

It is recommended that control wiring (i.e., initiation, pressure switch, etc.) physically separated from the high voltage wiring (115 volts or higher).

460 VAC Operation - Use Jumper #1 on T3 & T51. As shipped unless otherwise specified.
 230 VAC Operation - Use Jumper #2 on T3 & T51.
 575 VAC Operation - FACTORY WIRED ONLY. SEE VIEW "A".
 Place T3 with P/N 311016. Wire per View "A". Use Jumper #1 between H2 & H3 on T51. Resistor R74 (2000 Ohm, 10 Watt) in place of Jumper #1 between CTH2 & CTH3 on T51. 115 VAC or 380 VAC Operation - CONSULT FACTORY.

Single Stage Pilot Operation - Connect pilot switch to T51-F53 & T51-GND. Jumpers required across T51-F51 & T51-GND.
 Two Stage Pilot Operation - Connect 1st stage pilot switch to T51-F51 & T51-GND. Connect 2nd stage pilot switch to T51-F53 & T51-GND.

DUAL COUNT/DUAL CURRENT (Dual Weld/Dual Heat) or TRIPLE COUNT/TRIPLE CURRENT (Triple Weld/Triple Heat) or External Schedule Selection. SEE MANUAL.

4. 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. EN1000-150S, 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 T53-WL1 & T53-WL2 on the Terminal Strip Board (PCB2). (From T3-X1 & T3-X2). Connect external AC power supply (24-240 VAC) to T51-WL1 & T51-SV2/SV4/WL2.
 CAUTION: Do not overtighten T53.

3 OUTPUT USAGE:
 T51-SV5 & T51-SV6 (Valve 3) can be used for either a Valve output or a Process output. When T51-SV5 & T51-SV6 is used as a Valve output use Jumper "A" on T53. When T51-SV5 & T51-SV6 is used as a Process output use Jumper "B" on T53.
 NOTE: Do not overtighten T53.

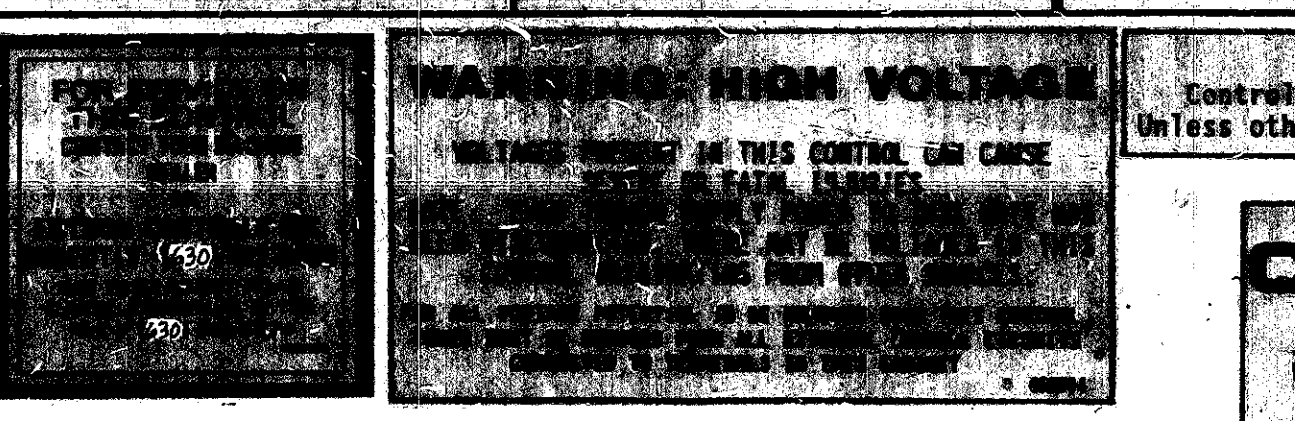
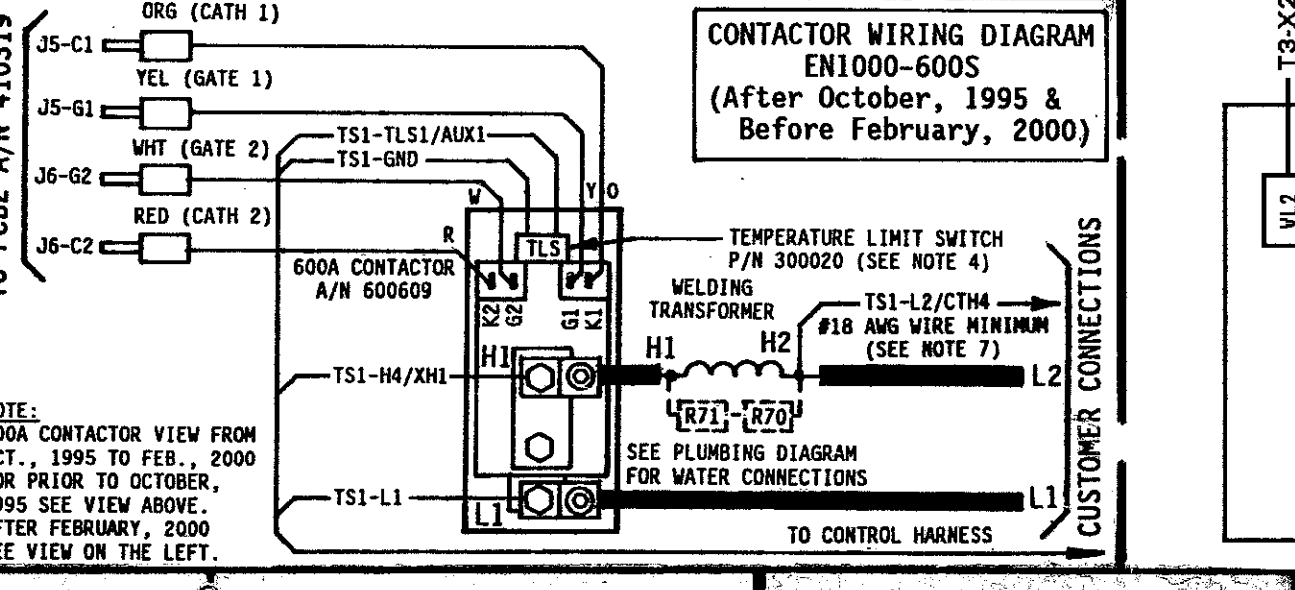
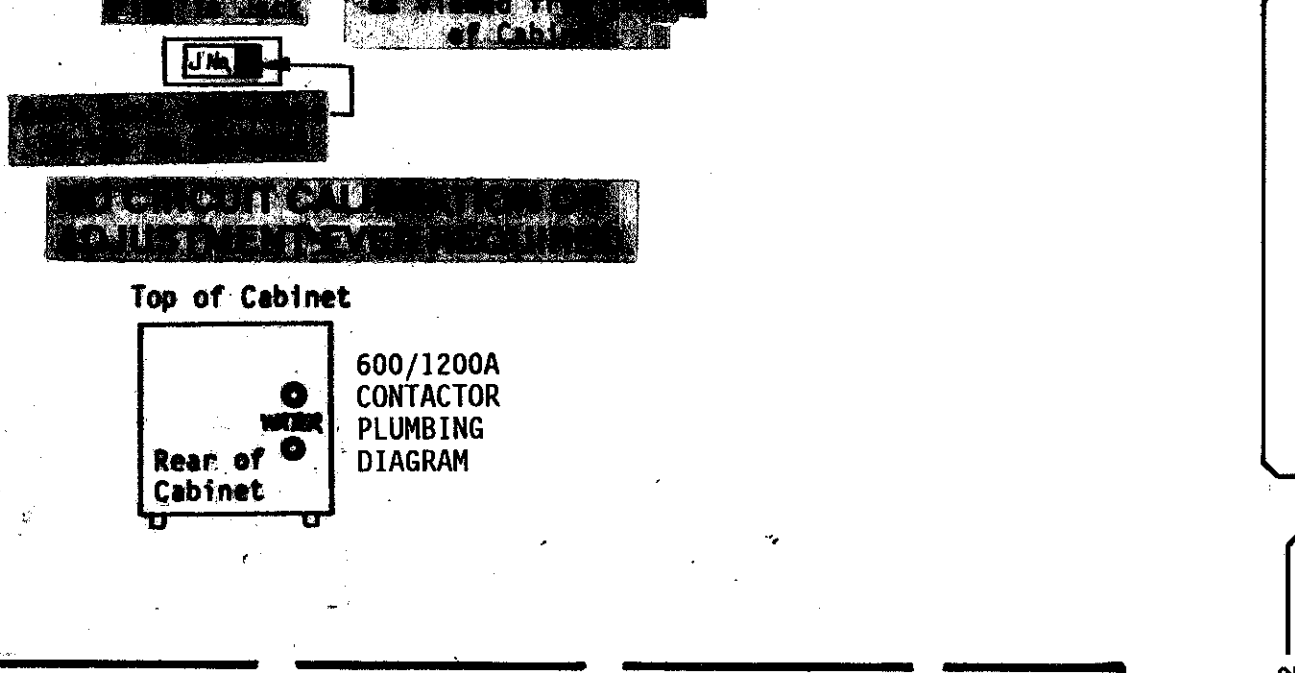
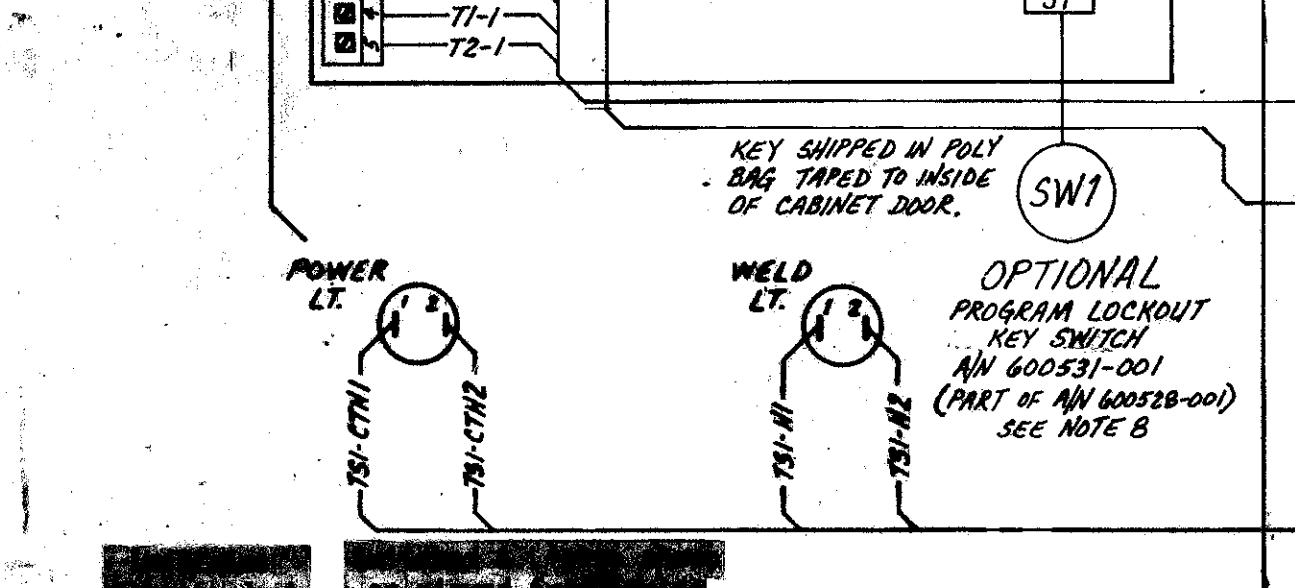
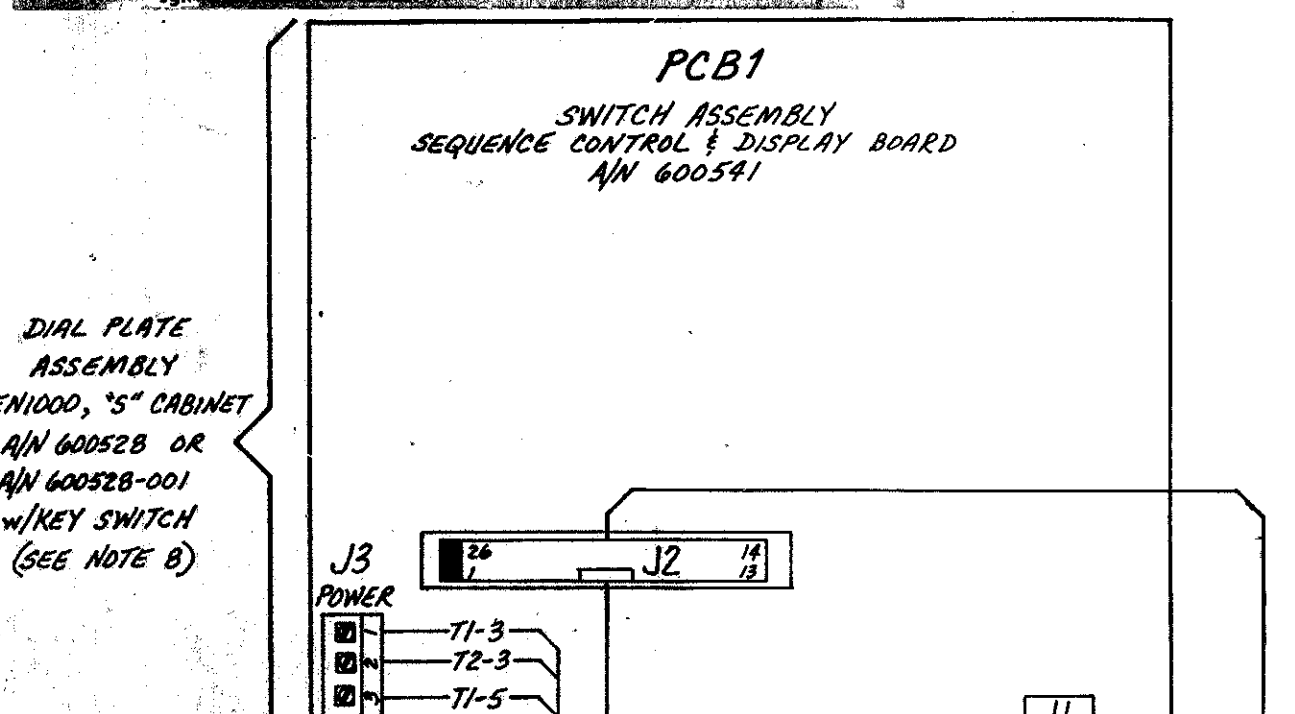
JMS: Use of Jumper "B" bypasses control relay contacts to allow a process output without an initiation. SEE MANUAL.

Connect T51-L2/CTH4 to L2/H2 side of Welding Transformer Primary.

Optional Program Lockout is specified by customer. Dial Plate A/N 600528-001 replaces 600528. Add Switch P/N 600531-001 & remove Hole Plug P/N 565005.

EN1000-S(IGN) & EN1000-S(SCR):
 Remove all connections from previously existing firing circuits to L1, L2/H2, & H1 also monitor leads or 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.

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 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 correct External SCR Contactor Wiring Diagram.

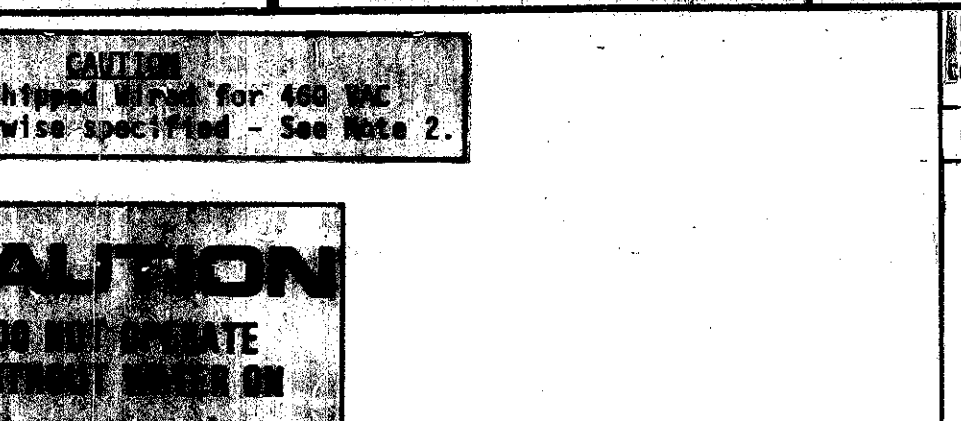
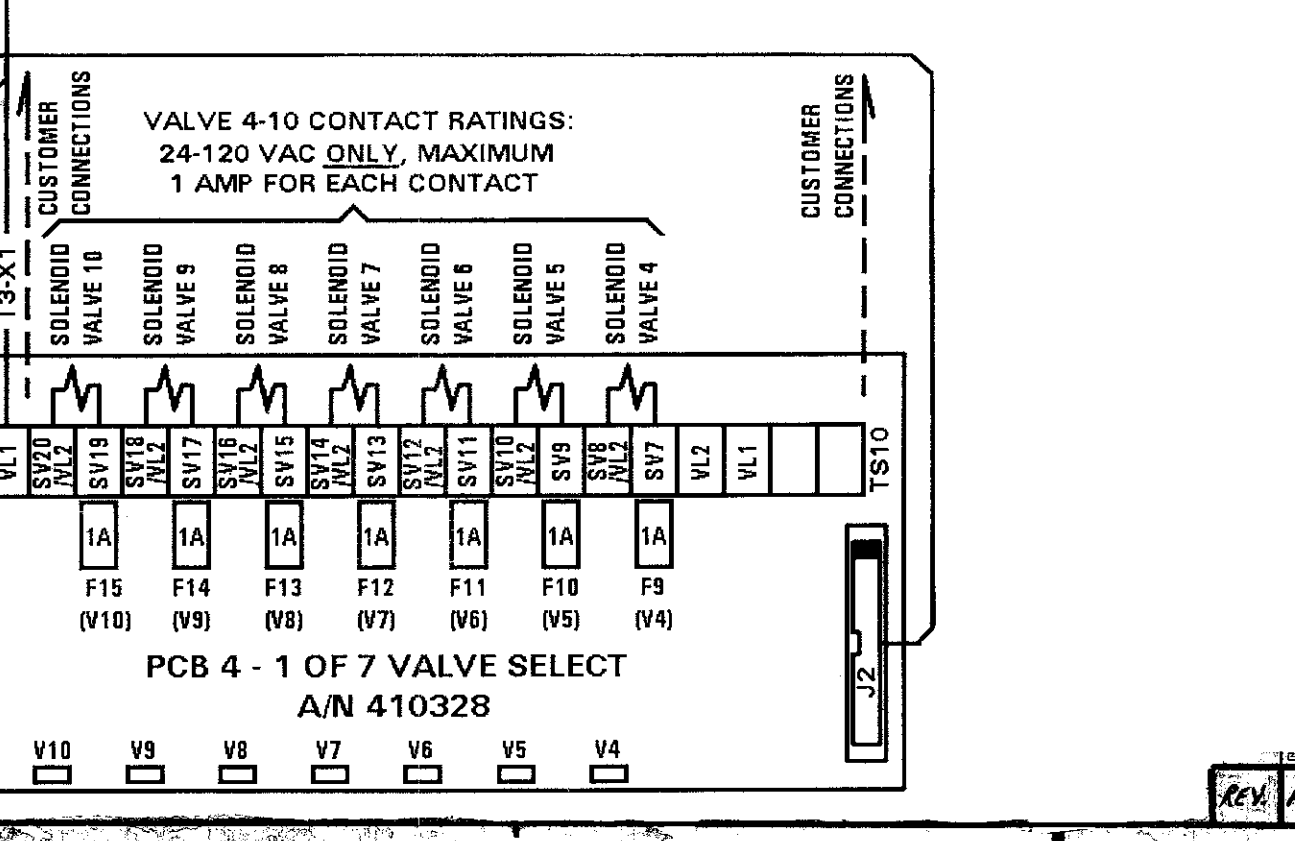
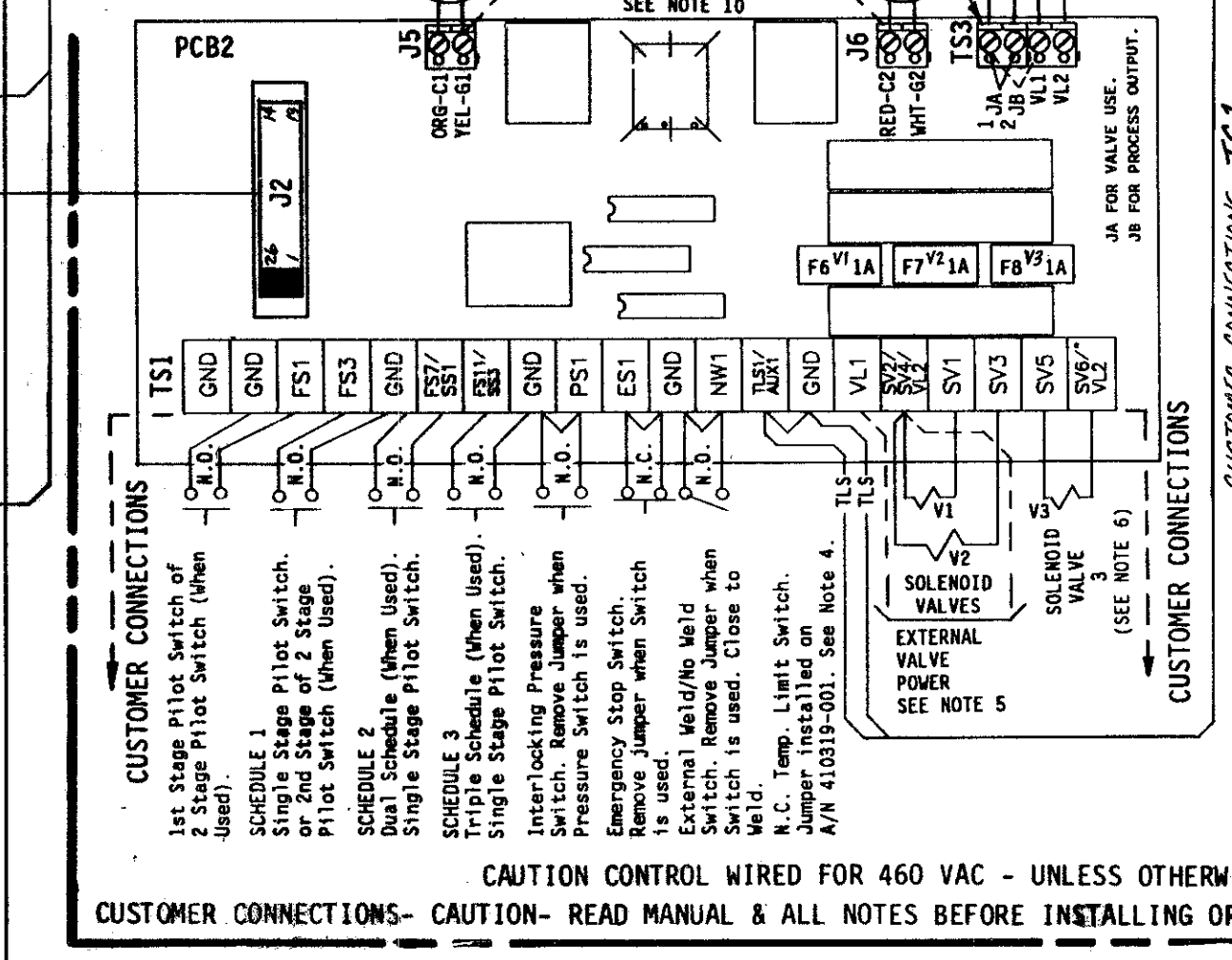
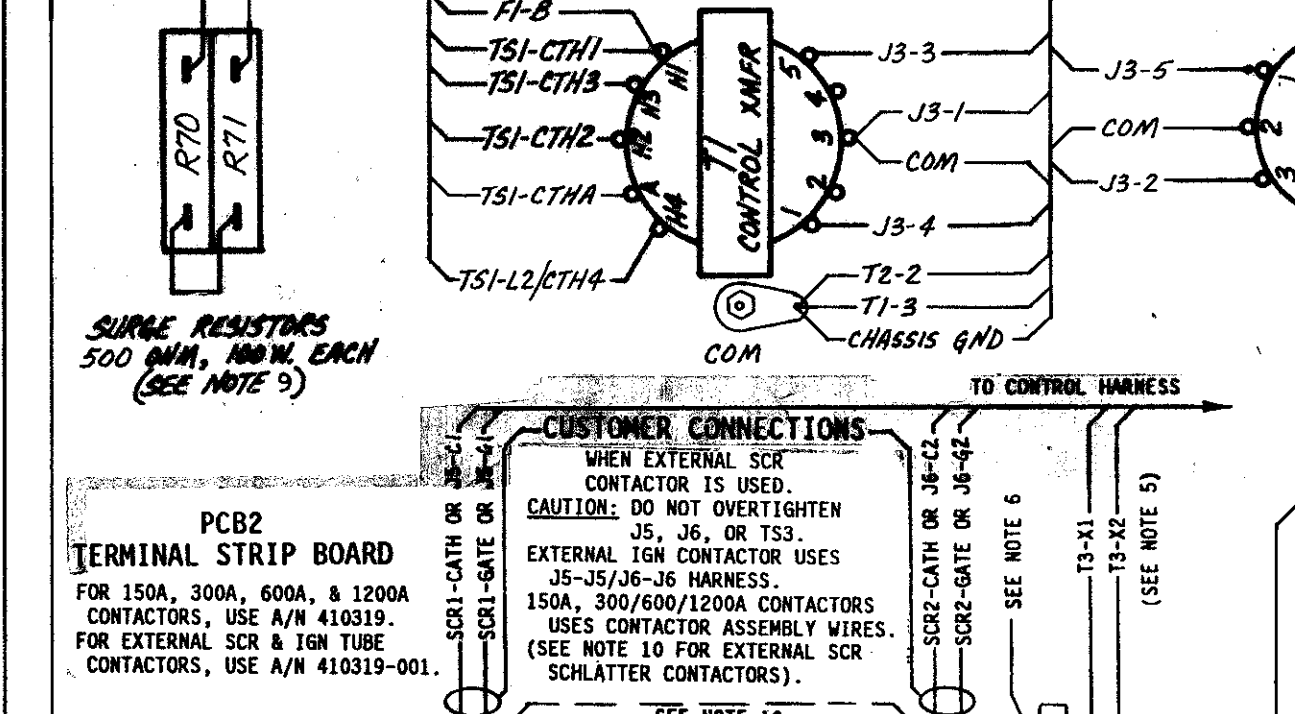
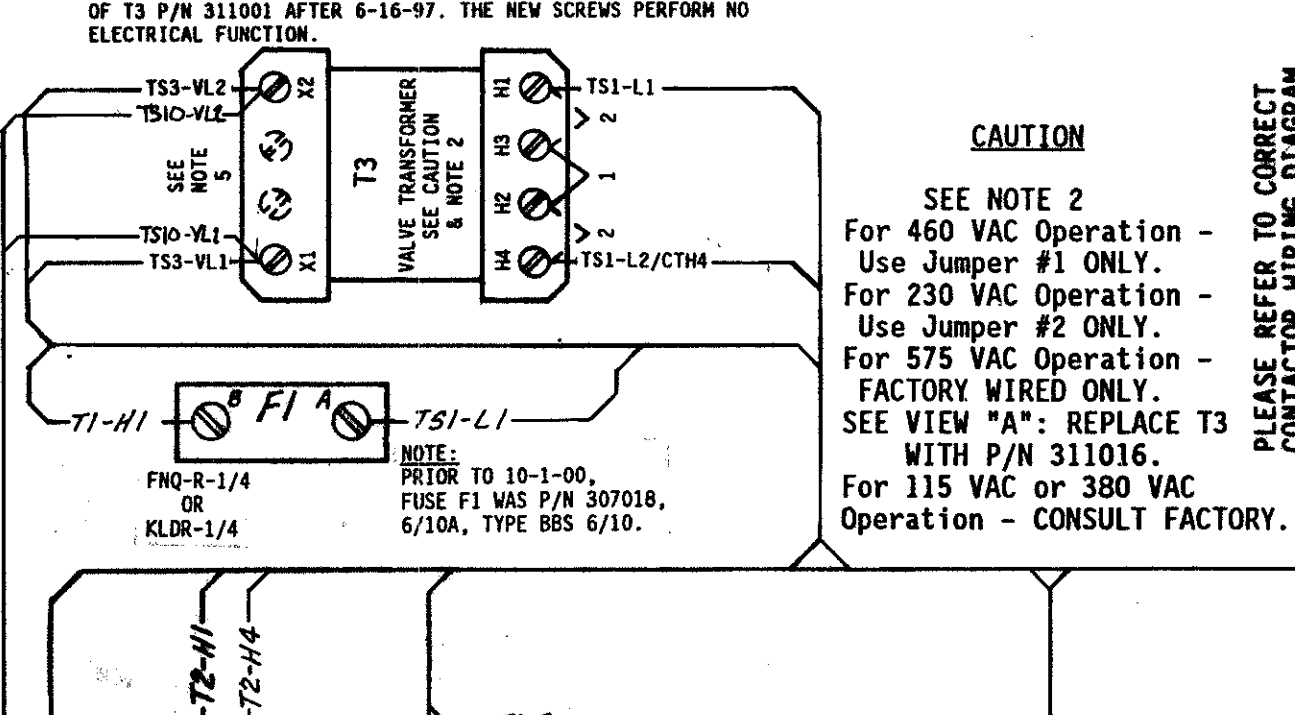


NOTE: PRIOR TO 1-15-93, OPTIONAL 575V T3 VALVE TRANSFORMER WAS P/N 311006. WIRE FROM T51-L2/CTH4 WAS CONNECTED TO T3-H3. T3-H3 SCREW POSITION WAS IN SAME LOCATION AS T3-H2.

NOTE: SCREW TERMINAL POSITIONS SHOWN IN DASHED LINES ARE PART OF 575V T3 P/N 311016. AFTER 6-16-97, THE NEW SCREWS PERFORM NO ELECTRICAL FUNCTION.

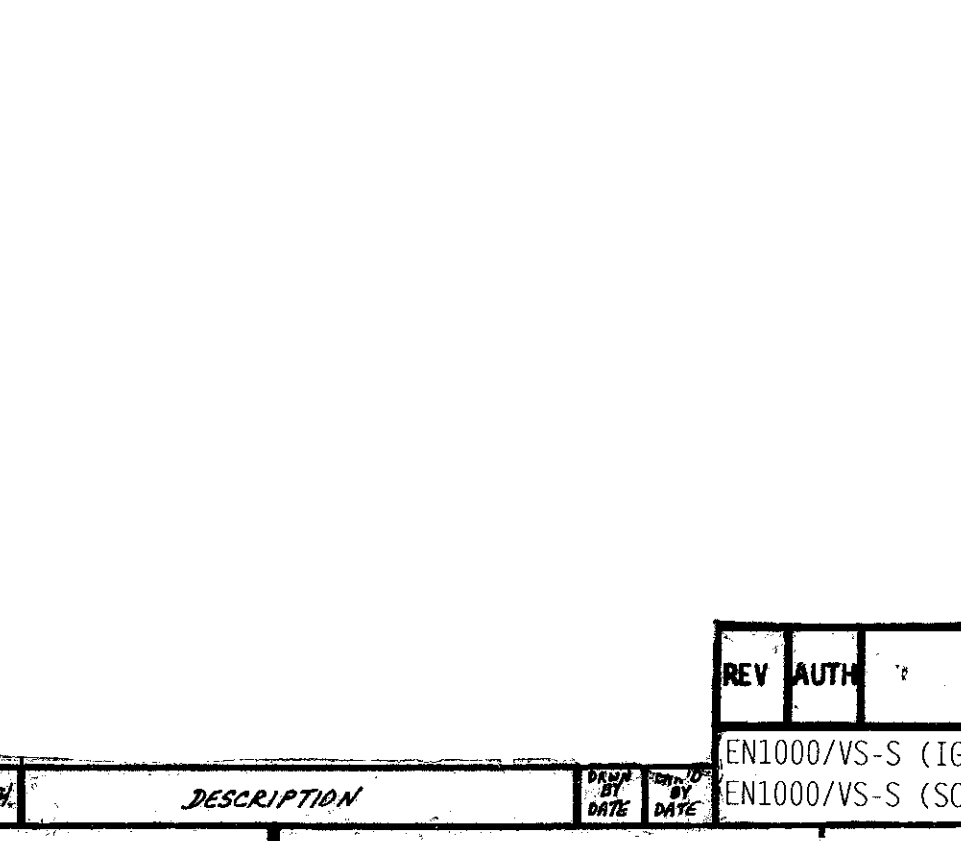
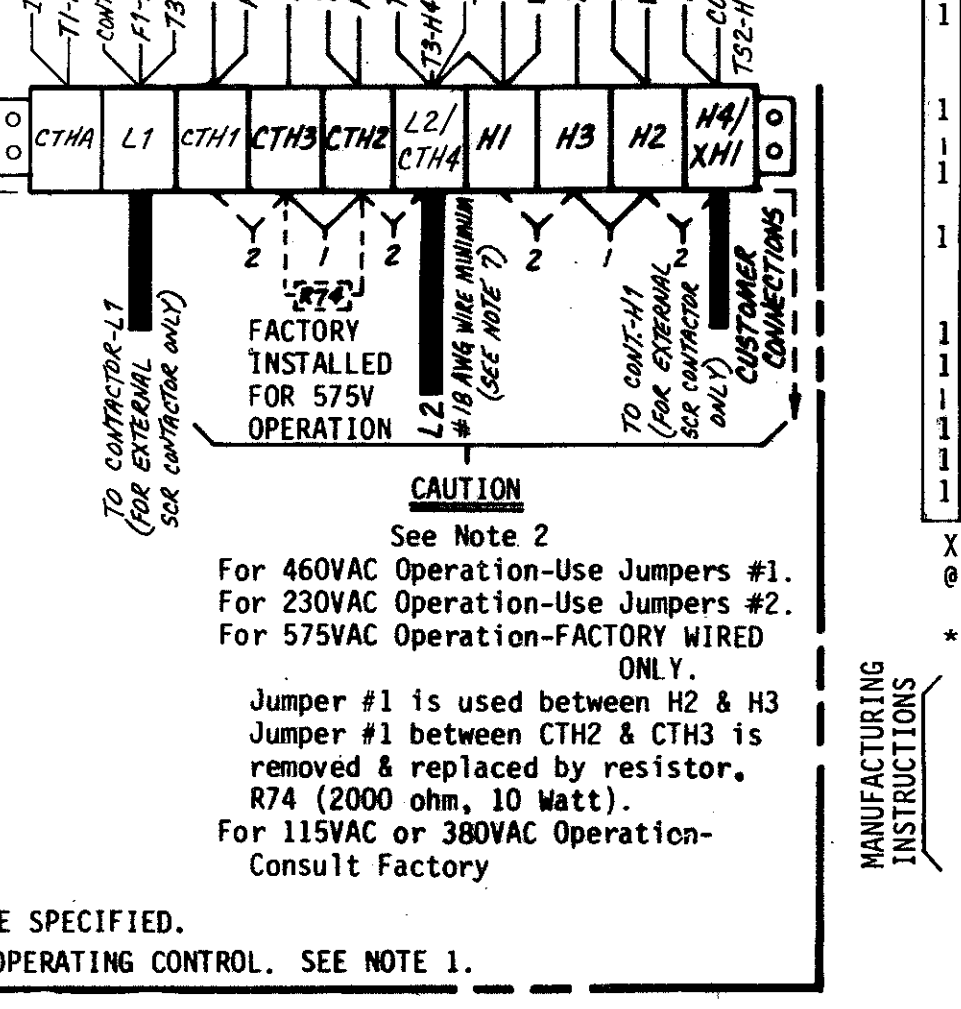
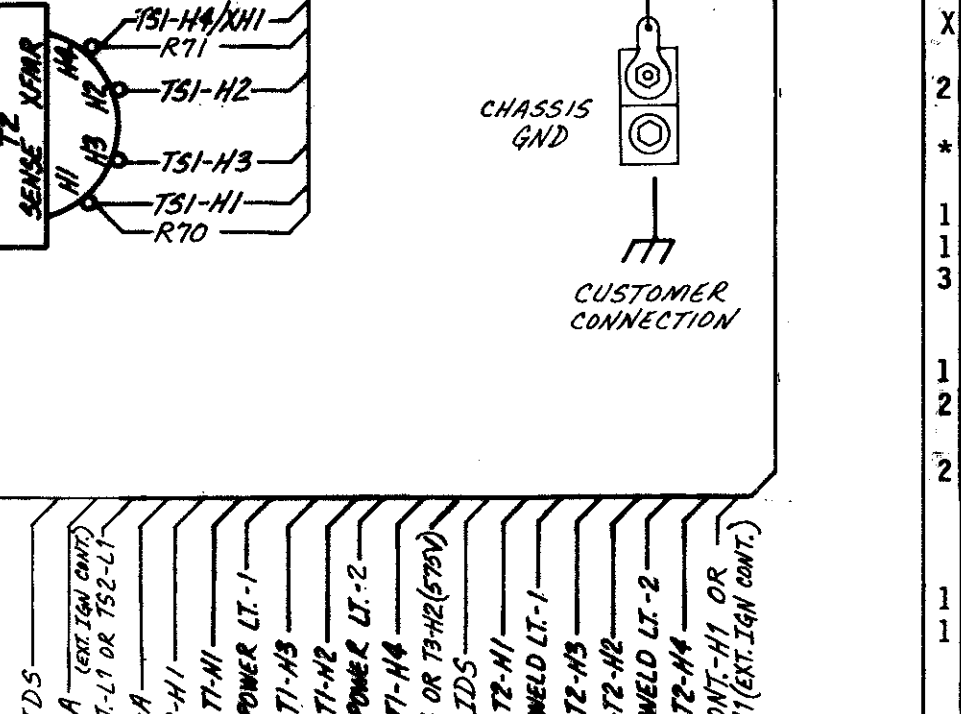
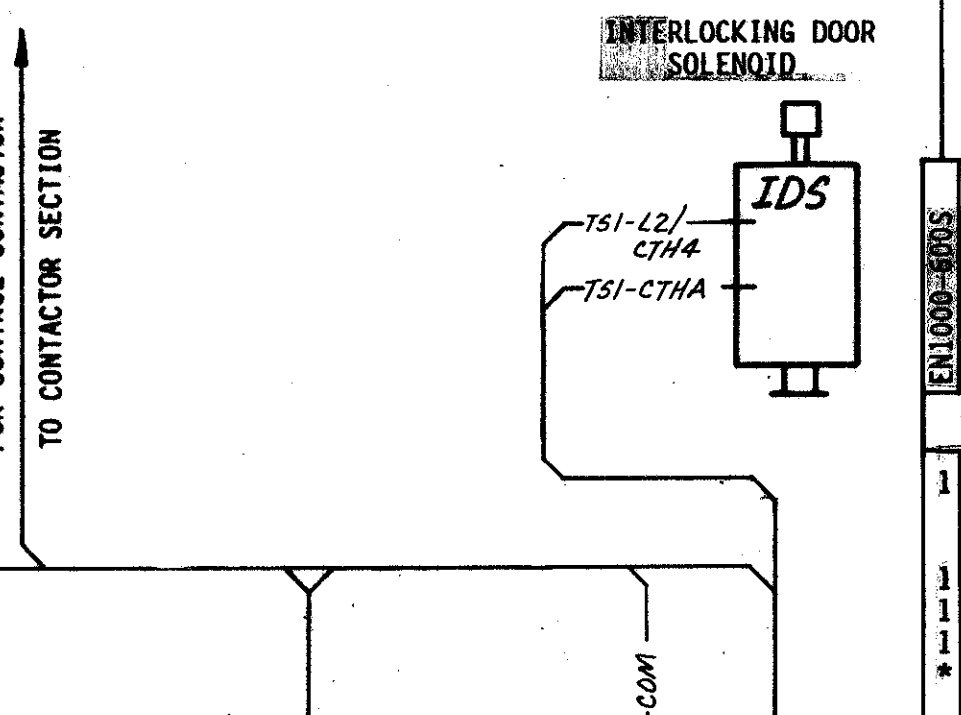
NOTE: SCREW TERMINAL POSITIONS SHOWN IN DASHED LINES ARE PART OF T3 P/N 311001 AFTER 6-16-97. THE NEW SCREWS PERFORM NO ELECTRICAL FUNCTION.

FOR 575 VAC OPERATION SEE NOTE 2.



CAUTION
 CONTROL WIRING FOR 460 VAC - UNLESS OTHERWISE SPECIFIED.
 UNLESS OTHERWISE SPECIFIED - SEE NOTE 2.

CAUTION
 DO NOT OVERTIGHTEN
 SCREWS OR BOLTS
 POWER SUPPLY TO THE FLOW
 MAY BE DAMAGED BY OVERTIGHTENING



QTY.		DESIG.	PART NO.	DESCRIPTION
1	1		600528	Assem., Dial Plate, EN1000, Consisting of:
0	0		600528-001	Assem., Dial Plate, w/Keylock, EN1000, Consisting of:
1	1	PCB1	600541	Assem., Switch, Sequence Control & Display Bd.
0	0	SW1	600531-001	Assem., Switch, Keylock, Momentary, SPST
1	1		540251	Illustrated Panel, Dial Plate, EN1000
1	1		515104	Panel, Display Window, Red Filter, EN1000
1	1		565003	Hole Plug, 3/4" Diam., Black
1	1	TS1	322498	Assem., Harness, Valve Select Bd. to Valve
1	1	PWR.LT.	305001	Lamp, Neon, Red, 230V
1	1	WLD.LT.	305002	Lamp, Neon, Clear, 230V
1	1	J2-J2-J2	322499	Assem., Harness, Term Bd./Ctrl Bd./Valve Select Bd.
1	1	J3	322304	Assem., Harness, Power, 150A, 300/600/1200A Cont's
1	1	J3	322304-002	Assem., Harness, Power, External IGN Tube Cont's
1	1	J3	322304-003	Assem., Harness, Power, External SCR Contactors

QTY.		DESIG.	PART NO.	DESCRIPTION
1	1	TS1	335034	Terminal Strip, 10 Pin, (Part of J3 Harness)
1	1	T1	310001	Transformer, Control, (Part of J3 Harness)
1	1	T2	310002	Transformer, Sense, (Part of J3 Harness)
1	1	T3	311001	Transformer, Valve, 50VA
1	1	T3	311016	Transformer, Valve, 50VA, 575V
1	1	J3	322311	Assem., Harness, IGN Firing Module to Term. Bd.
1	1	J3	311002	Transformer, Valve, 150VA
2	2	R70, 71	225016	Resistor, Power, Surge, 500 Ohm, 100W
2	2	R72, 73 (PCB3)	220505	Resistor, Ignitor, 5 Ohm, 50W (Part of 410318)
1	1	R74	600048	Assem., Resistor, Power, 2000 Ohm, 10W, (For 575V)
1	1	F1	308010	Fuseholder, 1 Pole, Mini, 600V
1	1	F1	307024	Fuse, Control, 1/4A, FNQ-R-1/4 or KLRD-1/4
3	3	F6, 7, 8 (PCB2)	307022	Fuse, 1 Amp, Slow Blow, 2AG, (Part of 410319 & 410319-001)
1	1	F4, 5 (PCB3)	307010	Fuse, Ignitor, 6 Amp, BAF 6, (Part of 410318)
1	1	(R70, 71)	325191	Assem., Wire, Surge Resistor, 18 GA., Black
2	2	(T3)	325149	Assem., Wire, Valve Transformer, 22 GA., Blk.
2	2		346004	Lug, 5/16" Bolt to 2/0 Wire, 600A Cont., L1 & H1
1	1		600613	Assem., Contactor, Thyristor, Air, 150A, 460/575V, w/TLS
1	1		600520	Assem., Cont., Thyristor, Air, 300A, 460/575V, w/TLS
1	1		600669	Assem., Cont., Thyristor, Water, 600A, 460/575V
1	1		300020	Switch, Temp. Limit, (Part of 600520 & 600613)
1	1		346002	Lug, 5/16" Bolt to 4/0 Wire, 1200A Cont., L1 & H1
1	1		600670	Assem., Cont., Thyristor, Water, 1200A, 460/575V
1	1	PCB2	410319	Assem., PCB, Terminal Strip Board, EN1000
1	1	PCB2	410319-001	Assem., PCB, Term. Strip Bd., Ext. Firing, EN1000
1	1	PCB3	410318	Assem., PCB, IGN Firing Module
1	1	(PCB2)	510236	Plate, Mounting, Terminal Strip Board
1	1	PCB4	410328	Assem., PCB, Valve Select 1 of 7
1	1	IDS	346004	Lug, Screw, Chassis GND, 2/0 Wire
1	1	IDS	314001	Assem., Interlocking Door Solenoid Coil Assem Only, IDS
1	1		510015	Cabinet, "S" Subcompact
1	1		510017	Door, Cabinet, "S"
1	1		700110	Instruction, Valve Select 1 of 7
1	1		700105	Manual, EN1000
1	1		421183	Logic Diagram, EN1000 Control
1	1		421180-009	Wiring Diagram, EN1000/VS SERIES, "S" CABINET

X Optional.
 @ Optional Keylock when specified by customer. See Note 8. Pack key in Poly bag 900148 & 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.

REV	AUTH	DESCRIPTION	DATE	CHK BY	DATE
1		ORIGINAL RELEASE			
2		DESCRIPTION			
ENTRON CONTROLS INC					
SCALE	DATE	DRAWN BY	CHK'D BY	APPROVED BY	
1/8"	1/3/02	RHL			
TOLERANCE UNLESS SPECIFIED					
ANGLES: ± 1°			REVISED		
DECIMALS: ± .010			APPROVED BY		
FRACTIONS: ± 1/64			DATE		
WIRING DIAGRAM, EN1000/VS-SERIES, "S" CABINET					
REV	AUTH	DESCRIPTION	DATE	CHK BY	DATE
1		EN1000/VS-S (IGN)			
1		EN1000/VS-150S			
1		EN1000/VS-300S			
1		EN1000/VS-1200S			
1		EN1000/VS-S (SCR)			
DRAWING NUMBER 421180-009					