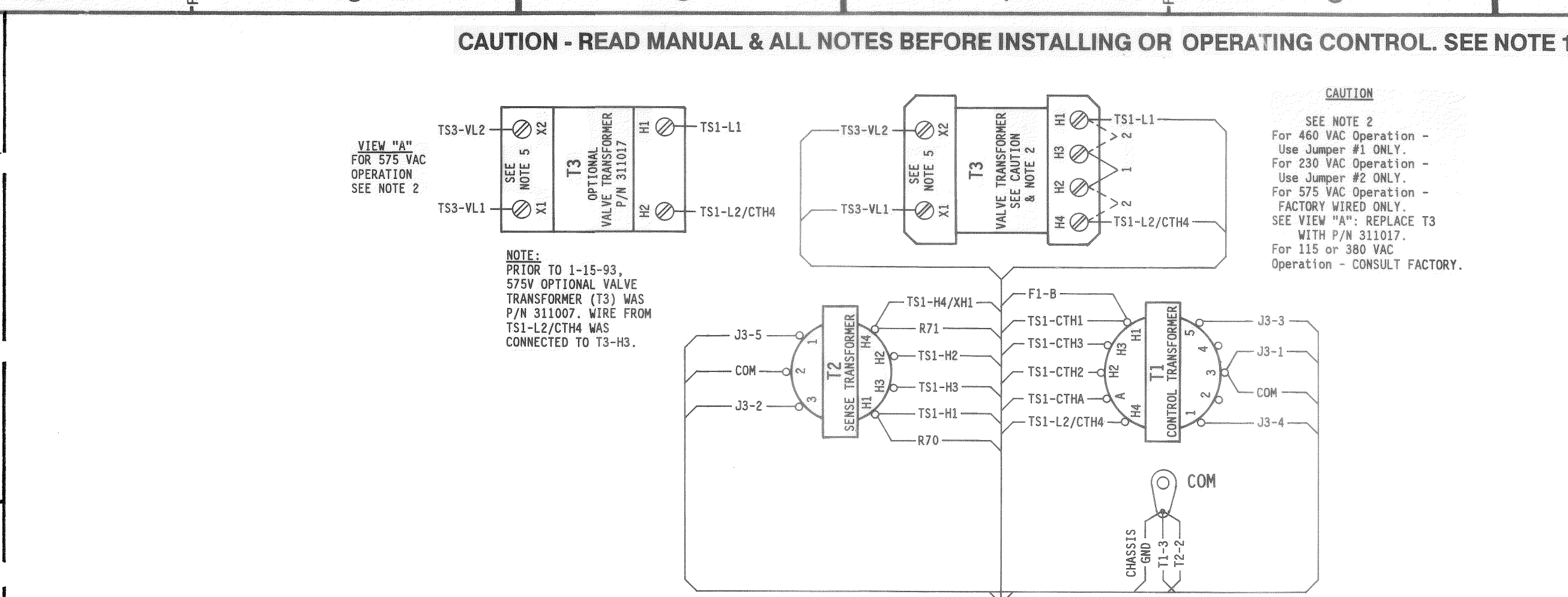


- NOTES:
- It is recommended that control wiring (i.e.: initiation, pressure switch, etc.) be physically separated from the high voltage wiring (115 volts or higher).
  - For 460 VAC Operation - Use Jumper #1 on T3 & TS1. As shipped unless otherwise specified. For 230 VAC Operation - Use Jumper #2 on T3 & TS1. 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 TS1. Use Resistor R74 (2000 Ohm, 10 Watt) in place of Jumper #1 between CTH2 & CTH3 on TS1. For 115 VAC or 380 VAC Operation - CONSULT FACTORY.
  - For Single Stage Pilot Operation - Connect pilot switch to TS1-F53 & TS1-GND. No jumpers required across TS1-F51 & TS1-GND. For Two Stage Pilot Operation - Connect 1st stage pilot switch to TS1-F51 & TS1-GND. Connect 2nd stage pilot switch to TS1-F53 & 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.
  - EN1000-E(IGN) & EN1000-E(SCR): When used, connect Normally Closed (N.C.) Temperature Limit Switch (TLS) across TS1-TLS1/AUX1 & TS1-GND and remove jumper between TS1-TLS1/AUX1 & TS1-GND.
  - When external valve power is supplied to the control. Remove and insulate leads TS3-VL1 & TS3-VL2 on the Terminal Strip Board (PCB2), (from T3-X1 & T3-X2). Connect external AC power supply (24-240 VAC) to TS1-VL1 & TS1-SV2/SV4/VL2. CAUTION: Do not overtighten TS3.
  - VALVE 3 OUTPUT USAGE: TS1-SV5 & TS1-SV6 (Valve 3) can be used for either a Valve output or a Process output. When TS1-SV5 & TS1-SV6 is used as a Valve output use Jumper "A" on TS3. When TS1-SV5 & TS1-SV6 is used as a Process output use Jumper "B" on TS3. CAUTION: Do not overtighten TS3. WARNING: Use of Jumper "B" bypasses control relay contacts to allow a process output without an initiation. SEE MANUAL.
  - Connect TS1-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-E(IGN) & EN1000-E(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-E(SCR), do NOT overtighten J5 & J6.
  - CAUTION: Do NOT set Current Control below 40% for 230 Volt Operation with Ignitron Tube Contactors.



**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 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.

EXT. SCR CONT.		EXT. IGN CONT.		PARTS LIST - CONTROL SECTION		421212-006		
QTY.	DESIG.	PART NO.	DESCRIPTION	QTY.	DESIG.	PART NO.	DESCRIPTION	
1	1	600528	Assem., Dial Plate, EN1000, Consisting of: Assem., Dial Plate, w/Key Switch, EN1000, Consisting of: Assem., Switch, Sequence Control & Display Board	1	1	PCB1	600541	
1	1	600531-001	Assem., Switch, Keylock, Momentary, SPST	1	1	SW1	540251	
1	1	515104	Illustrated Panel, Dial Plate, EN1000	1	1		515104	
1	1	565003	Panel, Display Window, Red Filter, EN1000 Hole Plug, 3/4" Diam., Black	1	1		565003	
1	1	PMR.LT.	305001	Lamp, Neon, Red, 230V	1	1	M.L.D.LT.	305002
1	1	J2-J2	322303	Assem., Harness, Ctrl Bd. to Term. Strip Bd.	1	1	J3	322327-005
1	1	J3	322327-006	Assem., Harness, Power, EN1000-E(IGN)	1	1	J3	322327-006
1	1	J3	322327-006	Assem., Harness, Power, EN1000-E(SCR)				

PARTS LIST - CONTACTOR SECTION

QTY.	DESIG.	PART NO.	DESCRIPTION
1	TS1	395034	Terminal Strip, 10 Pin, (Part of J3 Harness)
2	R70, R71	225016	Resistor, Power, Surge, 500 Ohm, 100W
**	R74	600048	Assem., Resistor, Power, 2000 Ohm, 10W, (For 575V)
1	T1	310001	Transformer, Control, (Part of J3 Harness)
1	T2	310002	Transformer, Sense, (Part of J3 Harness)
1	T3	311002	Transformer, Valve, 150 VA
1	T3	311017	Transformer, Valve, 150 VA, 575V
1	F1	308010	Fuseholder, 1 Pole, Mini, 600V
1	F1	307018	Fuse, Control, 6/10A, BBS 6/10
1	F6, 7, 8(PCB2)	307022	Fuse, 1 Amp, Slow Blow, 246, (Part of 410319-001)
1	(R70, R71)	325024	Assem., Wire, Surge Resistor, 18 Ga., Black
2	(T3)	325149	Assem., Wire, Valve Transformer, 22 Ga., Black
1	PCB3	410318	Assem., PCB, IGN Firing Module
2	R72, R73(PCB3)	310002	Resistor, Ignitor, 5 Ohm, 50W, (Part of 410318)
2	F4, 5(PCB3)	307010	Fuse, Ignitor, 6 Amp, BAF 6, (Part of 410318)
1	J5-J5/J6-J6	322311	Assem., Harness, IGN Firing Module to Term. Bd.
1	PCB2	410319-001	Assem., PCB, Terminal Strip Board, Ext. Firing, EN1000
1	(PCB2)	346004	Lug, Screw, Chassis GND, 2/0 Wire
1	(PCB2)	510236	Plate, Mounting, Terminal Strip Board
1	IDS	600044	Assem., Interlocking Door Solenoid
1		314001	Coil Assem. Only, IDS
1		510238	Cabinet, Control Style "E"
1		510241	Door, Cabinet, Style "E"
1		700105	Manual, EN1000
1		421183	Logic Diagram, EN1000 Control
1		421212-006	Wiring Diagram, EN1000-E(IGN) or -E(SCR), "E" Cabinet

