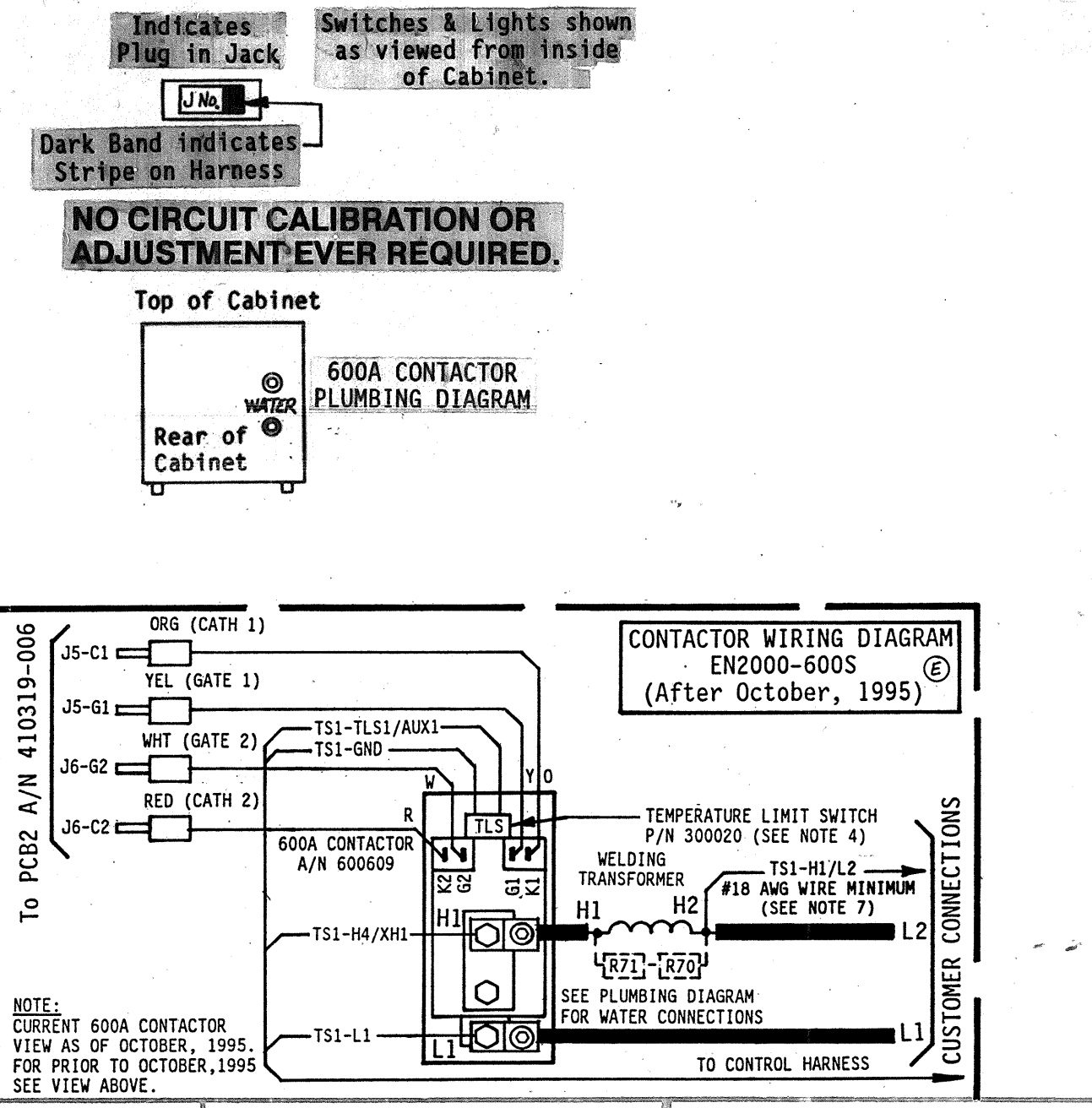
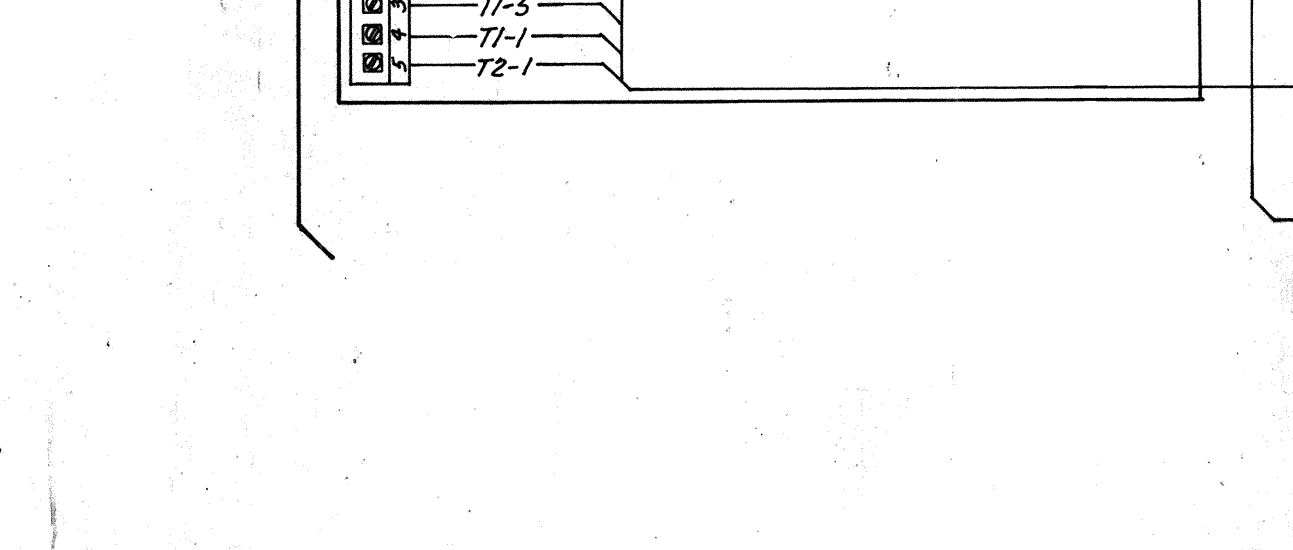
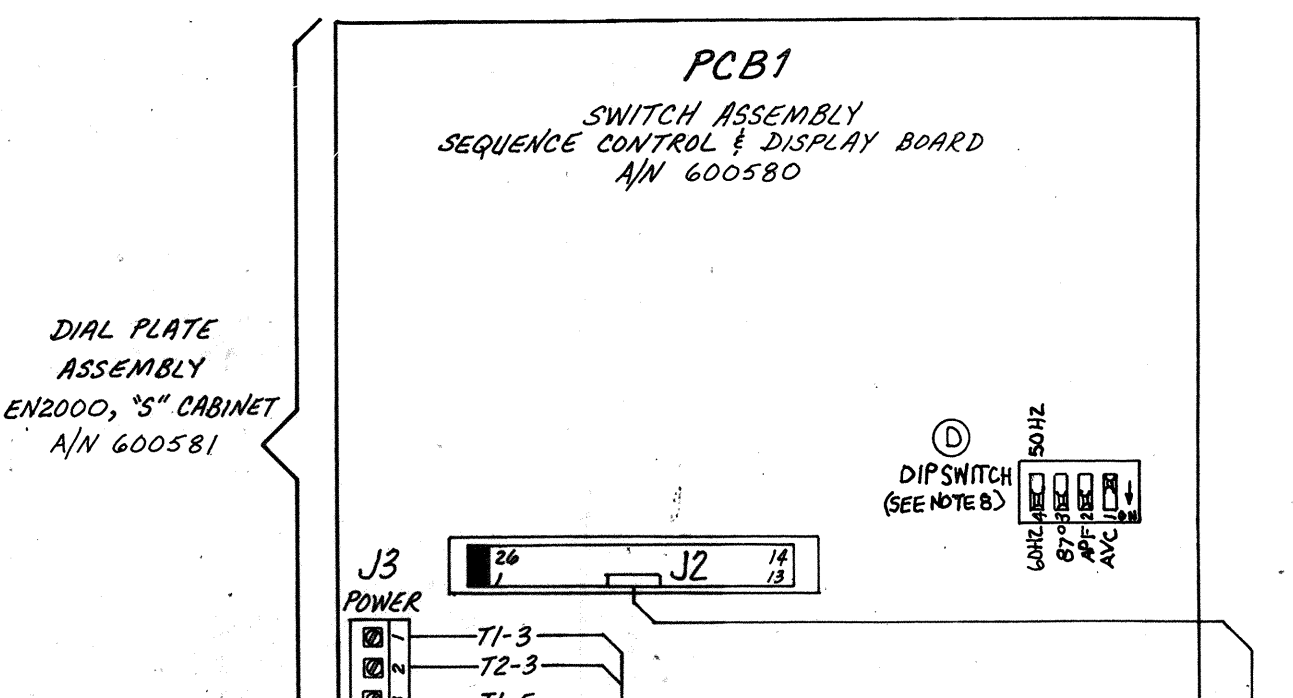


- NOTES:
- It is recommended that control wiring (i.e.: Initiation, pressure switch, etc.) be physically separated from the high voltage wiring (115 volts or higher).
  - For 380 VAC Operation - Use Jumpers #3 on TSI.
  - DO NOT CHANGE JUMPERS!  
For 230, 460, & 575 VAC Operation - CONSULT FACTORY.
  - For Single Stage Pilot Operation - Connect pilot switch to TSI-FS3 & TSI-GND. No jumpers required across TSI-FS1 & TSI-GND.
  - For Two Stage Pilot Operation - Connect 1st stage pilot switch to TSI-FS1 & TSI-GND. Connect 2nd stage pilot switch to TSI-FS3 & TSI-GND.
  - For DUAL COUNT/DUAL CURRENT (Dual Weld/Dual Heat) or External Schedule Selection, SEE MANUAL.
  - EN2000-S(IGN) & EN2000-S(SCR):  
When used, connect customer provided Normally Closed (N.C.) Temperature Limit Switch (TLS) across TSI-TLS1/AUX1 & TSI-GND and remove jumper between TSI-TLS1/AUX1 & TSI-GND.  
EN2000-70S, EN2000-150S, EN2000-300S, & EN2000-600S:  
ENTRON supplies Temperature Limit Switch (TLS) P/N 300020 and provides connections to TSI-TLS1/AUX1 & TSI-GND. Jumper not required between TSI-TLS1/AUX1 & TSI-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 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-W1 & T51-S2/3/4/VL2.  
CAUTION: Do not overtighten T53.
  - Connect T51-CTH4/L2 to L2/H2 side of Welding Transformer Primary.
  - 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.
  - EN2000-S(IGN) & EN2000-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 EN2000-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 EN2000-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 Contactors.

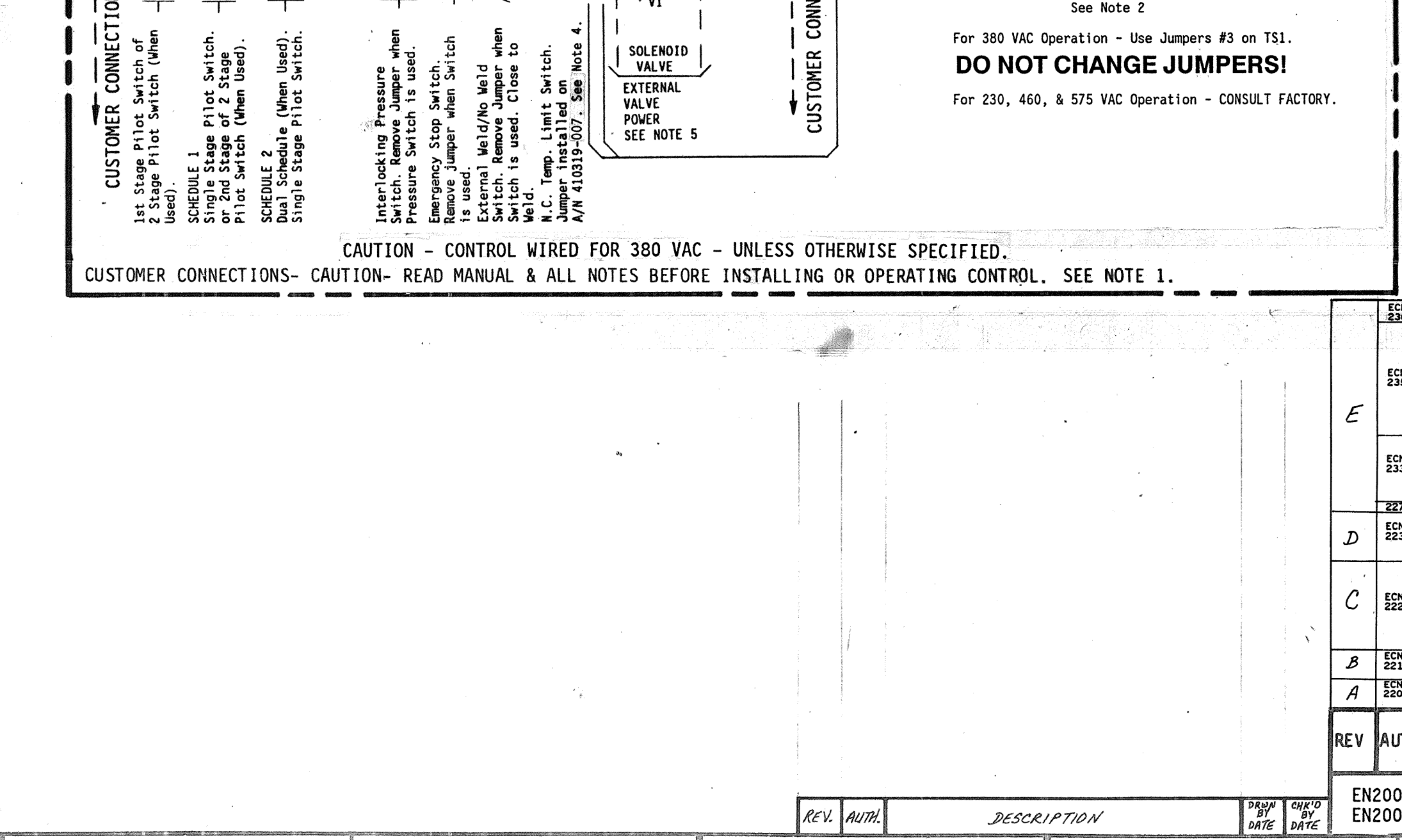
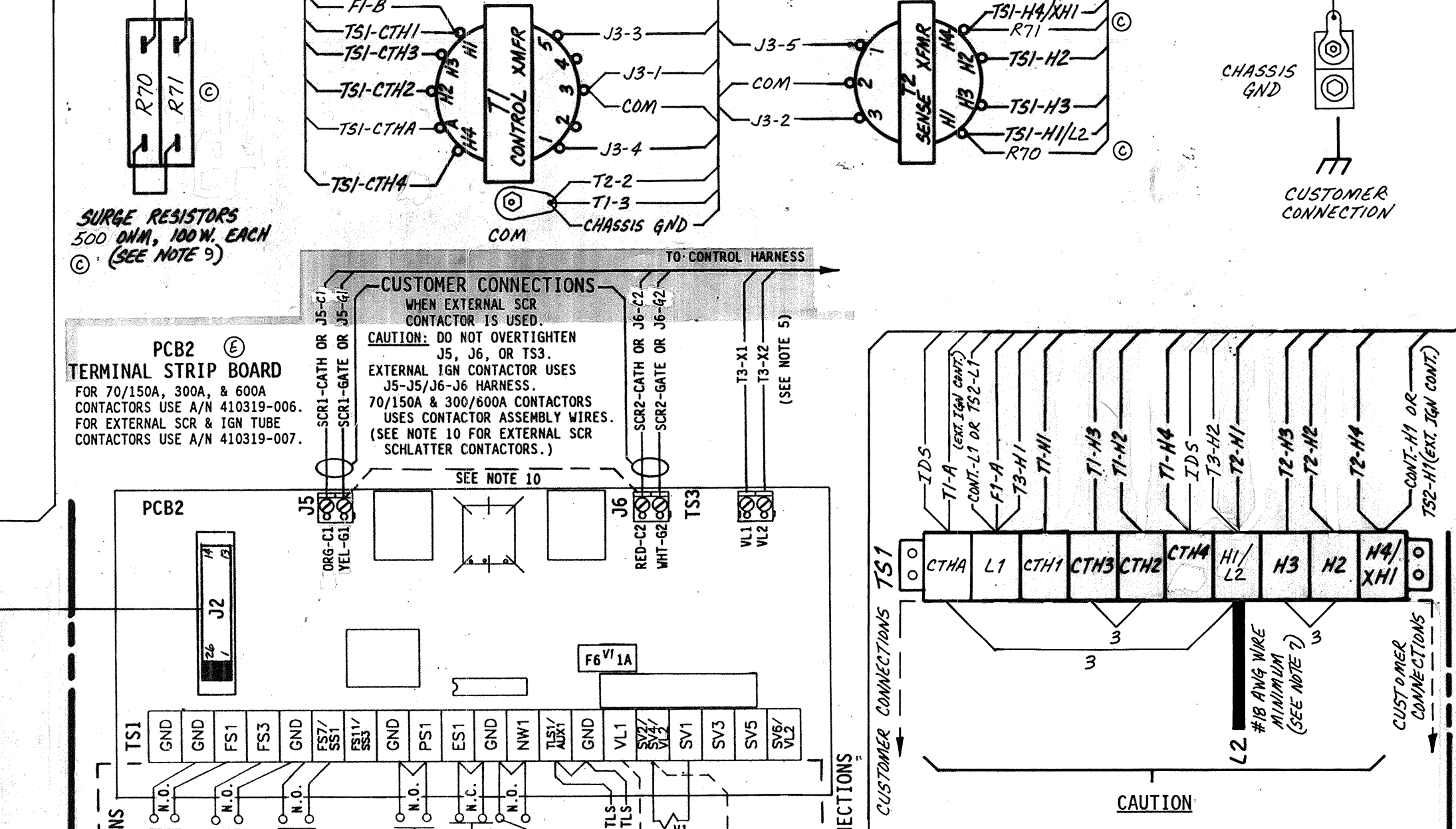
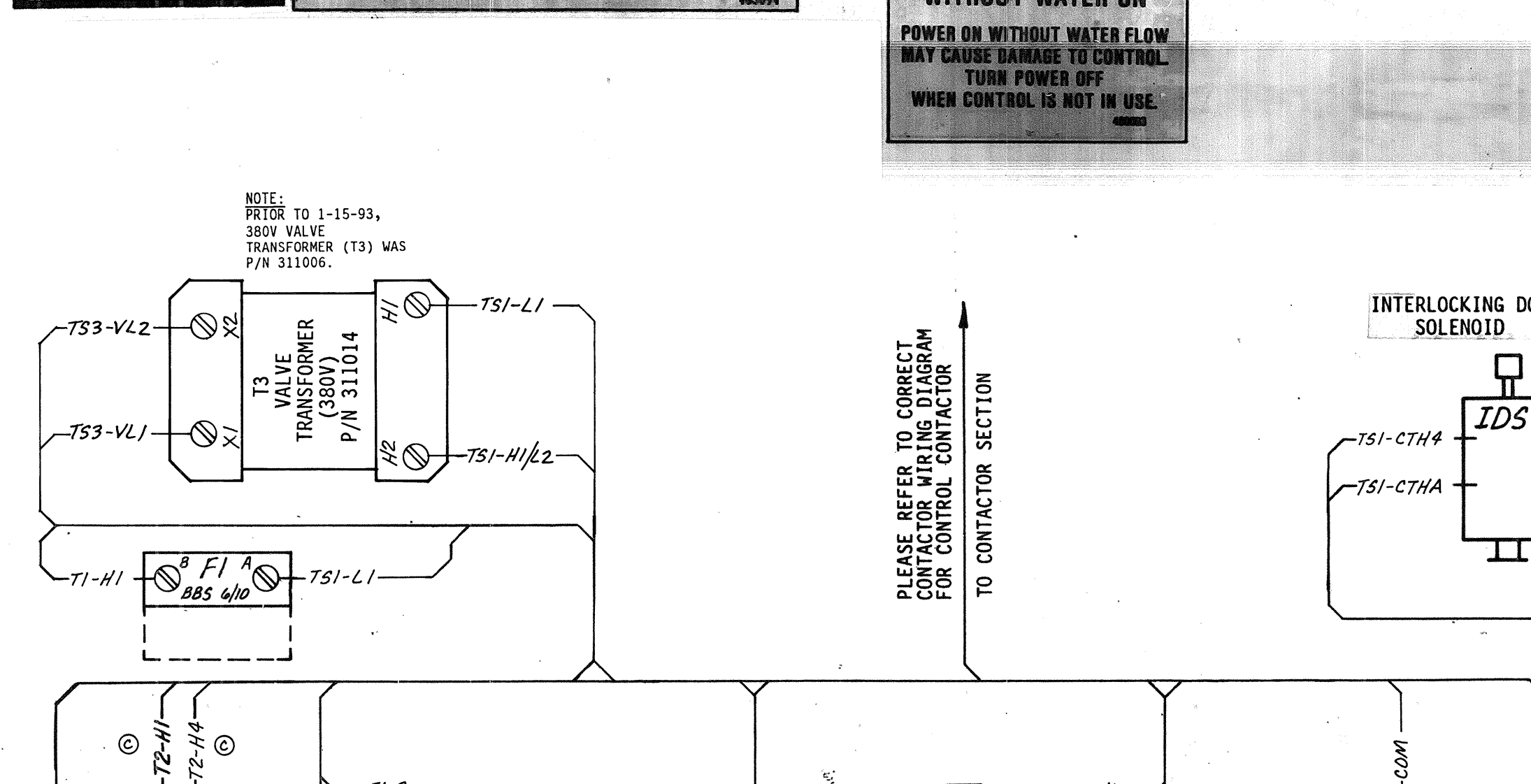


**FOR SERVICE ON THIS CONTROL CONTACT YOUR MACHINE DEALER**  
OR  
**ENTRON CONTROLS INC.**  
DIRECTLY: (430) 682-8900  
485 EAST RANDY ROAD  
CAROL STREAM, IL 60188  
FAX # (430) 682-3374

**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**  
Control Shipped Wired for 380 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			421280-001		
EXT. SCR CONT'S	EXT. IGN TUBE CONT'S	70/150A, 300A, & 600A CONT'S	DESIG.	PART NO.	DESCRIPTION
1	1	1	PCB1	600581	Assem., Dial Plate, EN2000, Consisting of: Assem., Switch, Sequence Control & Display Bd.
1	1	1		540244	Illustrated Panel, Dial Plate, EN2000
1	1	1		515104	Panel, Display Window, Red Filter, EN2000
1	1	1	J2-J2	322303	Assem., Harness, Control Bd. to Terminal Bd.
1	1	1	J3	322304-012	Assem., Harness, Power, 70/150A & 300/600A Cont's
1	1	1	J3	322304-013	Assem., Harness, Power, External IGN Tube Cont's
1	1	1	J3	322304-014	Assem., Harness, Power, External SCR Contactors

PARTS LIST - CONTACTOR SECTION			421280-001							
EN2000-600S	EN2000-300S	EN2000-70S	EN2000-150S	EN2000-300S	EN2000-S(IGN)	EN2000-S(SCR)	QUANTITY	DESIG.	PART NO.	DESCRIPTION
1	1	1	1	1	1	1	1	TS1	335034	Terminal Strip, 10 Pin, (Part of J3 Harness)
1	1	1	1	1	1	1	1	T1	310001	Transformer, Control, (Part of J3 Harness)
1	1	1	1	1	1	1	1	T2	310002	Assem., Cont., Thyristor, Air, 300A, 460/575V, w/TL5
1	1	1	1	1	1	1	1	T3	310114	Transformer, Valve, 50VA, 380V
1	1	1	1	1	1	1	1	(J5-J6/J6-J6)	322311	Assem., Harness, IGN Firing Module to Term. Bd.
2	2	2	2	2	2	2	2	R70, 71	225016	Resistor, Power, Surge, 500 Ohm, 100W
1	1	1	1	1	1	1	1	R2, 73(PCB3)	220505	Resistor, Ignitor, 5 Ohm, 50W, (Part of 410318)
1	1	1	1	1	1	1	1	F1	308006	Fuseholder, 2 Pole, Mini, 600V, For Dual BAF 6
1	1	1	1	1	1	1	1	F1	307018	Fuse, Control, 6/10A, BBS 6/10
1	1	1	1	1	1	1	1	F6(PCB2)	307022	Fuse, 1 Amp, Slow Blow, 2AG, (Part of 410319-006 & 410319-007)
1	1	1	1	1	1	1	1	F4, 5(PCB3)	307010	Fuse, Ignitor, 6 Amp, BAF 6, (Part of 410318)
1	1	1	1	1	1	1	1	(R70, 71)	325191	Assem., Wire, Surge Resistor, 18 GA., Black
1	1	1	1	1	1	1	1		600614	Assem., Contactor, Thyristor, Air, 70A, 460/575V, w/TL5
1	1	1	1	1	1	1	1		600613	Assem., Contactor, Thyristor, Air, 150A, 460/575V, w/TL5
1	1	1	1	1	1	1	1		600520	Assem., Cont., Thyristor, Air, 300A, 460/575V, w/TL5
1	1	1	1	1	1	1	1		600609	Assem., Cont., Thyristor, Water, 600A, 460/575V
1	1	1	1	1	1	1	1		300020	Switch, Temp. Limit, (Part of 600520/600613/600614)
1	1	1	1	1	1	1	1		346004	Lug, 5/16 Bolt to 2/0 Wire, 600A Contactor, L1 & H1
1	1	1	1	1	1	1	1		530021	Plate, Mounting, 600A Thyristor Contactor
1	1	1	1	1	1	1	1		410319-006	Assem., PCB, Terminal Strip Board, EN2000
1	1	1	1	1	1	1	1		410319-007	Assem., PCB, Term. Strip Bd., Ext. Firing, EN2000
1	1	1	1	1	1	1	1		410318	Assem., PCB, IGN Firing Module
1	1	1	1	1	1	1	1		510236	Plate, Mounting, Terminal Strip Board
1	1	1	1	1	1	1	1		346004	Lug, Screw, Chassis GND, 2/0 Wire
1	1	1	1	1	1	1	1		600044	Assem., Interlocking Door Solenoid
1	1	1	1	1	1	1	1		314001	Coil Assem Only, IDS
1	1	1	1	1	1	1	1		510015	Cabinet, "S"-Subcompact
1	1	1	1	1	1	1	1		510017	Door, Cabinet, "S"
1	1	1	1	1	1	1	1		700121	Manual, EN2000
1	1	1	1	1	1	1	1		421279	Logic Diagram, EN2000 Control
1	1	1	1	1	1	1	1		421280-001	Wiring Diagram, EN2000-Series, "S" Cabinet

**MANUFACTURING INSTRUCTIONS**

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.  
See Wiring Diagram #421282 for EN2000-Series, "E" Cabinet.  
See Wiring Diagram #421283 for EN2000-Series, "D1/TL5/LF" Cabinet, w/Optional Circuit Isolation Device.  
See Wiring Diagram #421280 for EN2000-Series, "S" Cabinet.

REV	AUTH	DESCRIPTION	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
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SCALE DATE DRAWN BY CHK'D BY APPROVED BY

TOLERANCE UNLESS SPECIFIED

ANGLES: ± 0°

DECIMALS: ± .010

FRACTIONS: ± 1/64

DATE 3-19-96 DEC

WIRING DIAGRAM, EN2000-SERIES, "S" CABINET, WIRED FOR 380 VAC OPERATION

EN2000-S(IGN) EN2000-70S EN2000-300S EN2000-600S

421280-001