

**PARTS LIST - CONTROL SECTION**

421214-050

QUANTITY	DESIG.	PART NO.	DESCRIPTION
1	PCB1	600585	Assem., Dial Plate, EN1000 Cascade, Consisting of: Assem., Switch, Front Panel Display Board, 540248
1		515093	Display Window, Panel, Red Filter, Cont. & Valve, EN1000 Cascade
1		515104	Display Window, Panel, Red Filter, EN1000 Cascade
1	PCB5	410324	Assem., PCB, Control Weld & Valve Indicator Board, EN1000 Casc.
1	PCB6	410347	Assem., PCB, RS485 Driver Bd.
1	PCB3	410321	Assem., PCB, Program Board, EN1000 Cascade/Multi-Valve
1	SW1	600551-001	Assem., Switch, Keylock, Interconnect, 3PS
1		560004	Hole Plug, 3/4" Dia., Black, (For Keylock Hole)
1	J3	322340-004	Assem., Harness, Power, Door Mounted
1	J4	322341-004	Assem., Harness, Power, Side Mounted
1	J4-J4-J4-J4	322523	Assem., Harness, Seq. Disp. Bd./Prgram Bd./LED Indicator Bd./485 Driver Bd.
1	J4-J4-J4-J4	322524	Assem., Harness, Seq. Display Bd./Prgram Bd./LED Indicator Bd./485 Driver Bd. Side
1	J4A-J4A-J4A	322343	Assem., Harness, Program Bd./Output Bd./Input Bd., Door Mt'd.
1		322344	Assem., Harness, Program Bd./Output Bd./Input Bd., Side Mt'd.
1	J7-1	322346	Assem., Harness, Program Bd. to Firing Board, Door Mounted
1	J7-1	322347	Assem., Harness, Program Bd. to Firing Board, Side Mounted

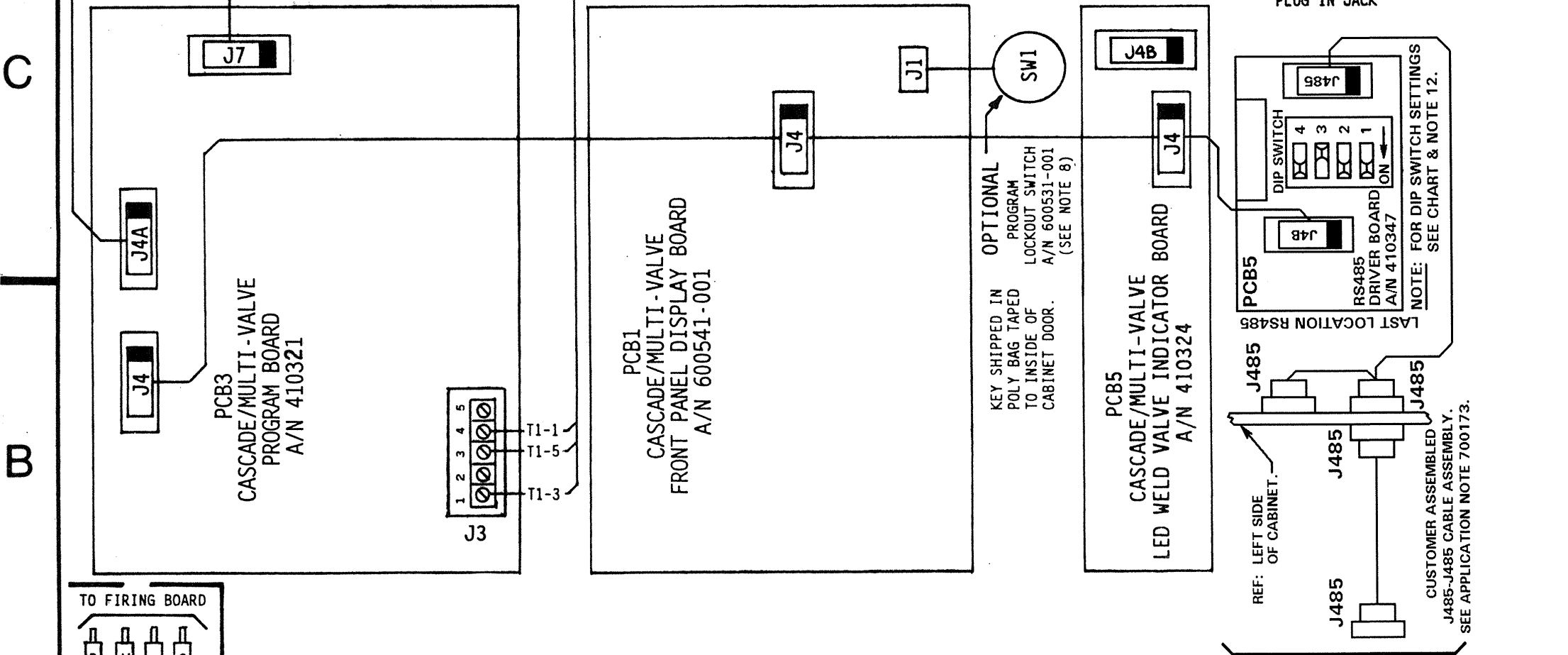
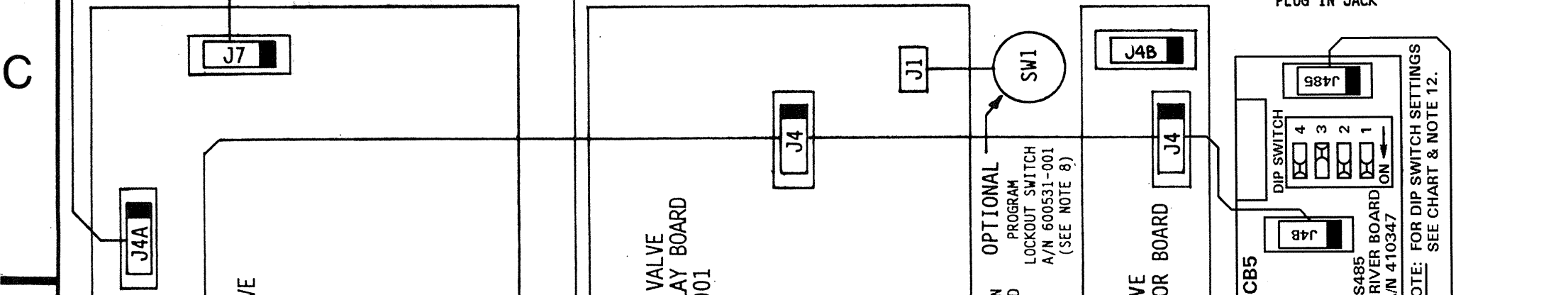
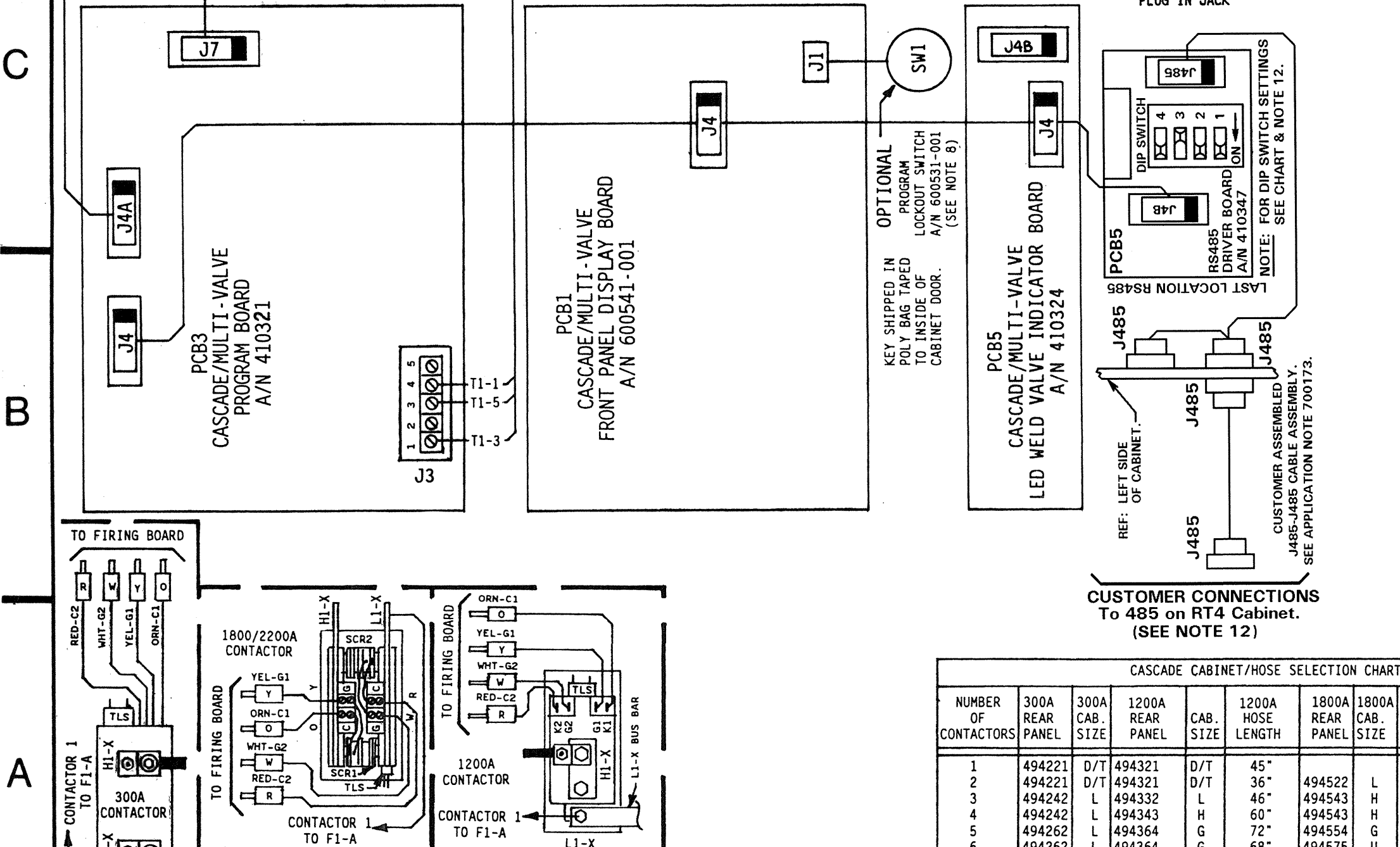
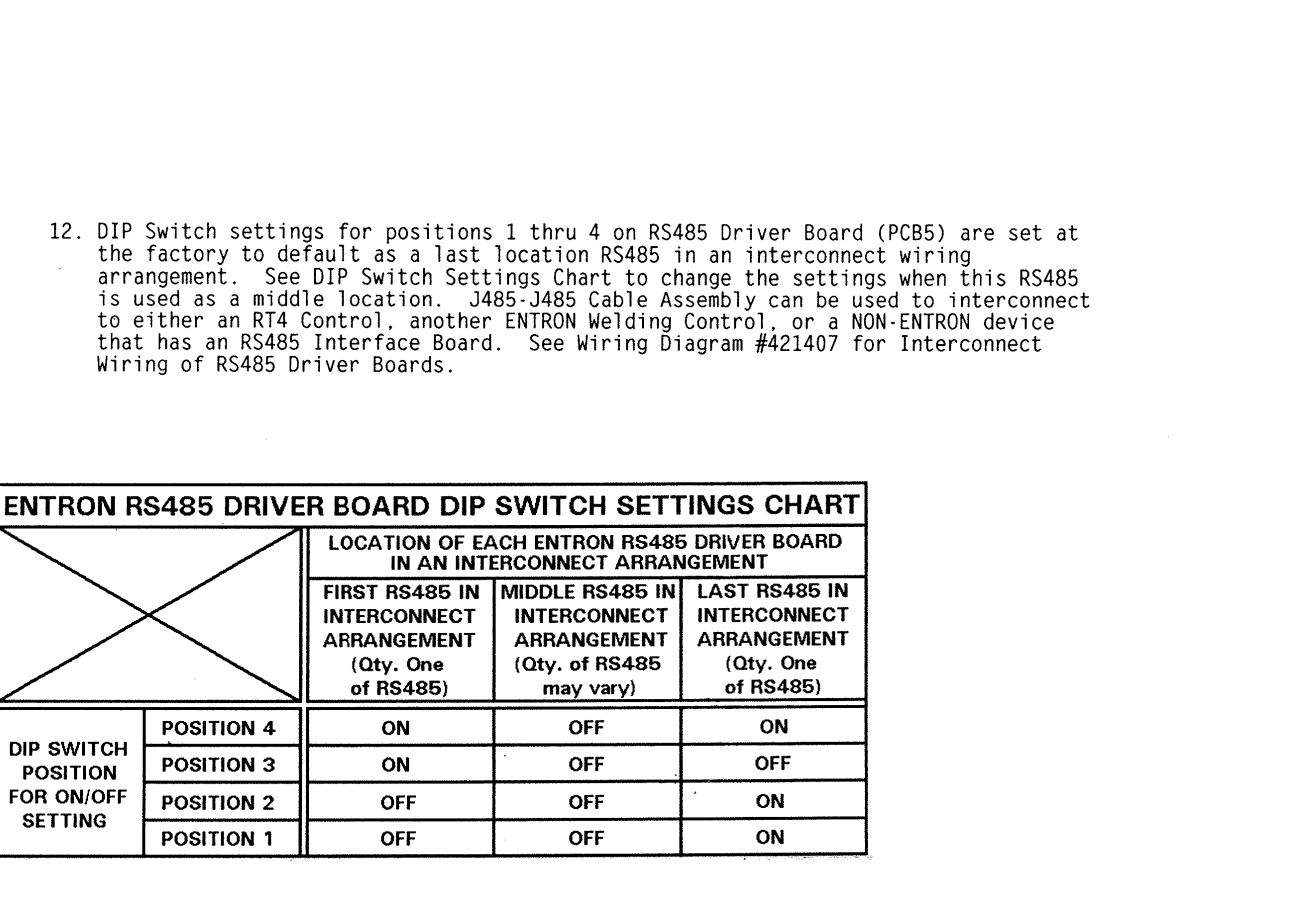
**PARTS LIST - CONTACTOR SECTION**

QUANTITY	DESIG.	PART NO.	DESCRIPTION
1	T56	335017	Terminal Strip, 2 Pin, 15A, (For WFS)
1	T59	335024	Terminal Strip, 6 Pin, 20A
1	T1	310001	Transformer, Control, (Part of J3 Harness)
1	T2	311002	Transformer, Valve, 150VA, 230/460V
1	T8	311017	Transformer, Valve, 150VA, 230V
1	T8	311019	Transformer, Valve, 150VA, 380/408/415V
1	T8	311022	Transformer, Valve, 250VA
1	T8	311021	Transformer, Valve, 500VA
1	(T8)	325149	Assem., Wire, Valve Transformer, 22 Ga., Black
1-3		341040	Insulator, Standoff, L2 Bus Bar
1		346011	Lug, Screw, 1/4" Bolt to 2/0 Wire, L1, L2, & H1
1		346015	Lug, Screw, 1/4" Bolt to Dual 2/0 Wire, L2 Bus Bar
1		346002	Lug, Screw, 1/4" Bolt to 2/0 Wire, L1, L2, & H1
1		346006	Lug, Screw, 1/4" Bolt to Dual 4/0 Wire, L2 Bus Bar
1		346005	Lug, Screw, 1/4" Bolt to 350 MCM Wire, L1, L2, & H1
1		346003	Lug, Screw, 1/4" Bolt to 350 MCM Wire, L2 Bus Bar
1		346003	Lug, Screw, 1/4" Bolt to 500 MCM Wire, L1, L2, & H1
1		346016	Lug, Screw, 1/4" Bolt to Dual 500 MCM Wire, L2 Bus Bar
1		300208	CABLE, WELD, 4-CON, 24AWG, 1500V, 15/16" DIA.
1		600520	Assem., Contactor, Air, 300A, W/LS, 460/575V
1		600520-004	Assem., Contactor, Air, 300A, W/LS, 460/575V, w/o L1 Lug
1-8		600598	Assem., Contactor, Water, 1200A, 460/575V
1-8		600549	Assem., Contactor, Water, 1800A, 460/575V
1-8		600535	Assem., Contactor, Water, 2200A, 460/575V
2	J485-J485	58186	CONNECTOR, 9 PIN, SCREW TERMINAL, APPROX. 600520-004
1-8	TLS	300029	Switch, Temp. Limit, (N.C.), (Part of 600520 & 600520-004)
1-8		530021	Plate, Mounting, 1800/2200A Contactor
1-8		530136	Bracket, Mounting, 1800/2200A Contactor Plate
1-8		525035-001	Bracket, Mounting, 300A Contactor
1-8		600547-005	Assem., Power Supply, Selectable 230/380/460/575V, Consisting of: Transformer, Sense, (Part of 600547-005)
1-8		225016	Resistor, Power, Surge, 500 Ohm, 100W, (Part of 600547-005)
1-8	(R1,2)	325024	Assem., Wire, Surge Resistor, 18 Ga., Black, (Part of 600547-005)
1-8		410323	Assem., PCB, Firing Board, Cascade, (Mounted on Power Supply)
1	JIN-JOUT	322348	Assem., Harness, Firing Bd., Input to Output
1	JOUT	322339	Assem., Termination Plug, Cascade Firing Bd. (SEE NOTE 7)
1	J74	600048	Assem., Resistor, Power, 2000 Ohm, 10W, (For 575V)
1		308010	Fuseholder, 1 Pole, Mini, 600V, WPC-(LBS)
1		307024	Fuse, Control, 1/4A, FNA-A-1/4 or ALDR-1/4
1		307022	Fuse, 1 Amp, Slow Blow, 2AG, (Part of 410322)
1		346004	Lug, Screw, Chassis GND, 5/16" Bolt to 2/0 Wire
1		410329	Assem., PCB, Terminal Strip Input Bd., Cascade
1		410332	Assem., PCB, Terminal Strip Output Bd., Cascade
2		510236	Plate Mounting, Terminal Strip Input & Output Boards

**HAZARDOUS VOLTAGE**  
FROM ONE OR MORE SOURCES  
Turn off all voltage sources before touching any components.  
Electrical shock or flash will cause severe injury or death.

**NOTICE**  
FOR SERVICE ON THIS CONTROL  
CONTACT YOUR MACHINE Dealer OR ENTRON CONTROLS LLC.  
DIRECTLY: (864) 416-0190  
601 HIGH TECH COURT  
GREENSBORO, NC 27409  
FAX: (864) 416-0195

- 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 T8 & T59. Connect Jumper #13 (Yellow) to Resistor(s) R2-X-2 (from T2-H4) on Power Supply's. As shipped unless otherwise specified.
  - For 230 VAC Operation - Use Jumper #2 on T8 & T59. Connect Jumper #13 (Yellow) to Resistor(s) R2-X-1 (from T2-H4) on Power Supply's.
  - For 300 VAC Operation - Use Jumper #3 on T8 & T59. Add Jumper #3 between L2 to CTH4 on Terminal Strip T59. Use Jumper #9 between CTH2 & CTH3 on Terminal Strip T59. Connect Jumper #13 (Yellow) to Resistor(s) R2-X-2 (from T2-H4) on Power Supply's.
  - For 575 VAC Operation - FACTORY WIRING ONLY. SEE VIEW "A". Replace T8 with P/N 311017. Wire per view "A". Use Resistor R74 (2000 Ohm, 10 Watt) in place of Jumper #1 between CTH2 & CTH3 on Terminal Strip T59. Connect Jumper #13 (Yellow) to Resistor(s) R2-X-2 (from T2-H4) on Power Supply's.
  - ENTRON Supplies Temperature Limit Switch (TLS) P/N 300020 and provides connections to T58 on supplied PCB7 Firing Board(s). Contactor 1 TLS connects to PCB7-1; Contactor 2 TLS connects to PCB7-2, etc.
  - NOTE: SCR & Thyristor TLS will open at temperatures greater than or equal to 150 F. CAUTION: DO NOT overheat T58.
  - When external valve power is supplied to the control. Remove and insulate leads T510-V1 & T510-V2 on the Terminal Strip Output Board (PCB4), (from T8-X1 & T8-X2). Connect external AC power supply (24-240 VAC) to T510-V1 & T510-V2.
  - This drawing is for Cascade/Multi-Valve Controls for any of 1 thru 8 Contactors and up to 8 Valves. Please note in the contactor section that electrical connections connect from the 1<sup>st</sup> contactor then continue in succession (DIP5 CHAIN) from one to another in numerical order until the last contactor is electrically connected in the Cascade arrangement. In the Parts List, parts with multiple quantities listed, correspond to the various number of cascade contactor arrangements.
  - The Termination Plug A/N 322330 will ALWAYS be located in the "J-OUT" socket on the Firing Board of the last numbered Contactor in the Cascade arrangement.
  - When Optional Program Lockout is specified by customer. Add Switch P/N 600531-001 and Escutcheon P/N 460128 & remove Hole Plug P/N 659003.
  - When Optional Water Flow Switch (WFS) is required, add Terminal Strip T56 (P/N 335017) and wire as shown. Remove Jumper between T51-WFS1/AUX1 & T51-GND.
  - NOTE: WFS will open with flow less than 25 GPM.
  - When Optional Circuit Isolation device is required, list P/N and size of Circuit Isolation device, and appropriate cabinet P/N.



**CASCADE CABINET/HOSE SELECTION CHART**

NUMBER OF CONTACTORS	300A REAR PANEL	300A CAB. SIZE	1200A REAR PANEL	CAB. SIZE	1200A HOSE LENGTH	1800A REAR PANEL	1800A CAB. SIZE	2200A REAR PANEL	2200A CAB. SIZE	2200A HOSE LENGTH
1	494221	D/T	494321	D/T	45"	494522	L	494622	L	45"
2	494223	L	494323	L	56"	494523	H	494623	H	56"
3	494242	L	494342	L	52"	494543	H	494643	H	52"
4	494242	L	494343	H	60"	494543	H	494644	G	63"
5	494242	L	494344	H	68"	494544	H	494644	G	72"
6	494262	L	494364	G	68"	494575	G	494665	U	94"
7	494283	H	494385	U	80"	494575	U	494665	U	90"
8	494283	H	494385	U	76"	494585	U	494665	U	90"

