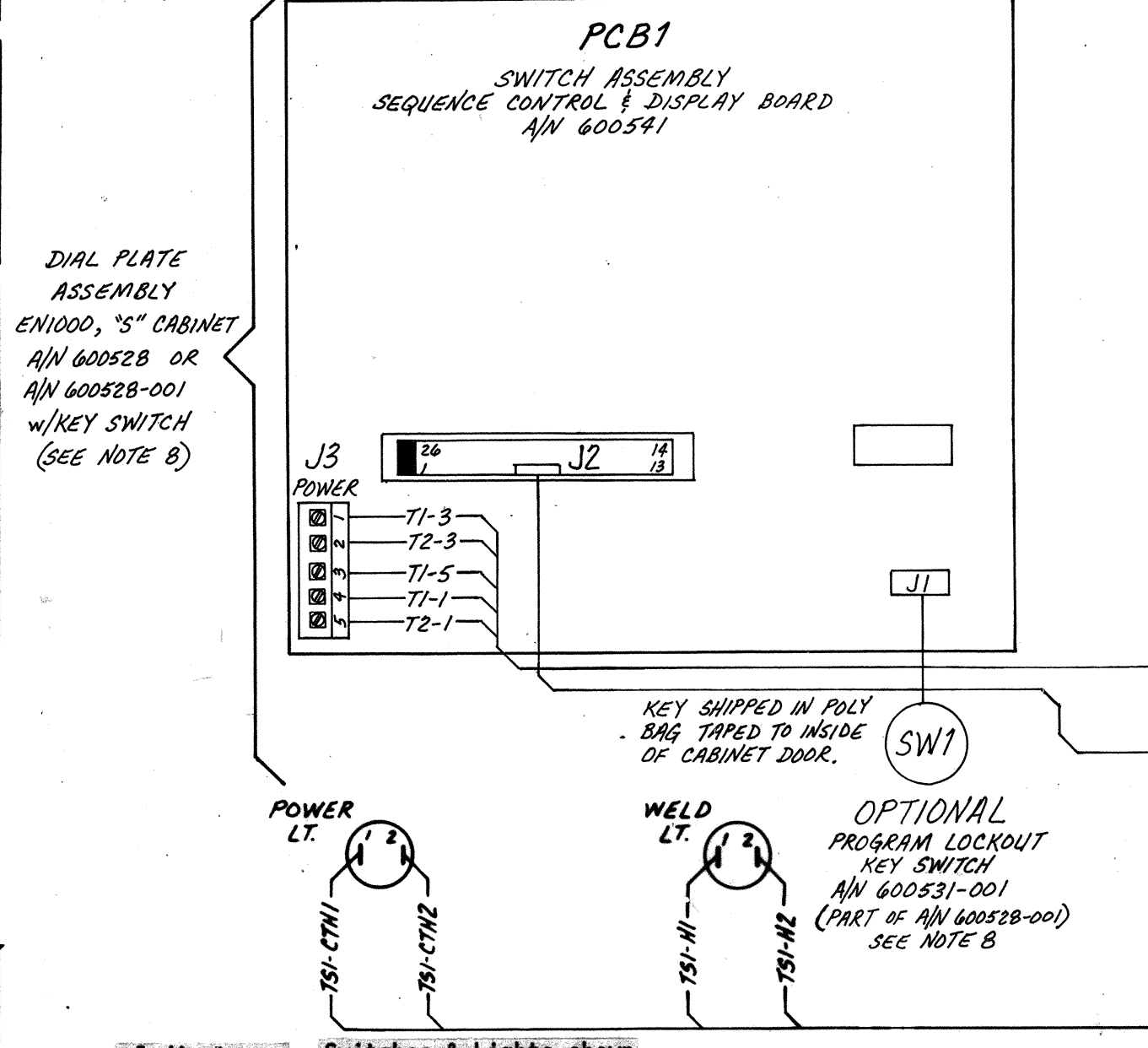
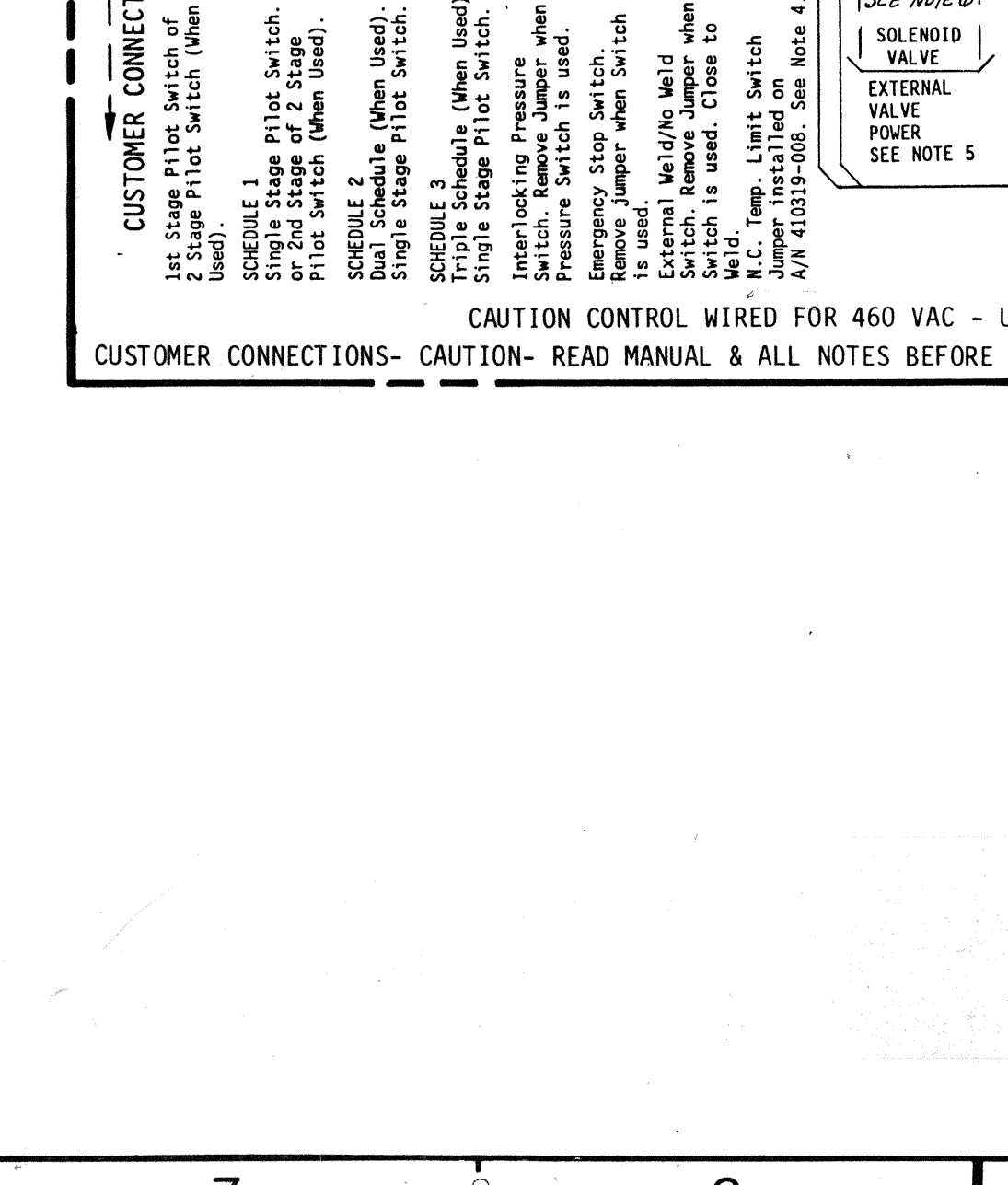
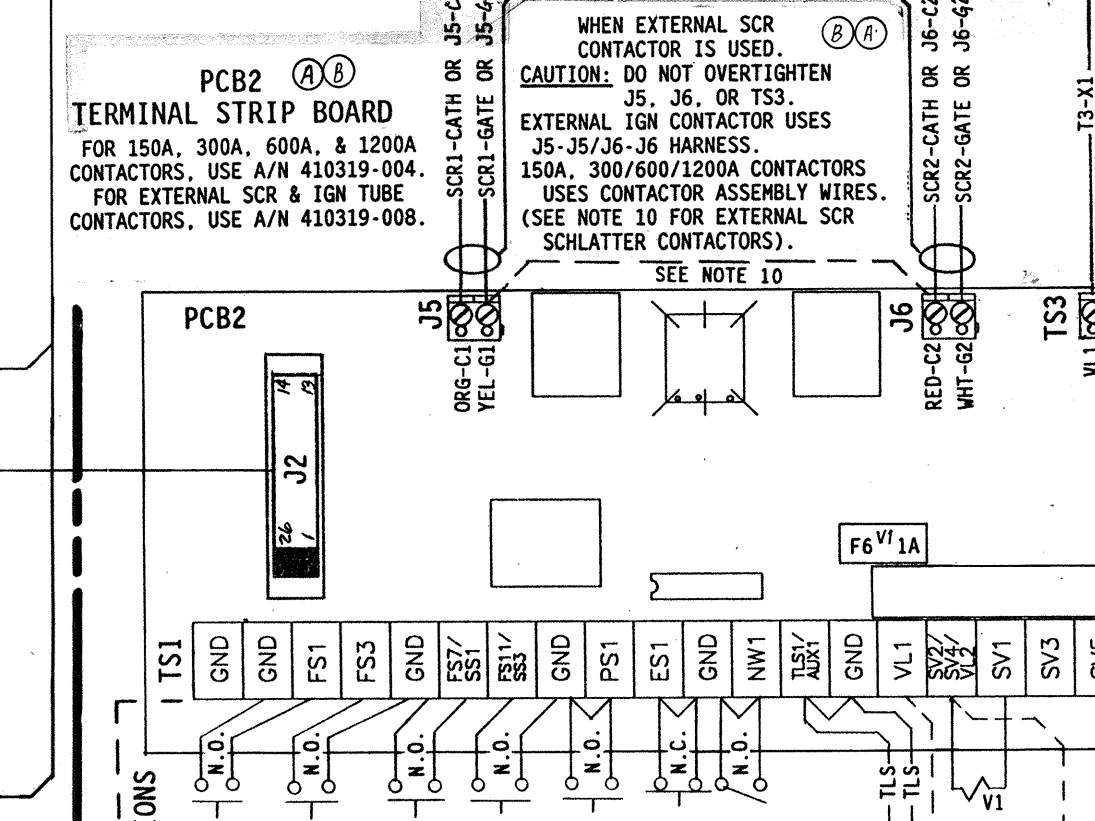
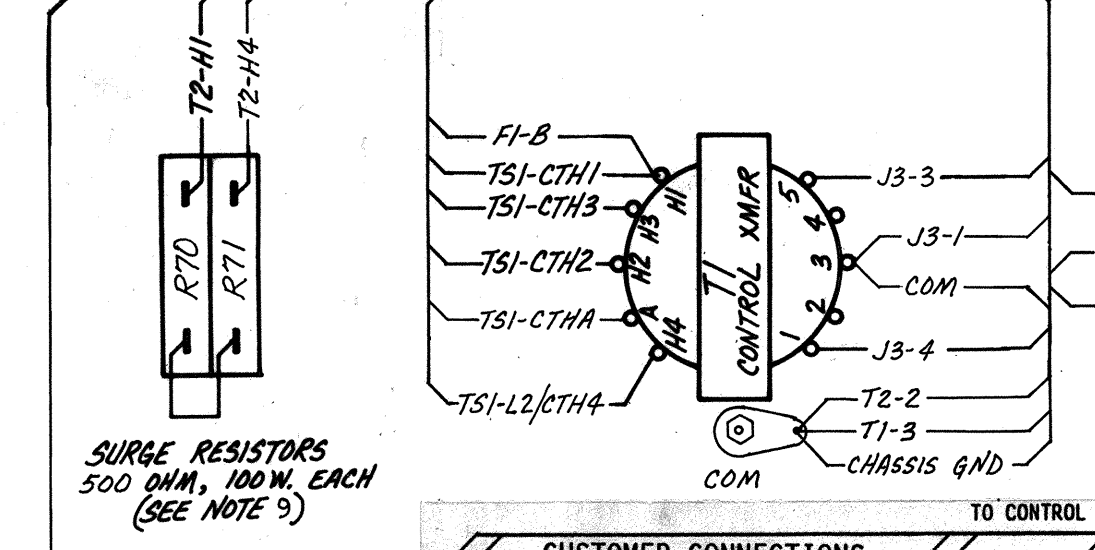
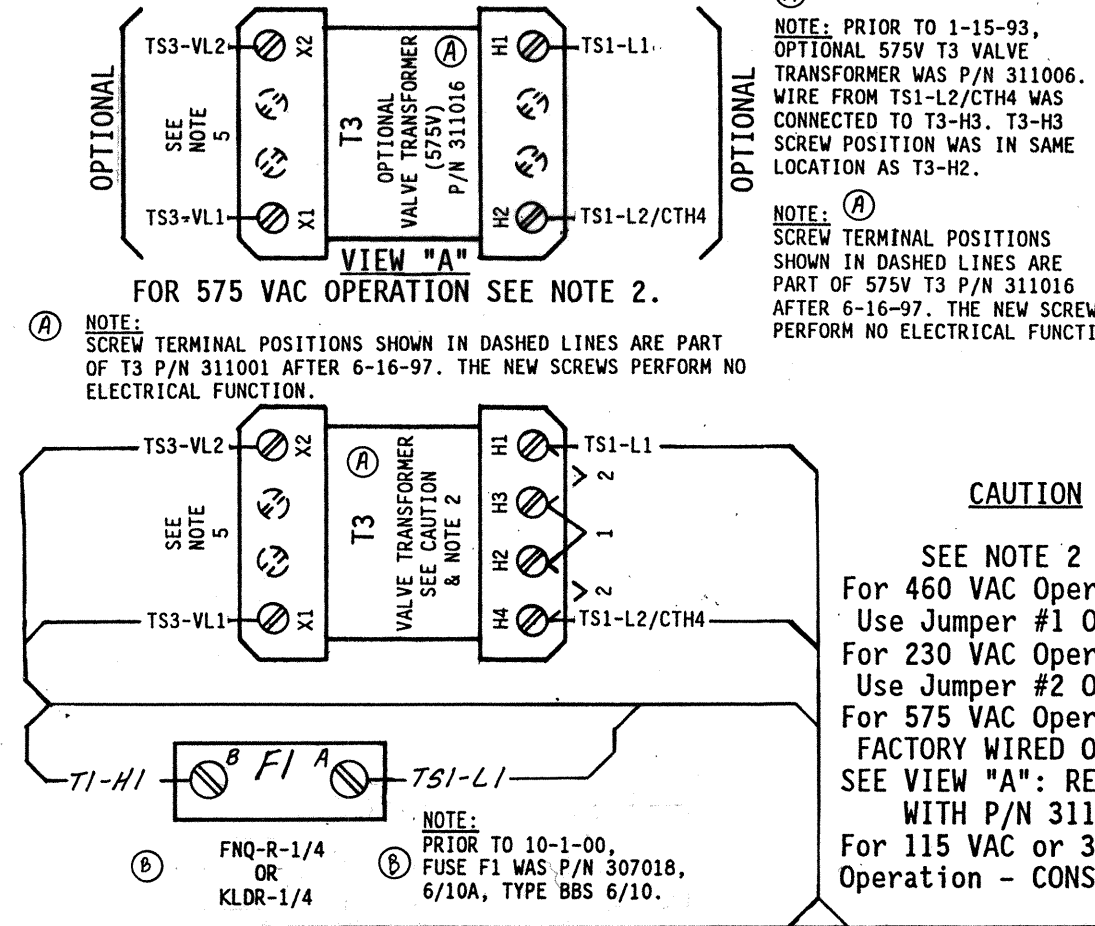


- NOTES:**
- It is recommended that control wiring (i.e. initiation, pressure switch, etc.) be physically separated from the high voltage wiring (115 volts or higher).
 - For 460 VAC Operation - Use Jumper #1 on T3 & T51. As shipped unless otherwise specified. For 230 VAC Operation - Use Jumper #2 on T3 & T51. For 115 VAC Operation - FACTORY WIRED ONLY. SEE VIEW "A". Replace T3 with P/N 311016. 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.
 - EN1000-S(IGN) & EN1000-S(SCR): When used, connect customer provided Normally Closed (N.C.) Temperature Limit Switch (TLS) across T51-TLS1/AUX1 & T51-GND and remove jumper between T51-TLS1/AUX1 & T51-GND. EN1000-150A, EN1000-300S, EN1000-600S, & EN1000-1200S: 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 Thyristor will open at temperatures greater than or equal to 150° F.
 - When external valve power is supplied to the control, remove and insulate leads T51-VL1 & T51-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 T53.
 - VALVE USAGE: T51-SV1 & T51-SV2 can ONLY be used for Solenoid Valve. Valve 2 and 3 are used to disable SCR1 & SCR2 for 1/2 Cycle Operation. See Application Note 700114 for more information.
 - Connect T51-L2/CTH4 to L2/H2 side of Welding Transformer Primary.
 - When Optional Program Lockout is specified by customer, Dial Plate A/N 600528-001 replaces A/N 600528. Add Switch P/N 600531-001 & remove Hole Plug P/N 565003.
 - EN1000-S(IGN) & EN1000-S(SCR): Remove all connections from previously existing firing circuits to L1, L2/H2, & H1 also Ignitor leads or SCR Gate leads & SCR Cathode leads. All previously existing surge Resistors or Rectifiers must be disconnected prior to installation of this control. CAUTION: On EN1000-S(SCR), Do not overtighten J5 & J6.
 - For External SCR Contactor firing with SCHLATTER P/N S55.5, ES65.5, & ES130 Contactors. Do NOT make J5 & J6 connections as shown on PCB2. See EN1000-S(SCR) Contactor Wiring Diagram with SCHLATTER Contactors. Install Jumper on PCB2 Terminal Strip Board between J5-2 (Yellow) & J6-1 (Red). Make connections from J5-1 (Orange) & J6-2 (White) on PCB2 to SCHLATTER Contactor per correct External SCR Contactor Wiring Diagram.
 - CAUTION: Do NOT set Current Control below 40% for 230 Volt Operation with Ignitron Tube Contactor.



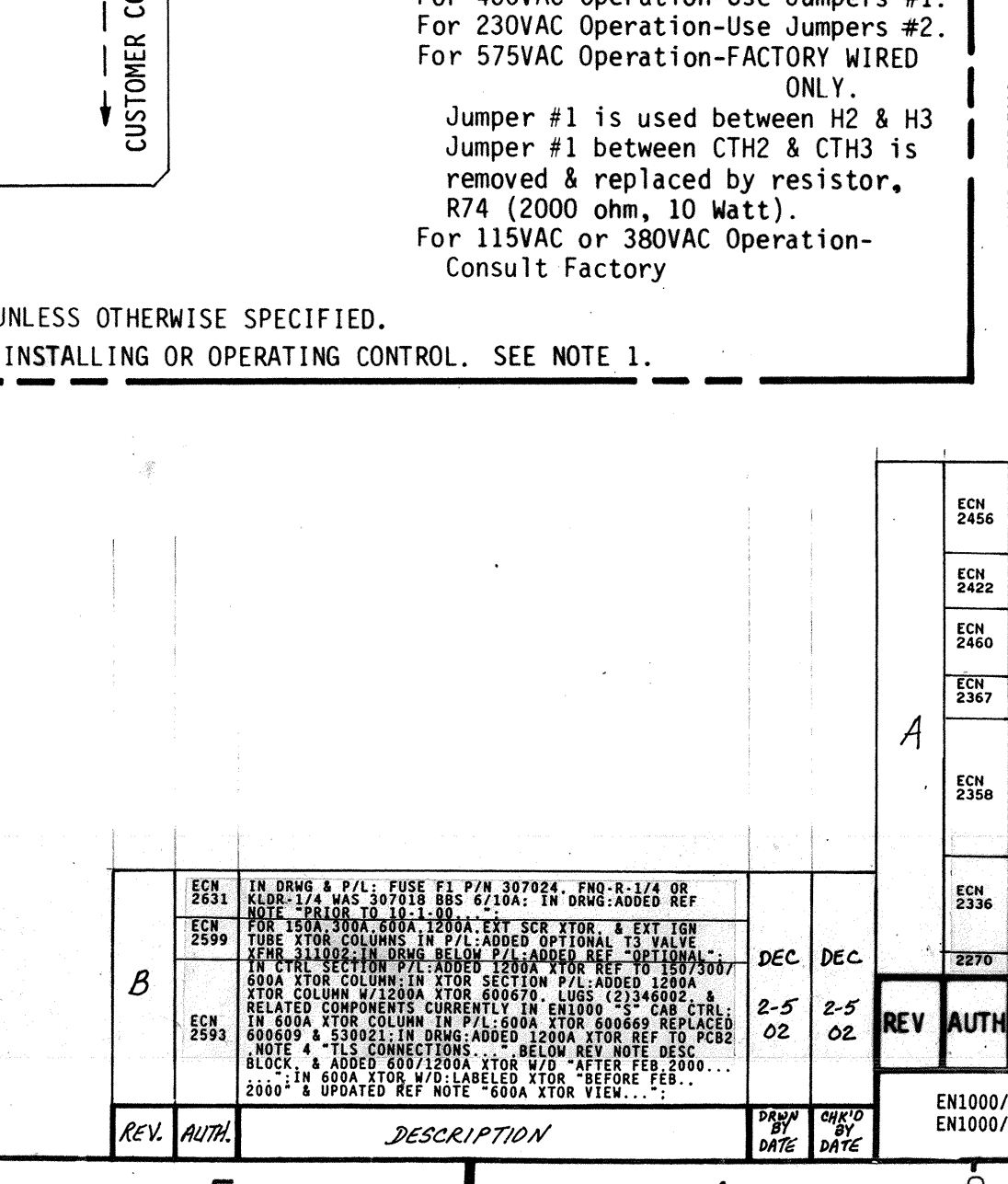
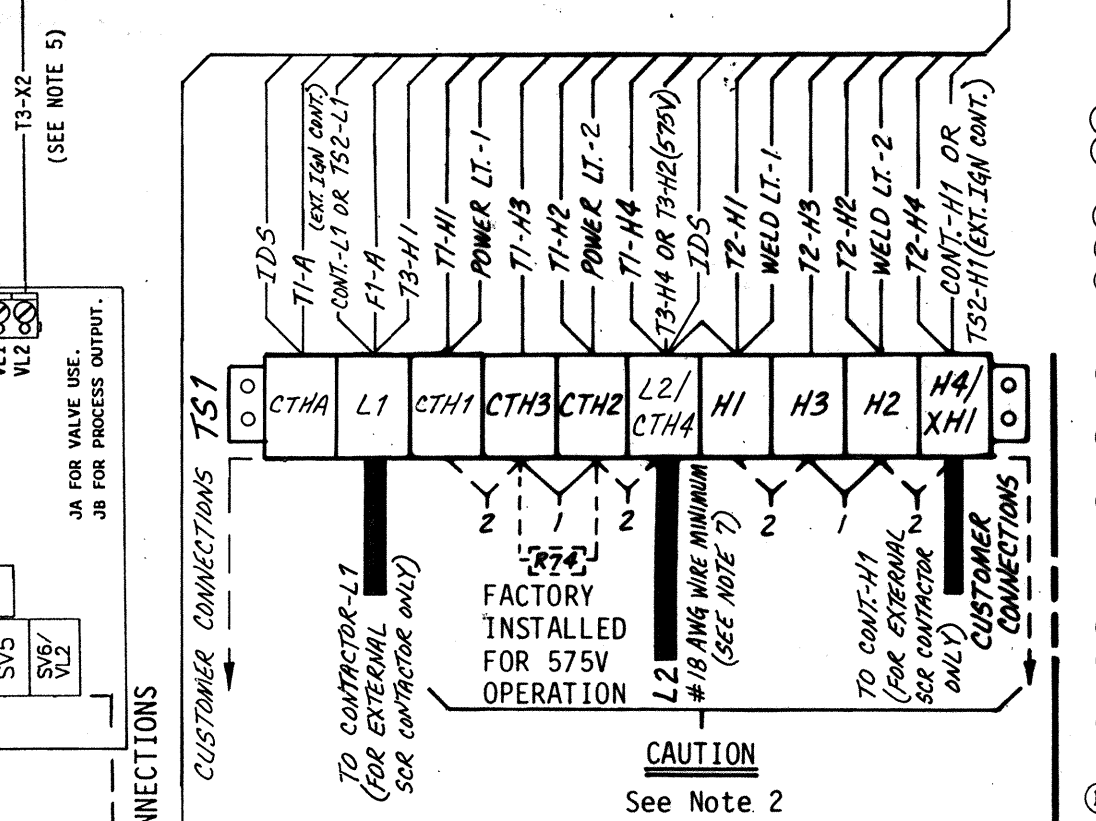
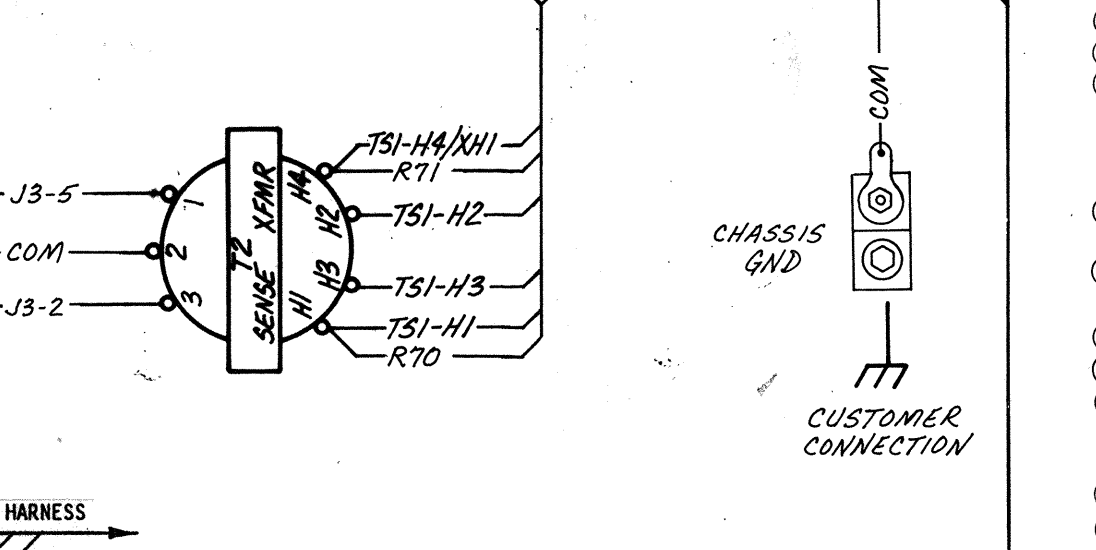
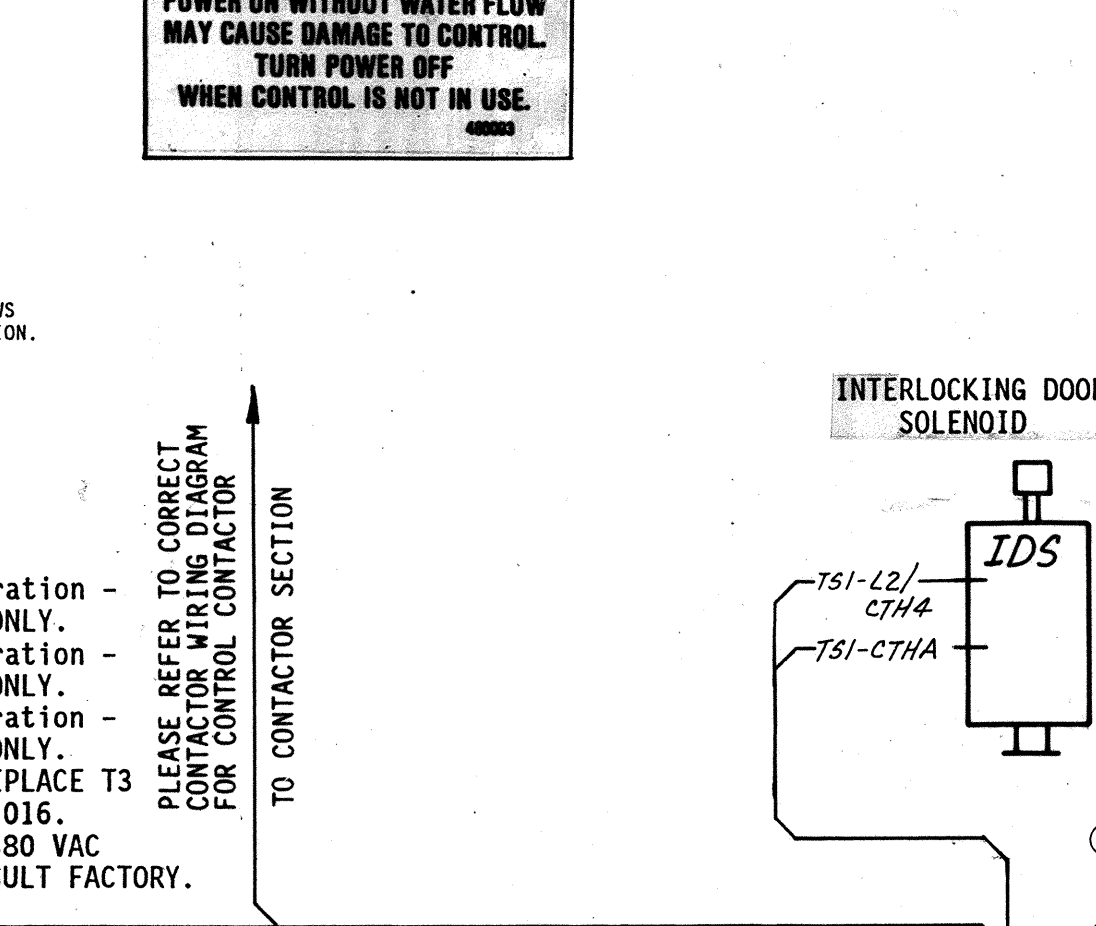
FOR SERVICE ON THIS CONTROL CONTACT YOUR MACHINE DEALER OR ENTRON CONTROLS INC. DIRECTLY: (630) 682-9800

465 EAST RANDY ROAD CAROL STREAM, IL 60188 FAX # (630) 682-3374



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

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.



PARTS LIST - CONTROL SECTION		421180-003 B	
QTY.	DESIG.	PART NO.	DESCRIPTION
1	600528	600528-001	Assem., Dial Plate, EN1000, Consisting of: Assem., Dial Plate, w/Keylock, EN1000, Consisting of: Assem., Switch, Sequence Control & Display Bd. Assem., Switch, Keylock, Momentary, SPST Illustrated Manual, Dial Plate, EN1000 Panel, Display Window, Red Filter, EN1000 Hole Plug, 3/4" Diam., Black
1	PCB1	600541	Assem., Switch, Sequence Control & Display Bd.
1	SW1	600531-001	Assem., Switch, Keylock, Momentary, SPST
1		540251	Illustrated Manual, Dial Plate, EN1000
1		515104	Panel, Display Window, Red Filter, EN1000
1		565003	Hole Plug, 3/4" Diam., Black
1		305001	Lamp, Neon, Red, 230V
1		305002	Lamp, Neon, Clear, 230V
1	J2-J2	322303	Assem., Harness, Control Bd. to Terminal Bd.
1	J3	322304	Assem., Harness, Power, 150A & 300/600A Cont's
1	J3	322304-002	Assem., Harness, Power, External IGM Tube Cont's
1	J3	322304-003	Assem., Harness, Power, External SCR Contactors

PARTS LIST - CONTACTOR SECTION		421180-003 B	
QTY.	DESIG.	PART NO.	DESCRIPTION
1	T51	335034	Terminal Strip, 10 Pin, (Part of J3 Harness)
1	T1	310001	Transformer, Control, (Part of J3 Harness)
1	T2	310002	Transformer, Sense, (Part of J3 Harness)
1	T3	311001	Transformer, Valve, 50VA
1	T3	311016	Transformer, Valve, 50VA, 575V
1	(J5-J5/J6-J6)	322311	Assem., Harness, IGM Firing Module to Term. Bd.
1	T3	311002	Transformer, Valve, 150VA
2	R70, R71	225016	Resistor, Power, Surge, 500 Ohm, 100W
2	R72, R73(PCB3)	220505	Resistor, Ignitor, 5 Ohm, 50W, (Part of 410318)
1	R74	600048	Assem., Resistor, Power, 2000 Ohm, 10W, (For 575V)
1	F1	308010	Fuseholder, 1 Pole, Mini, 600V
1	F1	307024	Fuse, Control, 1/4A, FNQ-R-1/4 or KLD-R-1/4
1	F6(PCB2)	307022	Fuse, 1 Amp, Slow Blow, 2AG, (Part of 410319-004 & 410319-008)
1	F4,5(PCB3)	307010	Fuse, Ignitor, 6 Amp, BAF 6, (Part of 410318)
1	(R70, R71)	325191	Assem., Wire, Surge Resistor, 18 GA., Black
2	(T3)	325149	Assem., Wire, Valve Transformer, 22 GA., Blk.
1		600613	Assem., Contactor Thyristor, Air, 150A 460/575V, w/TLS
1		600520	Cont., Thyristor, Air, 300A, 460/575V, w/TLS
1		600669	Assem., Cont., Thyristor, Water, 600A, 460/575V
1		600670	Assem., Cont., Thyristor, Water, 1200A, 460/575V
1		346004	Lug, 5/16" Bolt to 2/O Wire, 600A Cont., L1 & H1
1		346002	Lug, 5/16" Bolt to 4/O Wire, 1200A Cont., L1 & H1
1		300020	Switch, Temp. Limit, (Part of 600520 & 600513)
1		410319-004	Assem., PCB, Terminal Strip Board, EN1000/1/2
1		410319-008	Assem., PCB, Term. Strip Bd., Ext. Firing, EN1000/1/2
1		410318	Assem., PCB, IGM Firing Module
1		510236	Plate, Mounting, Terminal Strip Board
1		346004	Lug, Screw, Chassis GND, 2/O Wire
1		600044	Assem., Interlocking Door Solenoid
1		314001	Coil Assem Only, IDS
1		510015	Cabinet, "S" Subcompact
1		510017	Door, Cabinet, "S"
1		700114	Application Note, EN1000/1/2 Control
1		700105	Manual, EN1000
1		421183	Logic Diagram, EN1000 Control
1		421180-003	Wiring Diagram, EN1000/1/2-Series, "S" Cabinet

MANUFACTURING INSTRUCTIONS:

- X Optional.
- * Optional Keylock when specified by customer. See Note 8. Pack key in Poly bag #00148 & attach to Door w/Yellow Tape 900118.
- * Substitution or Addition of Parts when 575V Control is specified.
- See Drawings #600530, #600530-001, #600530-002, & #600530-003 for Mechanical Assembly Instructions.
- See Drawing #440269 for Packing Instructions, "S" Cabinet.
- See Drawing #440352 for Label Locations, "S" Cabinet.
- See Drawing #440055 for Customer Mounting & Knockout Detail of "S" Cabinet. For Layout/Assembly of Front Panel, See Drawing #600526.
- See Wiring Diagram #421180-001 for EN1000-Series, "S" Cabinet, 380 VAC Operation.
- See Wiring Diagram #421189 for EN1000-Series, "MR" Cabinet.
- See Wiring Diagram #421210 for EN1000-Series, "D", "T", "L", or "LS" Cabinet, w/Optional Circuit Isolation Device.
- See Wiring Diagram #421212 for EN1000-Series, "E" Cabinet.

REV.	AUTH.	DESCRIPTION	DATE	CHK'D BY	DATE
1		ORIGINAL RELEASE			
2		SCALE DATE	1-10-95	RHL	
3		TOLERANCE UNLESS SPECIFIED			
4		ANGLES: ± .010			
5		DECIMALS: ± .010			
6		FRACTIONS: ± 1/64			
7		WIRING DIAGRAM, EN1000/1/2-SERIES, "S" CABINET	2-5-02	DEC	DEC
8		NEXT ASSM/USED ON			
9		DRAWING NUMBER	421180-003		
10		REV			