

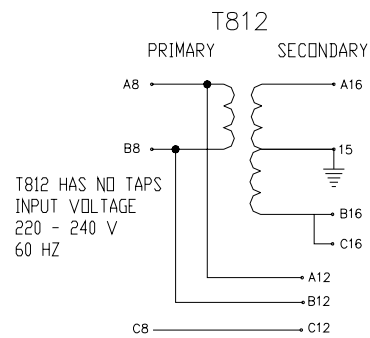
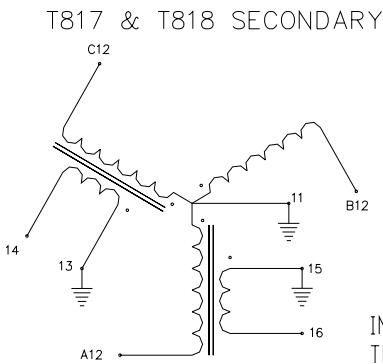
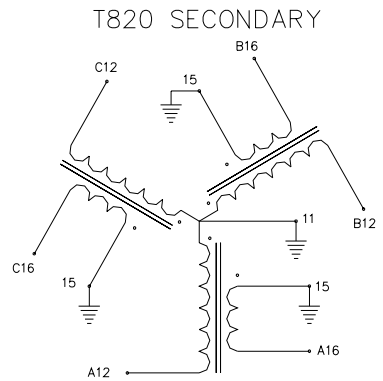
SECTION 1

Electrical / CE interlocks

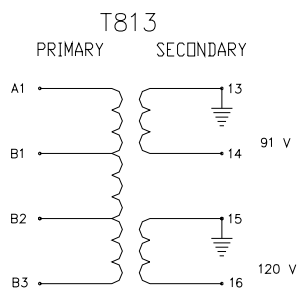
Wrg_1002M_sht_2of6_vmc_electrical

CE TRANSFORMERS & CIRCUIT BREAKERS

TRANSFORMER DIAGRAMS:



T812 HAS NO TAPS
INPUT VOLTAGE
220 - 240 V
60 HZ

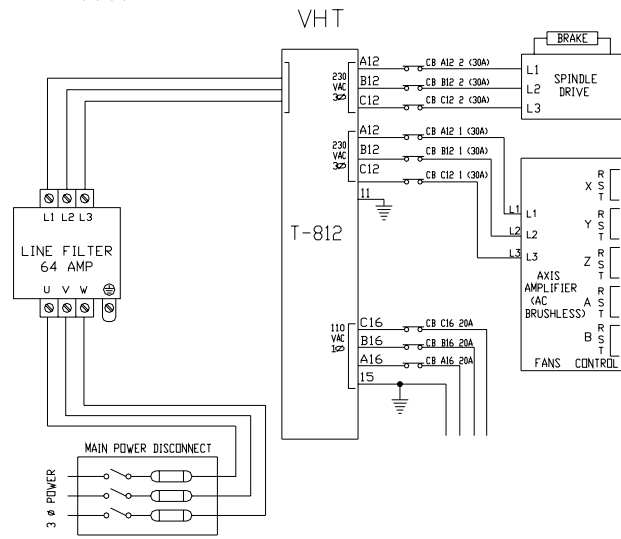
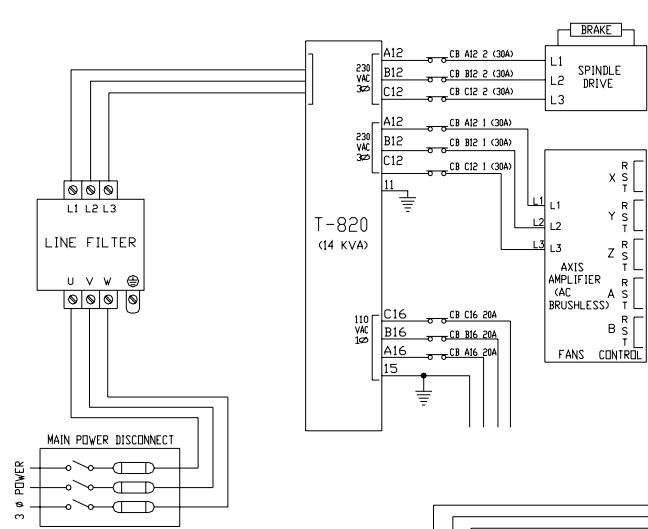


INPUT CONNECTIONS FOR MULTITAP TRANSFORMERS (EACH PHASE A, B & C)

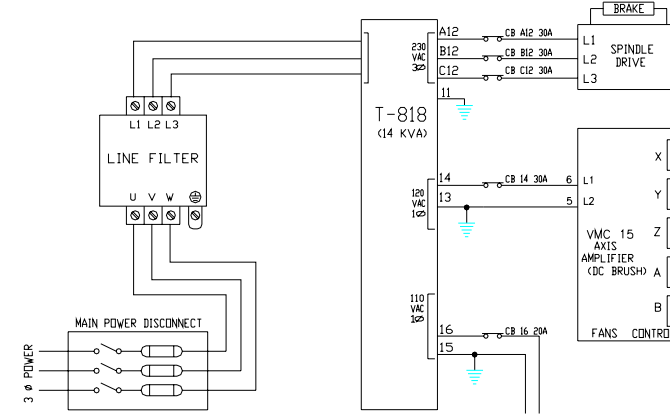
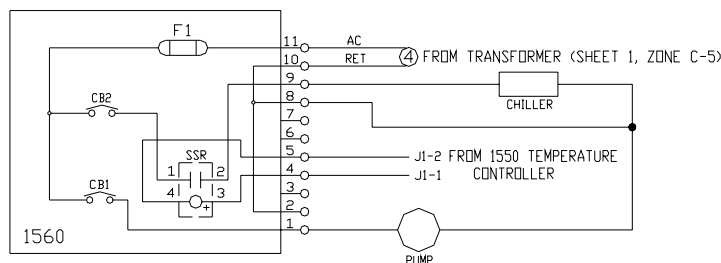
INPUT VOLTAGE	JUMPER 3 PLS	AC INPUT
190	NONE	2
200	2-7	8
210	2-5	6
230	2-6	7
240	2-6	8
250	2-5	7
260	2-5	8
340	NONE	3
350	3-7	8
360	3-5	6
380	3-6	7
390	3-6	8
400	3-5	7
410	3-5	8
440	NONE	4
450	4-7	8
460	4-5	6
480	4-6	7
490	4-6	8
500	4-5	7
510	4-5	8

TRANSFORMER OUTPUTS

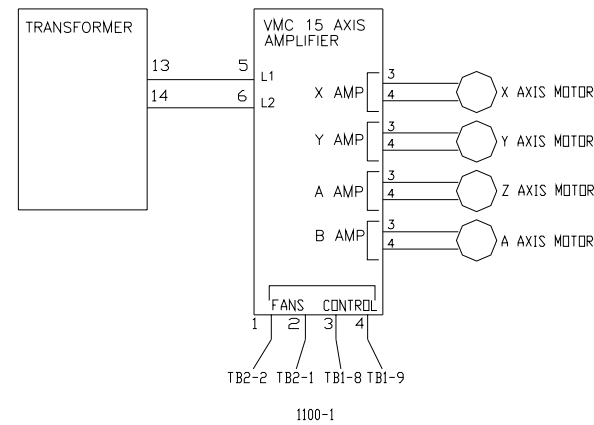
TRANSFORMER	TERMINAL	VOLTAGE
T817, T818, T820	11	GROUND FOR 240 V 3-PHASE
T817, T818, T820	A12, B12, C12	240 V 3-PHASE
T812, T820	A16, B16, C16	120 V SINGLE PHASE
T813, T817, T818	16	120 V SINGLE PHASE
ALL	15	RETURN FOR 16 (GROUNDED)
T813, T817, T818	14	120 V FOR DC AXIS AMPLIFIER CHASIS
T813, T817, T818	13	RETURN FOR 14, (GROUNDED)



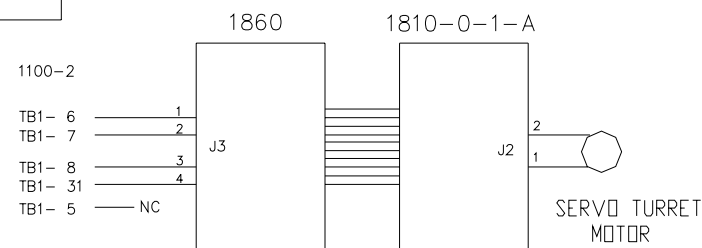
CHILLER



VMC 15 AXIS AMPLIFIERS



SERVO TURRET OPTION



NOTES

1 SENSOR TABLE

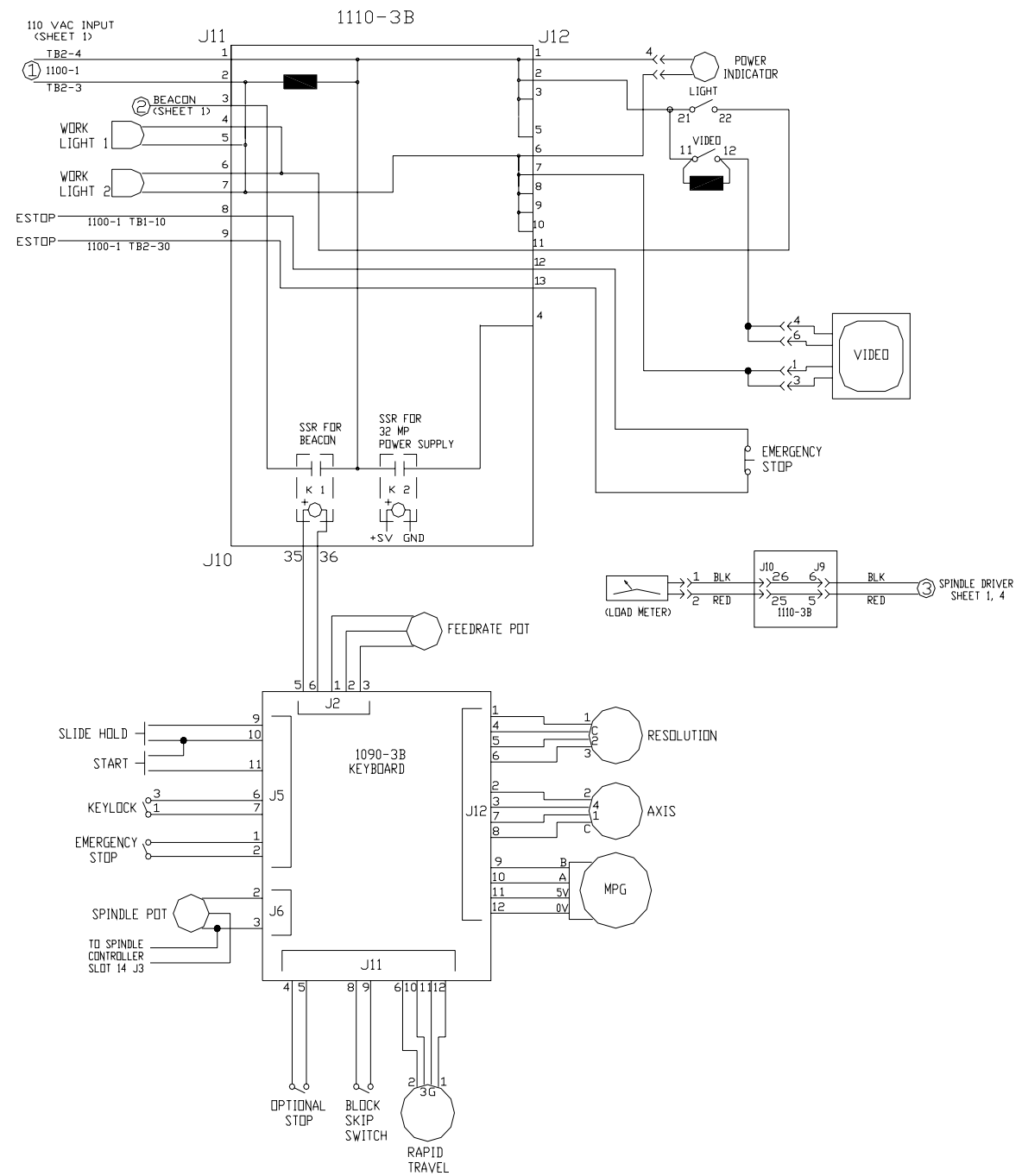
SENSOR	1040	1060		
		A	B	C] 5VDC
SLIDE EXTENDED	70	J12-1	J12-2	J12-3
SLIDE HOME	72	J12-4	J12-5	J12-6
TURRET MOTION	74	J12-7	J12-8	J12-9
DRAWBAR DOWN	50	J9-1	J9-2	J9-3
HIGH RANGE	54	J9-10	J9-11	J9-12
LOW RANGE	58	J11-4	J11-5	J11-6

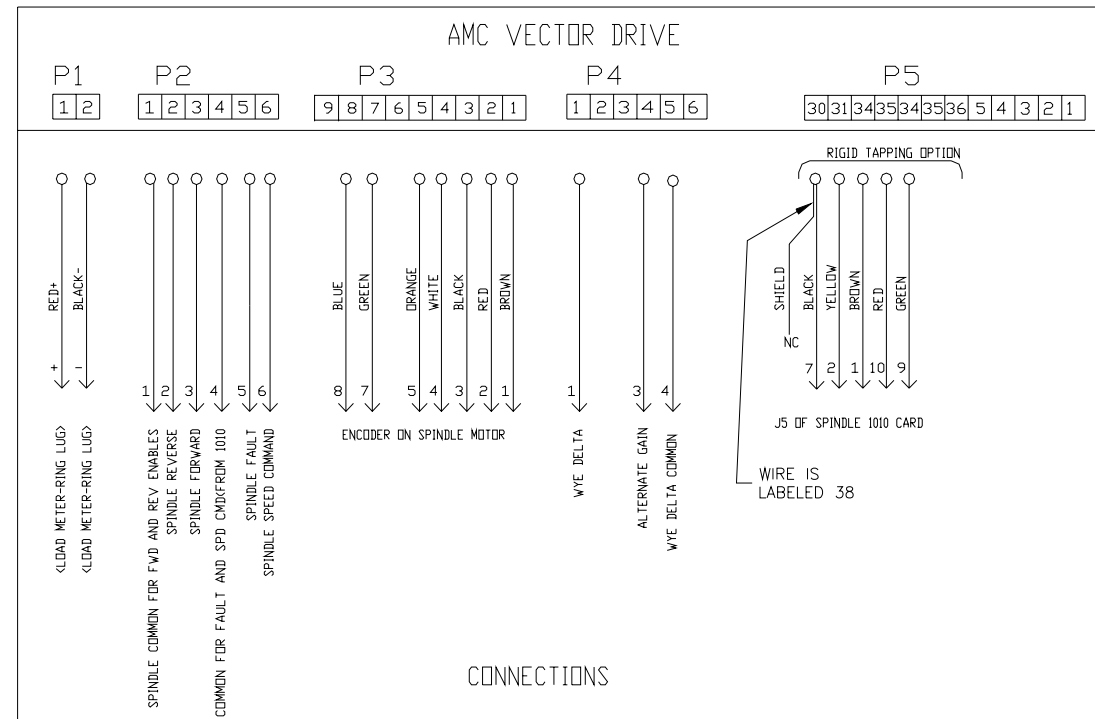
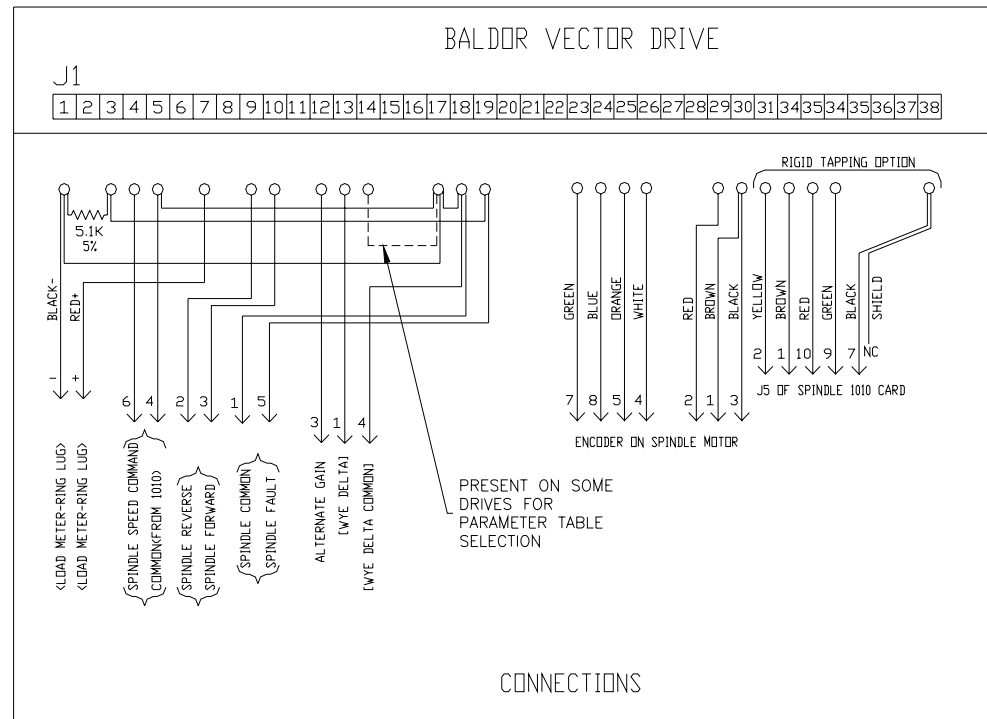
2 TYPICAL OF EACH AXIS (FOR D.C. MOTORS ONLY)

	A	B	C
X AXIS	1010 (X)	1060 J1	X AXIS AMP
Y AXIS	1010 (Y)	1060 J2	Y AXIS AMP
Z AXIS	1010 (Z)	1060 J3	Z AXIS AMP
A AXIS	1010 (A)	1060 J5	A AXIS AMP
B AXIS	1010 (B)	1060 J4	B AXIS AMP

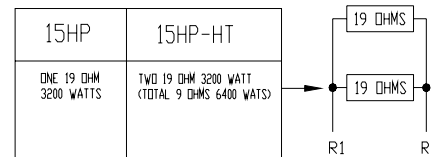
BOARD DESCRIPTION

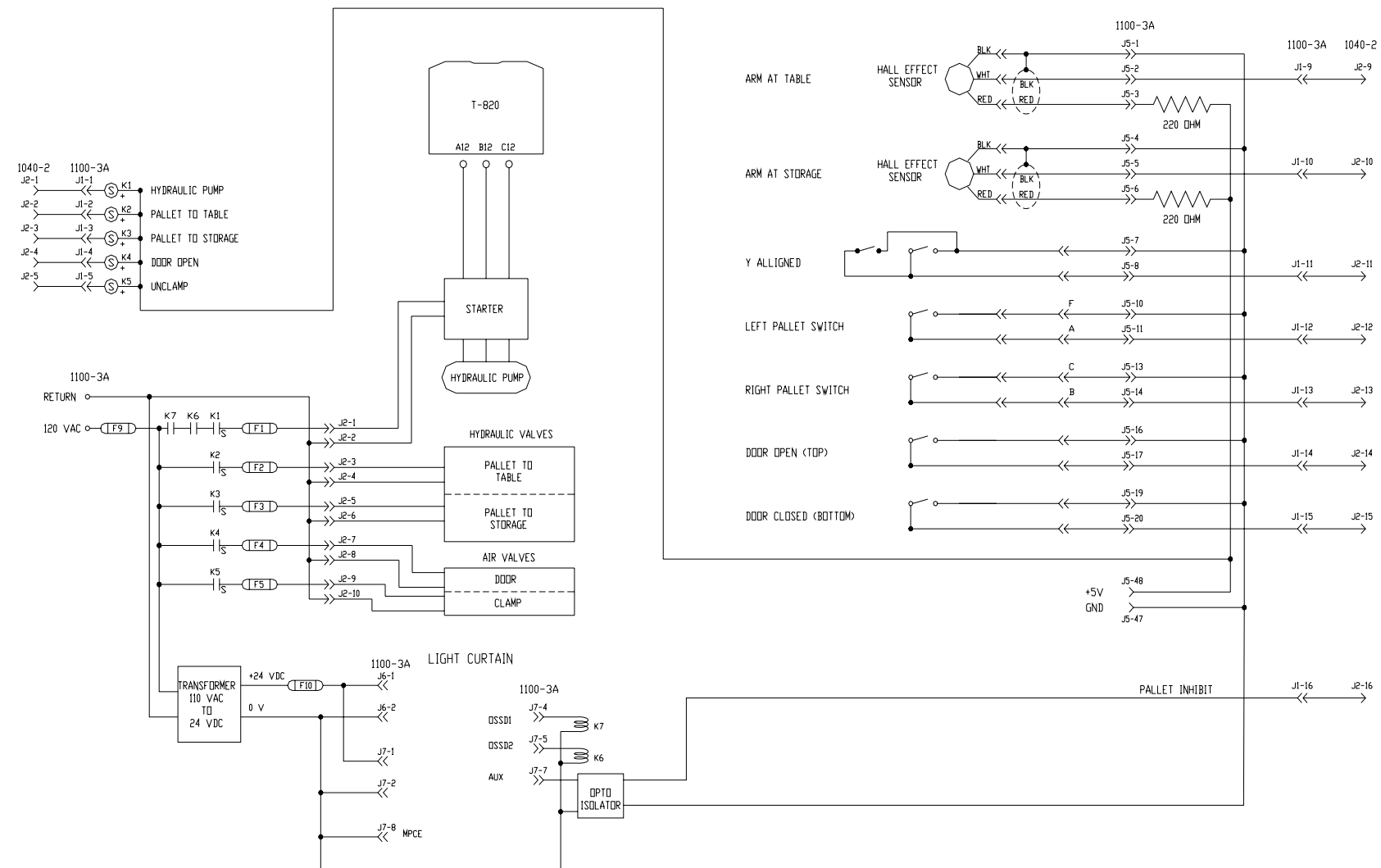
BOARD #	LOCATION	FUNCTION
1010 (X)	SLOT 9	X AXIS CONTROLLER
1010 (Y)	SLOT 10	Y AXIS CONTROLLER
1010 (Z)	SLOT 11	Z AXIS CONTROLLER
1010 (A)	SLOT 13	A AXIS CONTROLLER
1010 (B)	SLOT 12	B AXIS CONTROLLER
1010 (C)	SLOT 14	SPINDLE CONTROLLER
1020	SLOT 15	CLOCKS
1030	SLOT 8	COMPUTER INTERFACE
1040	SLOT 17	MILL INTERFACE
1050	SLOT 16	M FUNCTION
1060	CONTROL CAB.	BACKPLANE
1090	PENDANT	KEYBOARD
1100-1	CONTROL CAB.	POWER DISTRIBUTION
1100-2	JUNCTION BOX	POWER DISTRIBUTION
1110	PENDANT	PENDANT POWER DISTRIBUTION
1220	CONTROL CAB.	POWER SUPPLY
1400	SLOT 5	CPU
1420	SLOT 7	VIDEO
1550	SLOT 3	TEMPATURE CONTROLLER
1560	CONTROL CAB.	CHILLER CONTROLLER
1610	SLOT 5	SOFTWARE MODULE



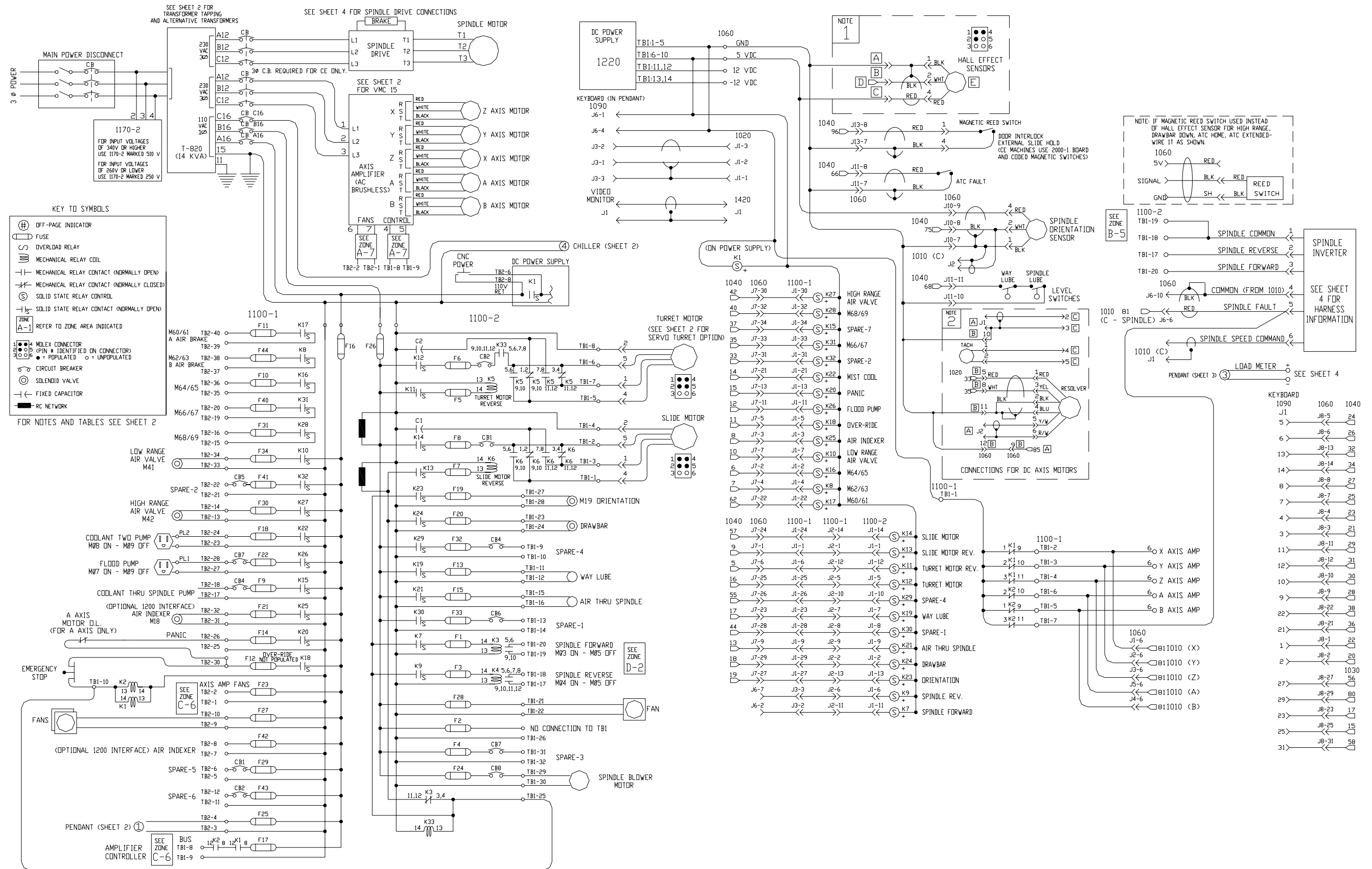


SPINDLE DRIVE BRAKE DESCRIPTION





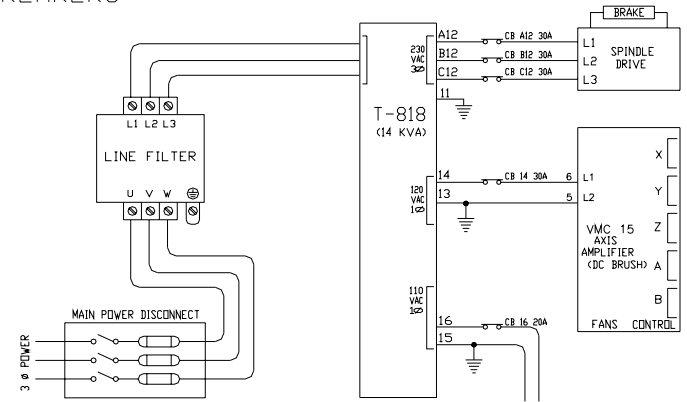
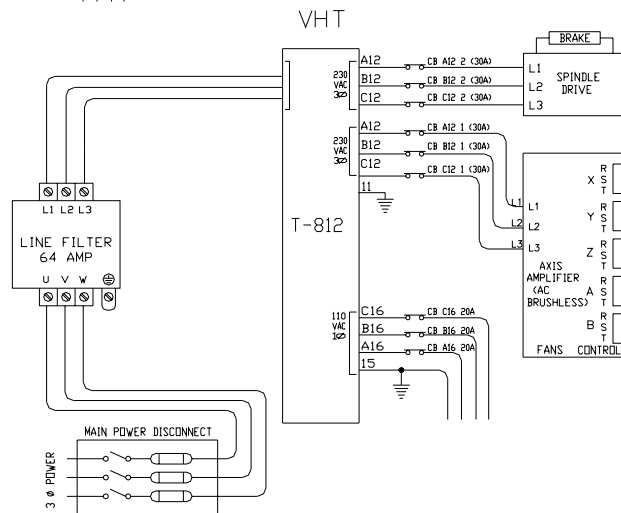
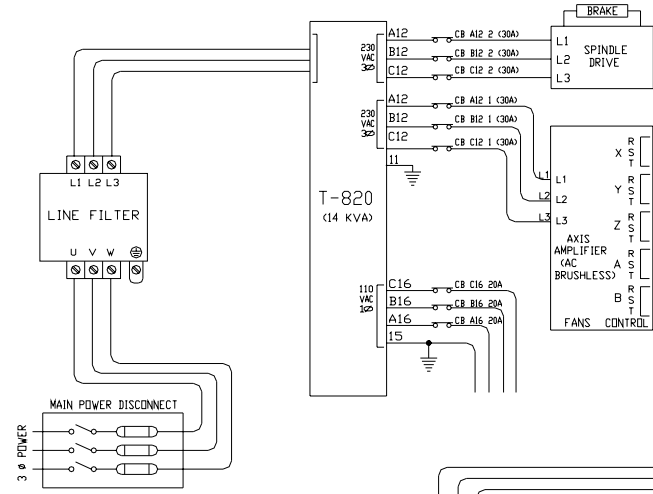
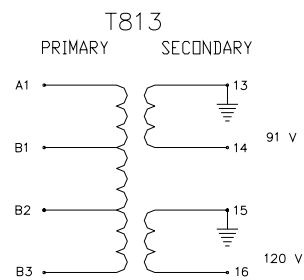
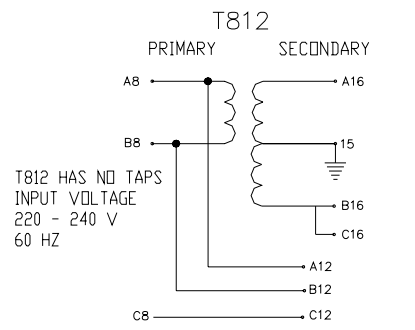
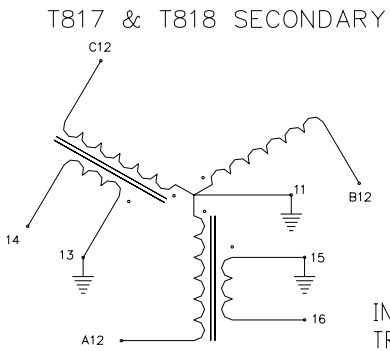
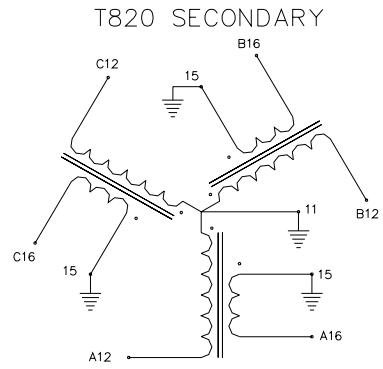
WRG_1002T_sht_1of6_vmc_electrical



WRG_1002T_sht_2of6_vmc_electrical_Note and Option

CE TRANSFORMERS & CIRCUIT BREAKERS

TRANSFORMER DIAGRAMS:



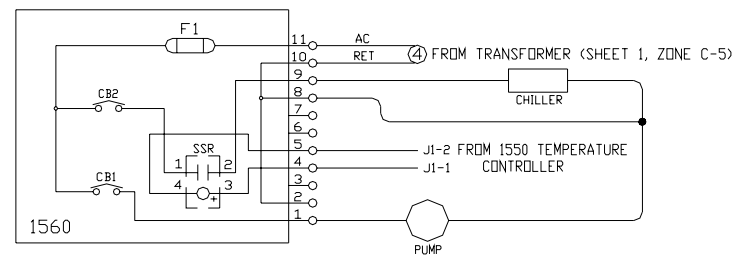
INPUT CONNECTIONS FOR MULTITAP TRANSFORMERS (EACH PHASE A, B & C)

INPUT VOLTAGE	JUMPER 3 PLS	AC INPUT
190	NONE	2
200	2-7	8
210	2-5	6
230	2-6	7
240	2-6	8
250	2-5	7
260	2-5	8
340	NONE	3
350	3-7	8
360	3-5	6
380	3-6	7
390	3-6	8
400	3-5	7
410	3-5	8
440	NONE	4
450	4-7	8
460	4-5	6
480	4-6	7
490	4-6	8
500	4-5	7
510	4-5	8

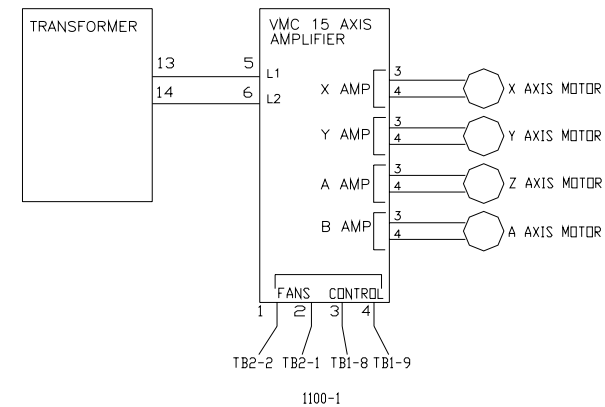
TRANSFORMER OUTPUTS

TRANSFORMER	TERMINAL	VOLTAGE
T817, T818, T820	11	GROUND FOR 240 V 3-PHASE
T817, T818, T820	A12, B12, C12	240 V 3-PHASE
T812, T820	A16, B16, C16	120 V SINGLE PHASE
T813, T817, T818	16	120 V SINGLE PHASE
ALL	15	RETURN FOR 16 (GROUNDED)
T813, T817, T818	14	120 V FOR DC AXIS AMPLIFIER CHASIS
T813, T817, T818	13	RETURN FOR 14, (GROUNDED)

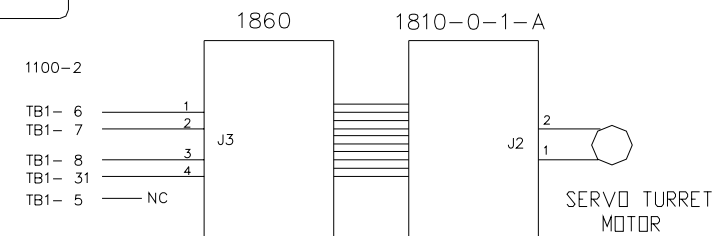
CHILLER



VMC 15 AXIS AMPLIFIERS



SERVO TURRET OPTION



NOTES

1 SENSOR TABLE

SENSOR	1040	1060		
		A	B	C 5VDC
SLIDE EXTENDED	70	J12-1	J12-2	J12-3
SLIDE HOME	72	J12-4	J12-5	J12-6
TURRET MOTION	74	J12-7	J12-8	J12-9
DRAWBAR DOWN	50	J9-1	J9-2	J9-3
HIGH RANGE	54	J9-10	J9-11	J9-12
LOW RANGE	58	J11-4	J11-5	J11-6

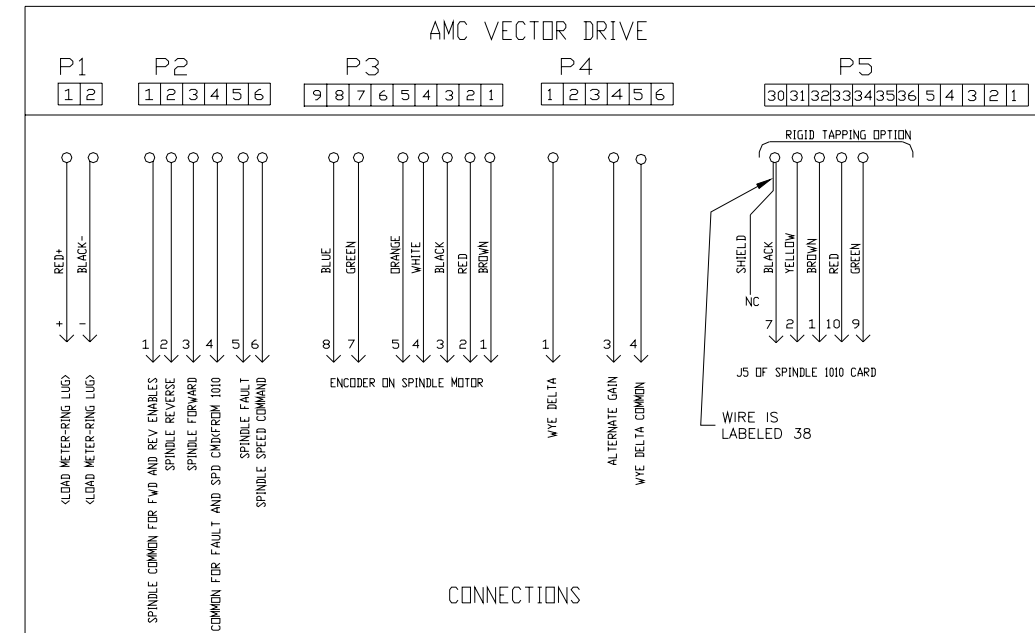
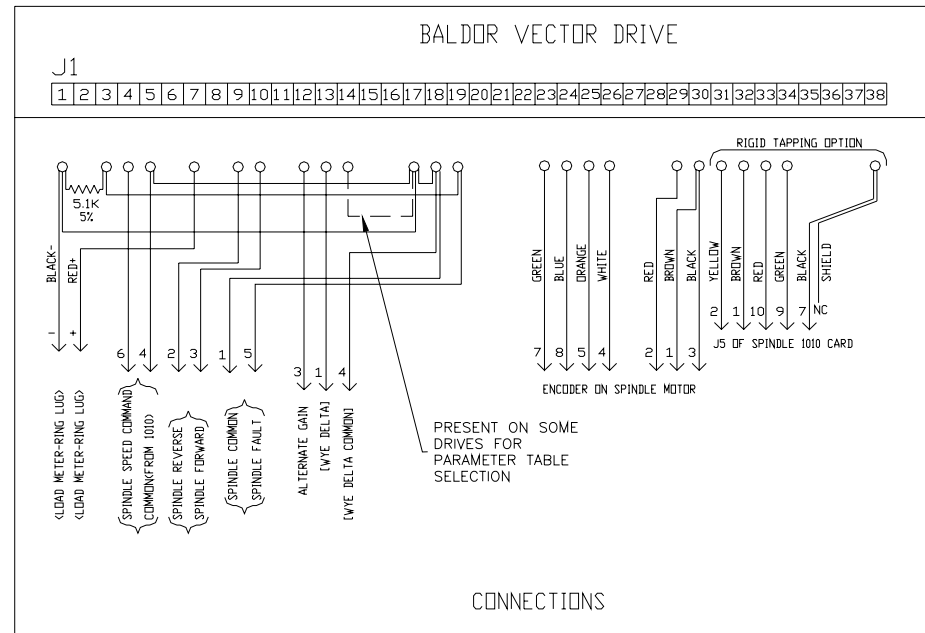
2 TYPICAL OF EACH AXIS (FOR DC MOTORS ONLY)

	A	B	C
X AXIS	1010 (X)	1060 J1	X AXIS AMP
Y AXIS	1010 (Y)	1060 J2	Y AXIS AMP
Z AXIS	1010 (Z)	1060 J3	Z AXIS AMP
A AXIS	1010 (A)	1060 J5	A AXIS AMP
B AXIS	1010 (B)	1060 J4	B AXIS AMP

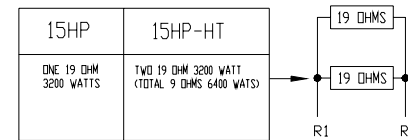
BOARD DESCRIPTION

BOARD #	LOCATION	FUNCTION
1010 (X)	SLOT 9	X AXIS CONTROLLER
1010 (Y)	SLOT 10	Y AXIS CONTROLLER
1010 (Z)	SLOT 11	Z AXIS CONTROLLER
1010 (A)	SLOT 13	A AXIS CONTROLLER
1010 (B)	SLOT 12	B AXIS CONTROLLER
1010 (C)	SLOT 14	SPINDLE CONTROLLER
1020	SLOT 15	CLOCKS
1030	SLOT 8	COMPUTER INTERFACE
1040	SLOT 17	MILL INTERFACE
1050	SLOT 16	M FUNCTION
1060	CONTROL CAB.	BACKPLANE
1090	PENDANT	KEYBOARD
1100-1	CONTROL CAB.	POWER DISTRIBUTION
1100-2	JUNCTION BOX	POWER DISTRIBUTION
1110	PENDANT	PENDANT POWER DISTRIBUTION
1220	CONTROL CAB.	POWER SUPPLY
1400	SLOT 5	CPU
1420	SLOT 7	VIDEO
1550	SLOT 3	TEMPATURE CONTROLLER
1560	CONTROL CAB.	CHILLER CONTROLLER
1610	SLOT 5	SOFTWARE MODULE

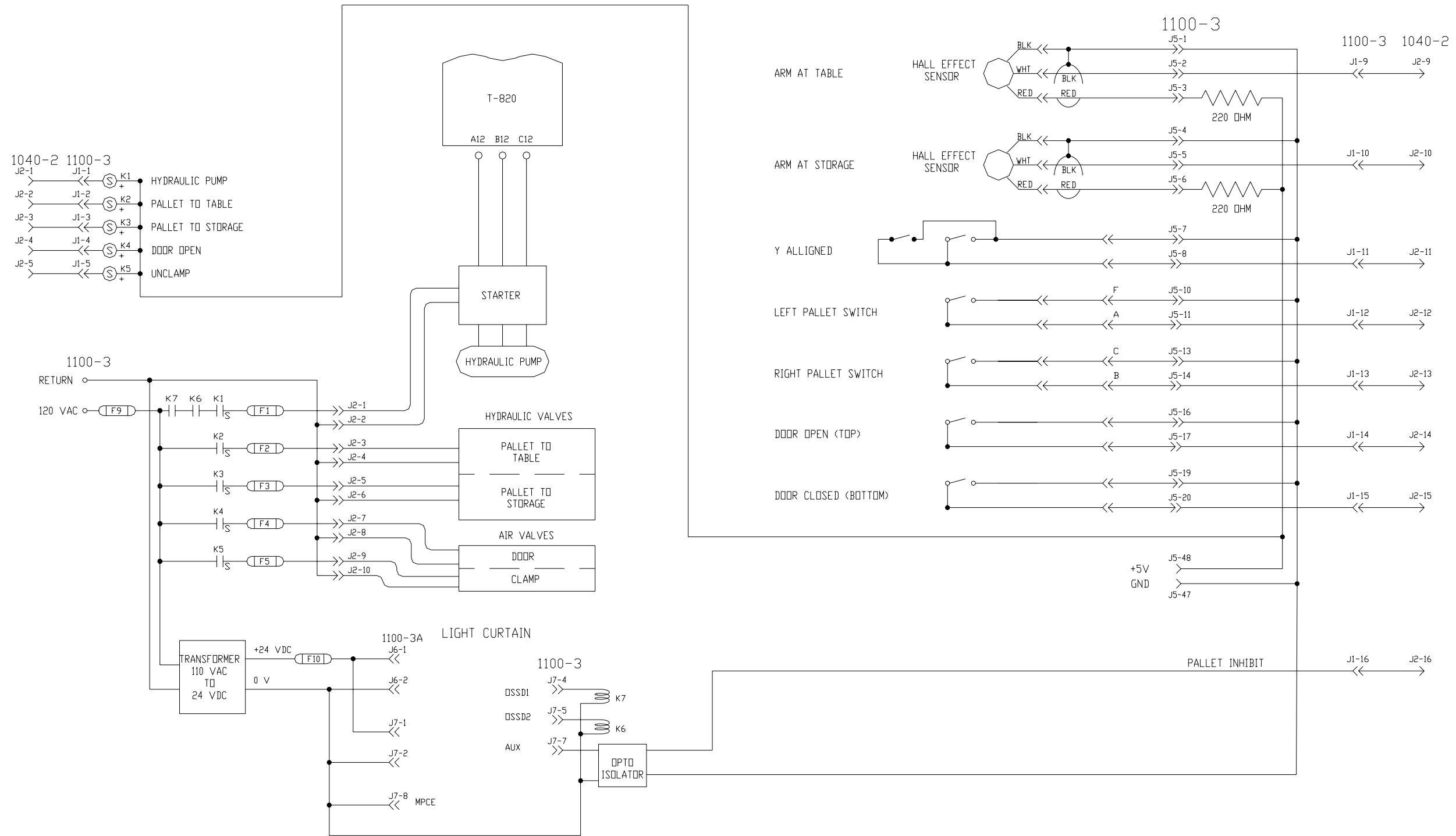
WRG_1002T_sht_4of6_vmc_electrical_Spindle Drive Connections



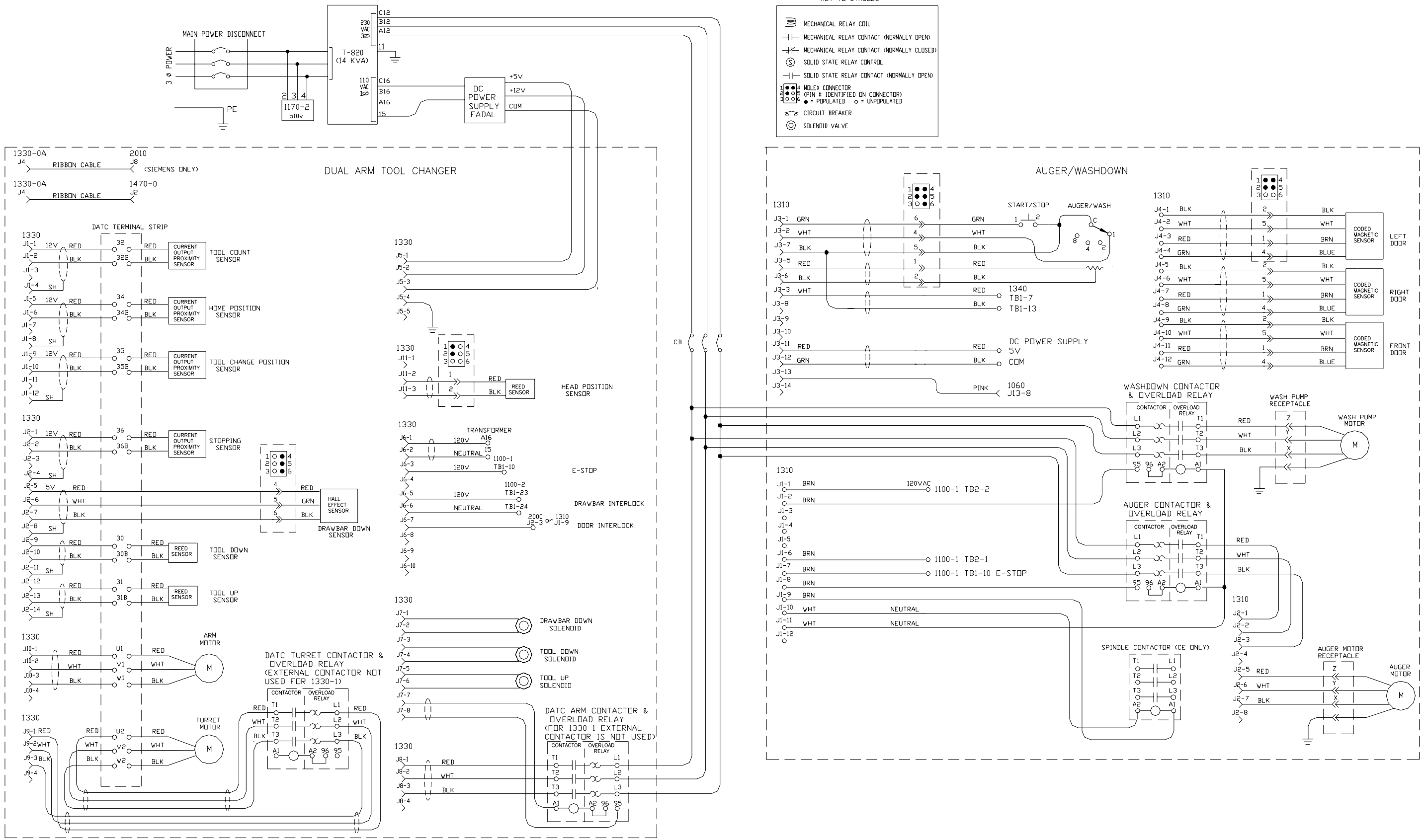
SPINDLE DRIVE BRAKE DESCRIPTION



WRG_1002T_sht_5of6_vmc_electrical_Pallet Changer



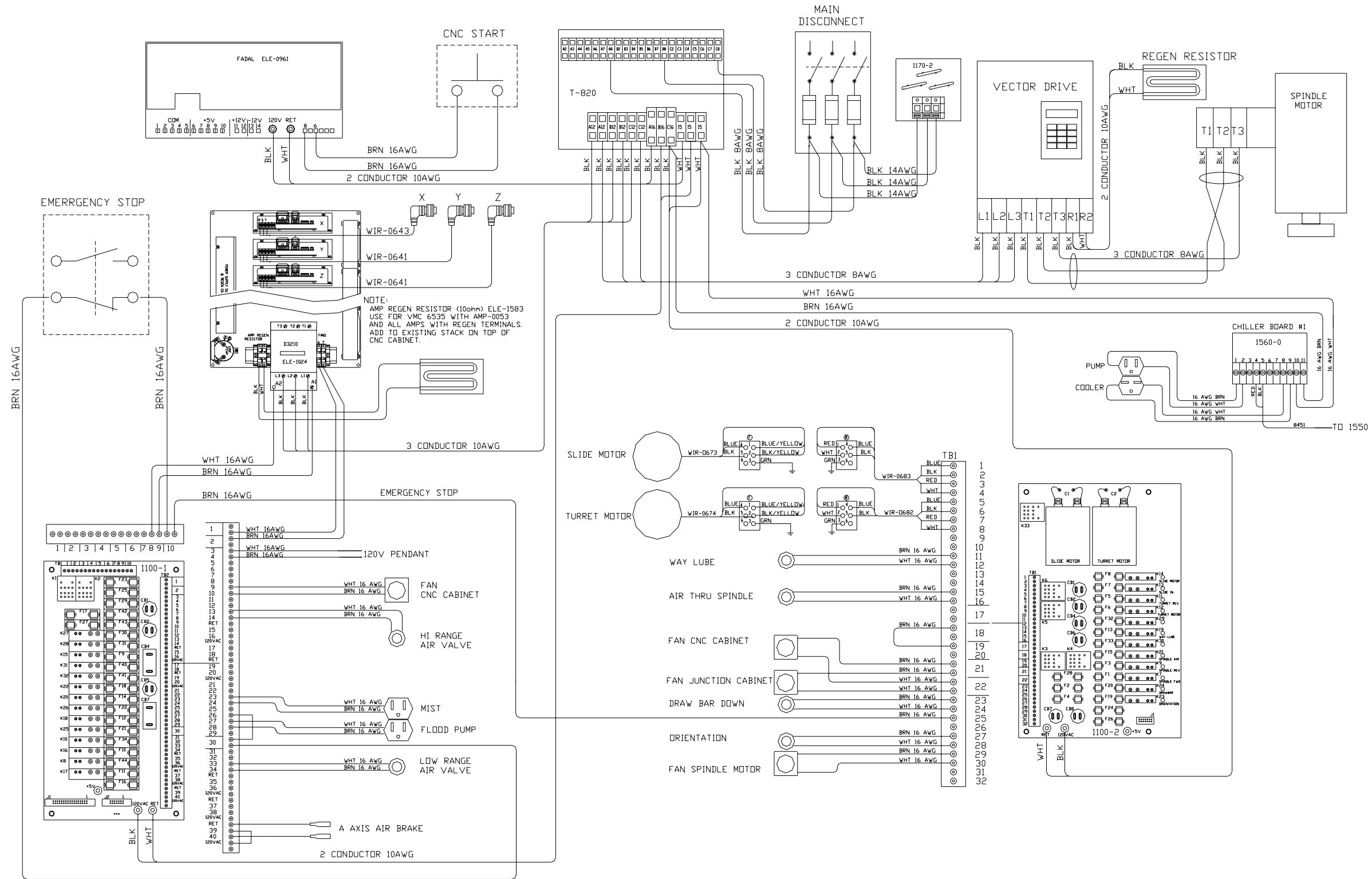
WRG_1002T_sht_6of6_vmc_electrical_Dual Arm and Auger



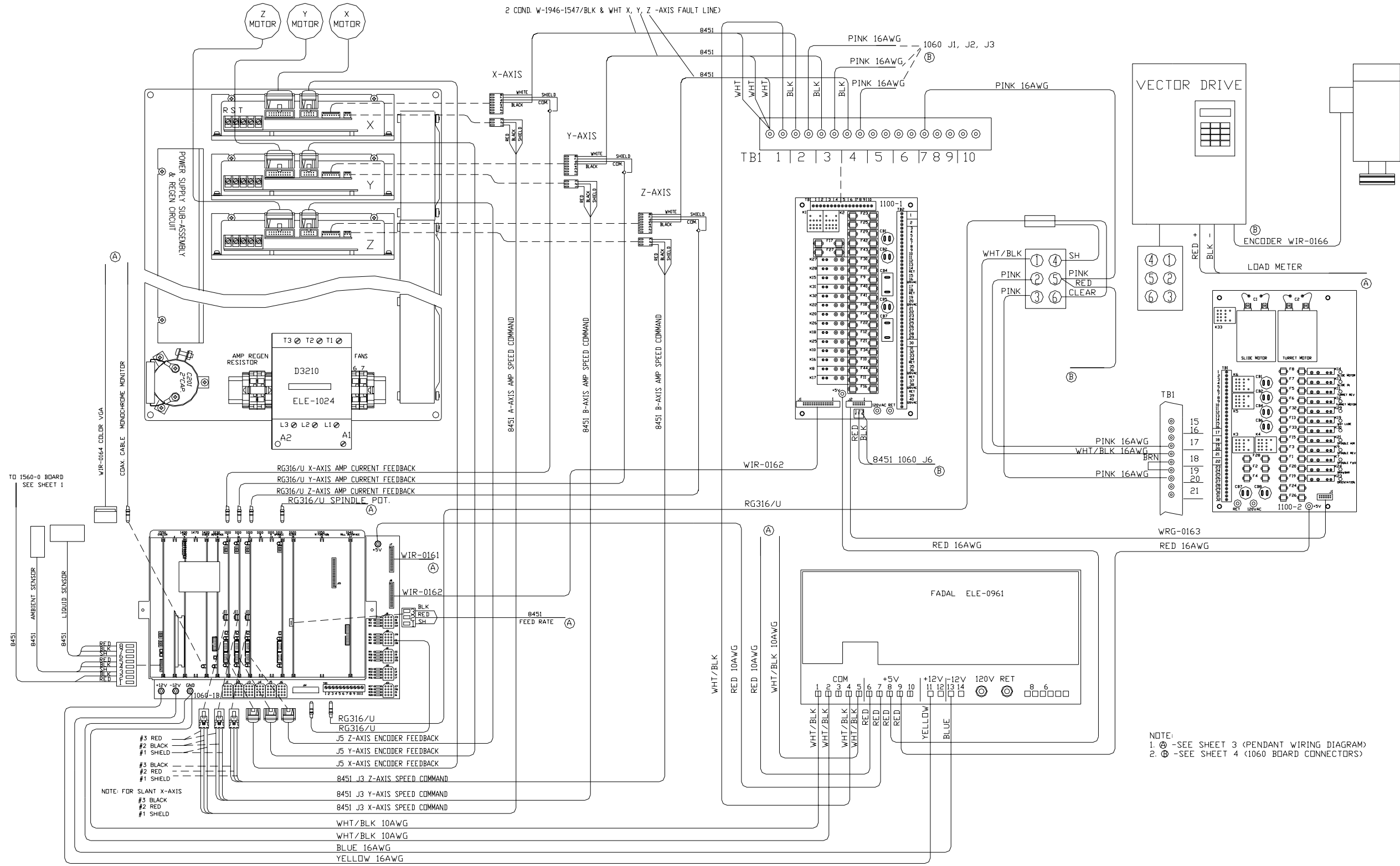
KEY TO SYMBOLS

- MECHANICAL RELAY COIL
- MECHANICAL RELAY CONTACT (NORMALLY OPEN)
- MECHANICAL RELAY CONTACT (NORMALLY CLOSED)
- SOLID STATE RELAY CONTROL
- SOLID STATE RELAY CONTACT (NORMALLY OPEN)
- MOLEX CONNECTOR (PIN # IDENTIFIED ON CONNECTOR)
- = POPULATED ○ = UNPOPULATED
- CIRCUIT BREAKER
- SOLENOID VALVE

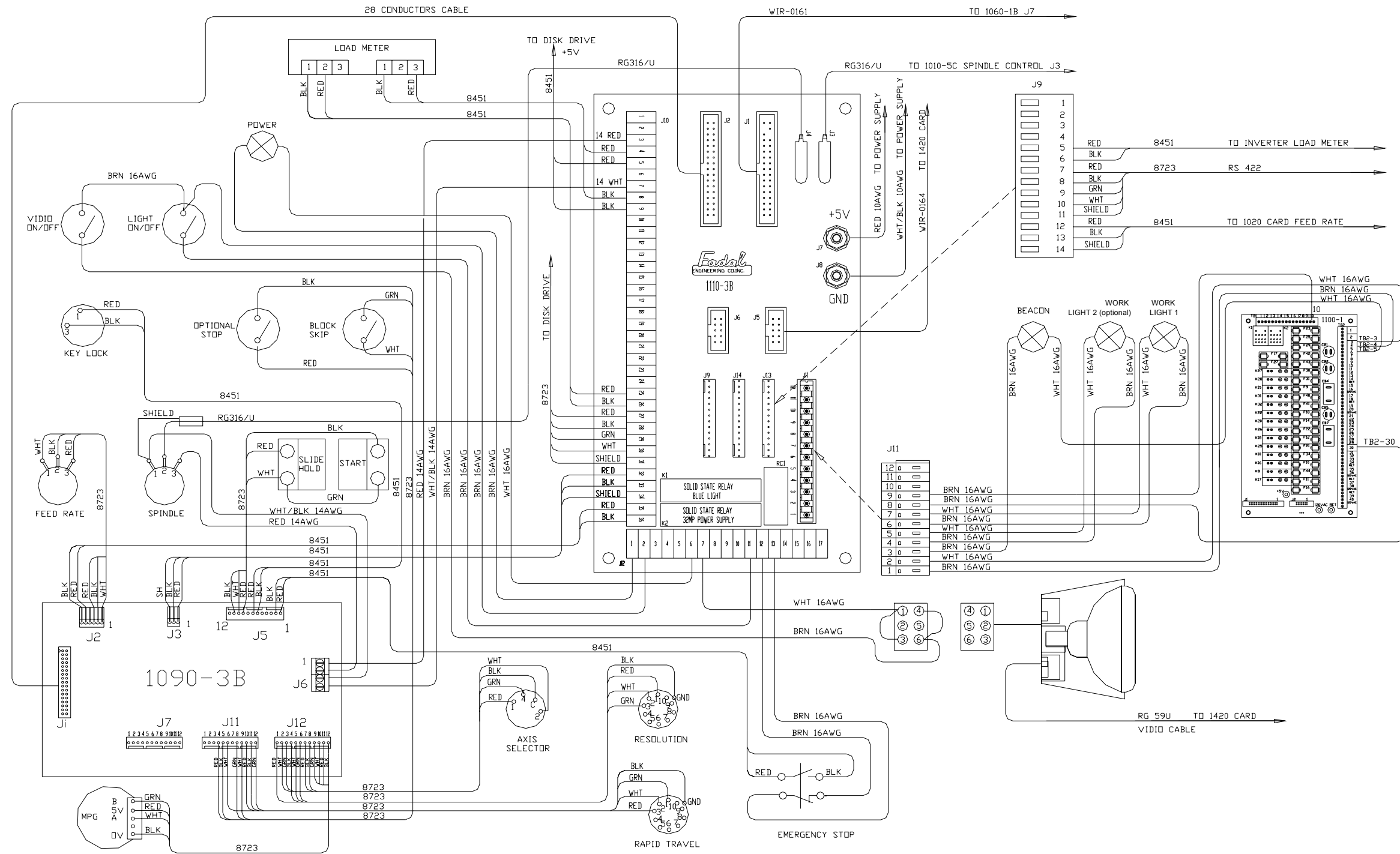
WRG_0030C_vmc_ac_brushless_power



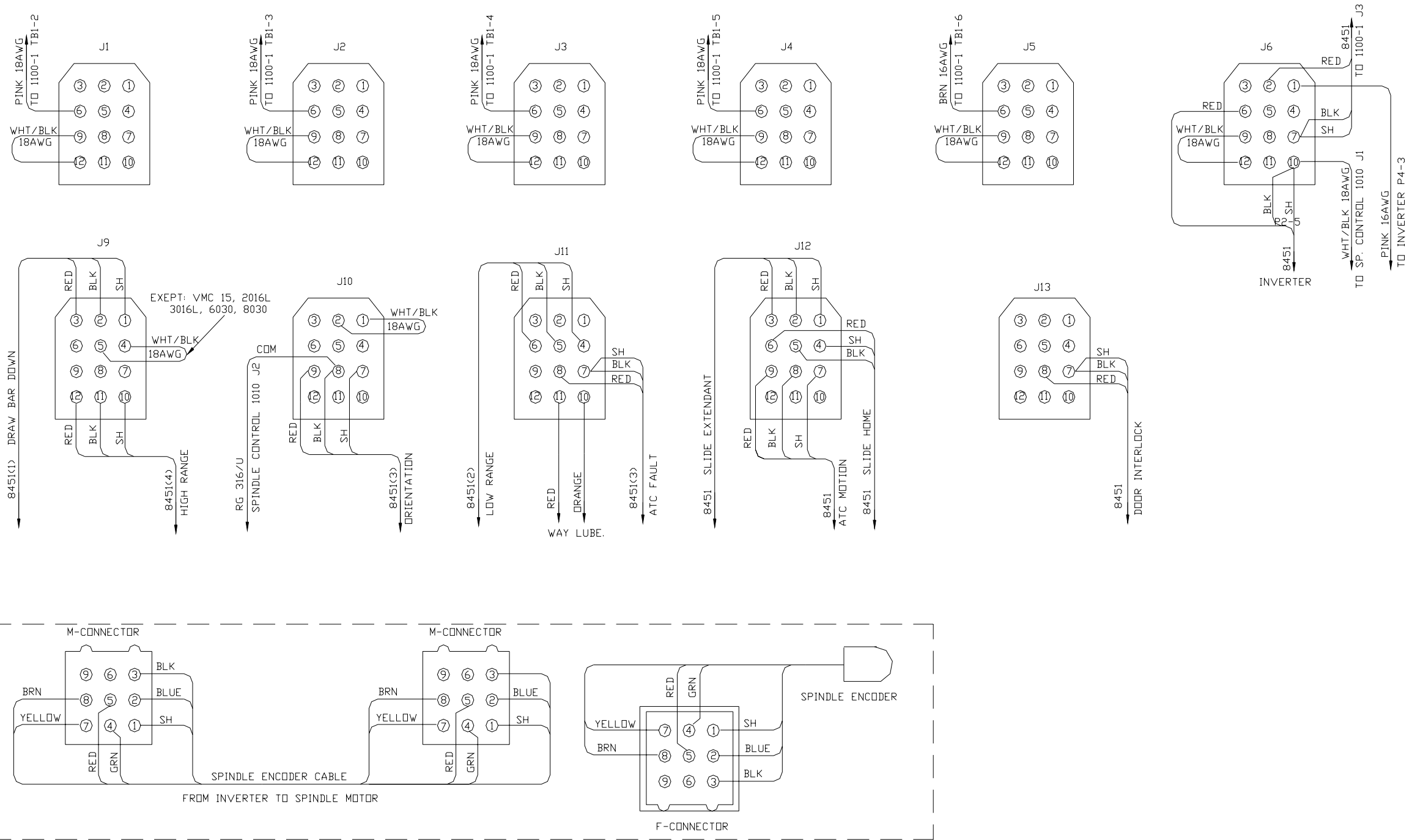
Wrg_0058B_vmc_ac_brushless_control



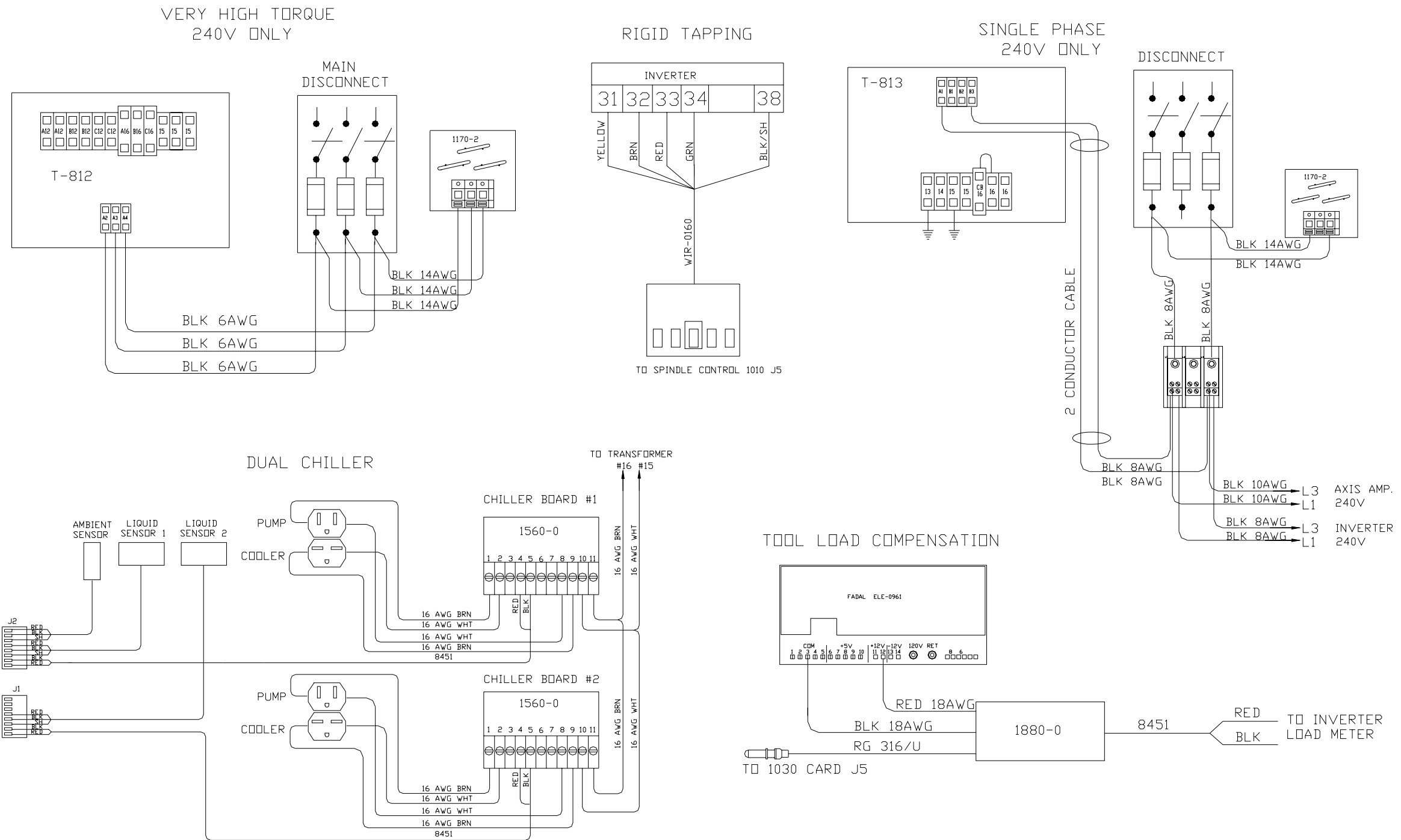
Wrg_0059B_vmc_ac_brushless_pendant



Wrg_0064B_vmc_ac_brushless_connectors



Wrg_0065B_vmc_ac_brushless_options

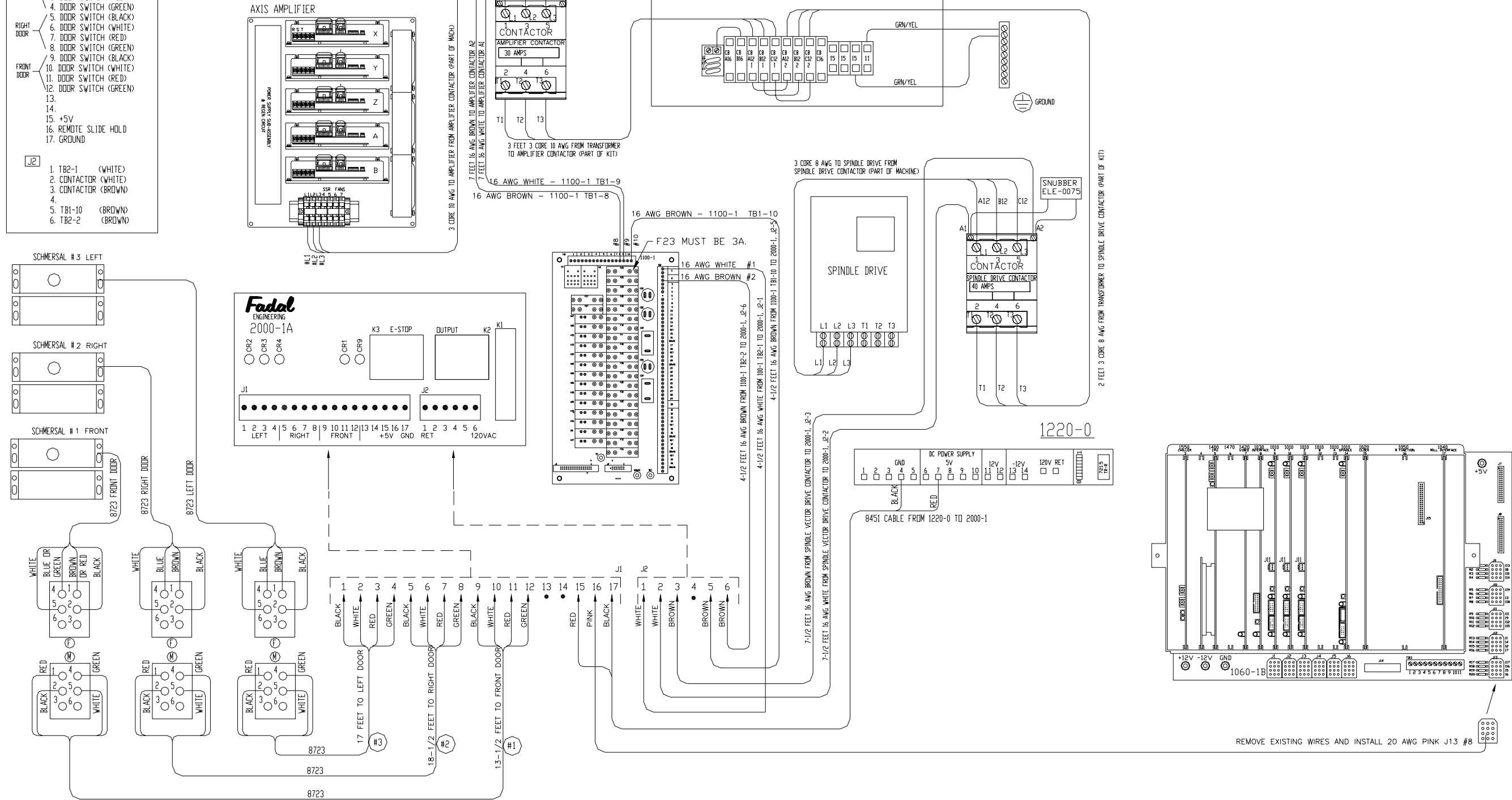


Wrg_0696C_ce_door_interlock_wiring_diagram_ac_brushless_sheet_1of3

2000-1 PIN LIST

- J1**
- 1. DOOR SWITCH (BLACK)
 - 2. DOOR SWITCH (WHITE)
 - 3. DOOR SWITCH (RED)
 - 4. DOOR SWITCH (GREEN)
 - 5. DOOR SWITCH (BLACK)
 - 6. DOOR SWITCH (WHITE)
 - 7. DOOR SWITCH (RED)
 - 8. DOOR SWITCH (GREEN)
 - 9. DOOR SWITCH (BLACK)
 - 10. DOOR SWITCH (WHITE)
 - 11. DOOR SWITCH (RED)
 - 12. DOOR SWITCH (GREEN)
 - 13.
 - 14.
 - 15. +5V
 - 16. REMOTE SLIDE HOLD
 - 17. GROUND
- J2**
- 1. TB2-1 (WHITE)
 - 2. CONTACTOR (WHITE)
 - 3. CONTACTOR (BROWN)
 - 4.
 - 5. TB1-10 (BROWN)
 - 6. TB2-2 (BROWN)

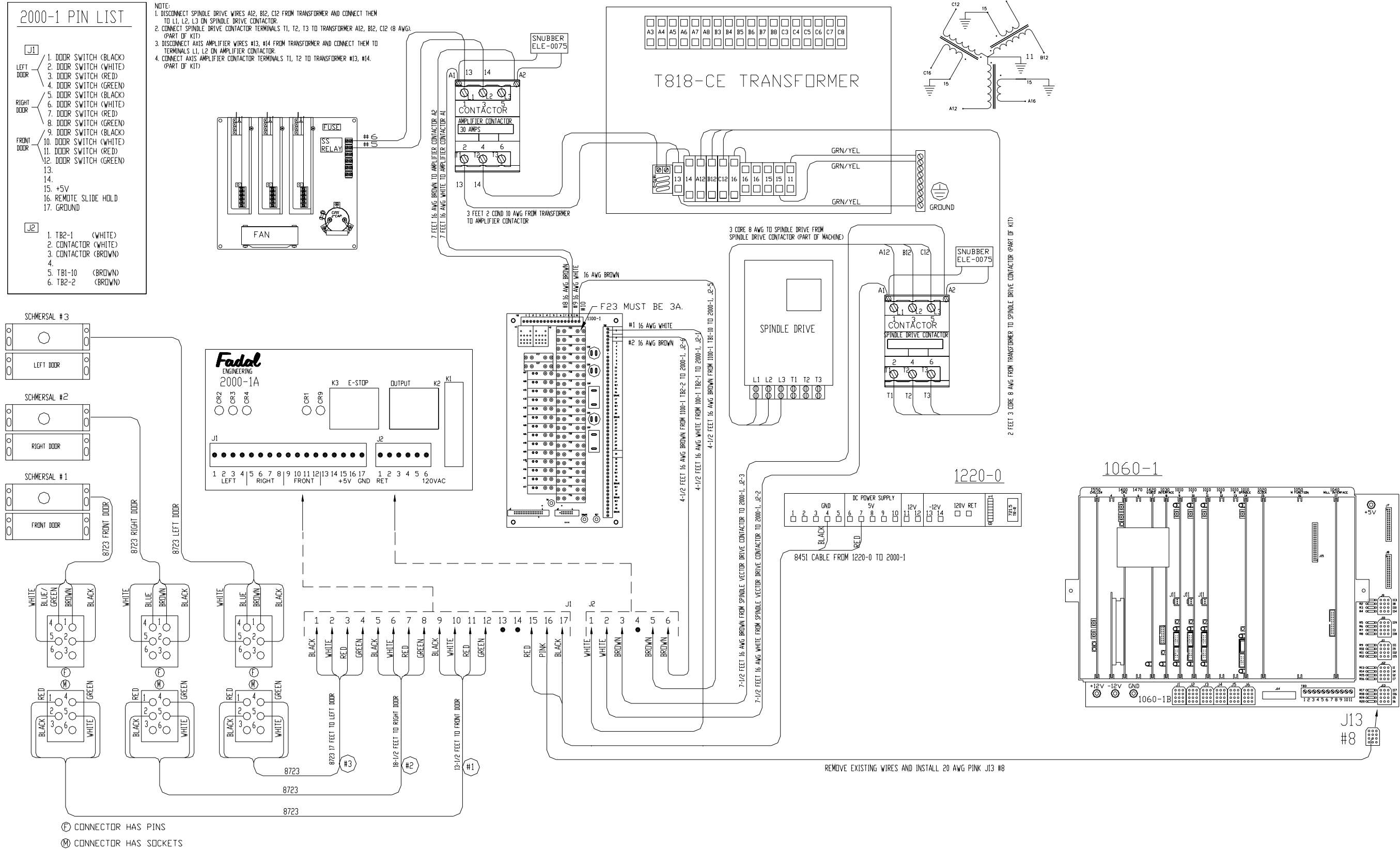
- NOTE:
1. DISCONNECT SPINDLE DRIVE WIRES A12, B12, C12 FROM TRANSFORMER AND CONNECT THEM TO L1, L2, L3 ON SPINDLE DRIVE CONTACTOR (ON SLANT '98 DISCONNECT FROM SPINDLE DRIVE)
 2. CONNECT SPINDLE DRIVE CONTACTOR TERMINALS T1, T2, T3 TO TRANSFORMER A12, B12, C12 (8 AWG) (PART OF KIT)
 3. DISCONNECT AXIS AMPLIFIER WIRES A12, B12, C12 FROM TRANSFORMER AND CONNECT THEM TO TERMINALS L1, L2, L3 ON AMPLIFIER CONTACTOR (ON SLANT '98 DISCONNECT FROM AXIS AMPLIFIER)
 4. CONNECT AXIS AMPLIFIER CONTACTOR TERMINALS T1, T2, T3 TO TRANSFORMER A12, B12, C12 (PART OF KIT)



- Ⓢ CONNECTOR HAS PINS
- Ⓜ CONNECTOR HAS SOCKETS

REMOVE EXISTING WIRES AND INSTALL 20 AWG PINK J13 #8

Wrg_0696C_ce_door_interlock_wiring_diagram_dc_machine_sheet_2of3



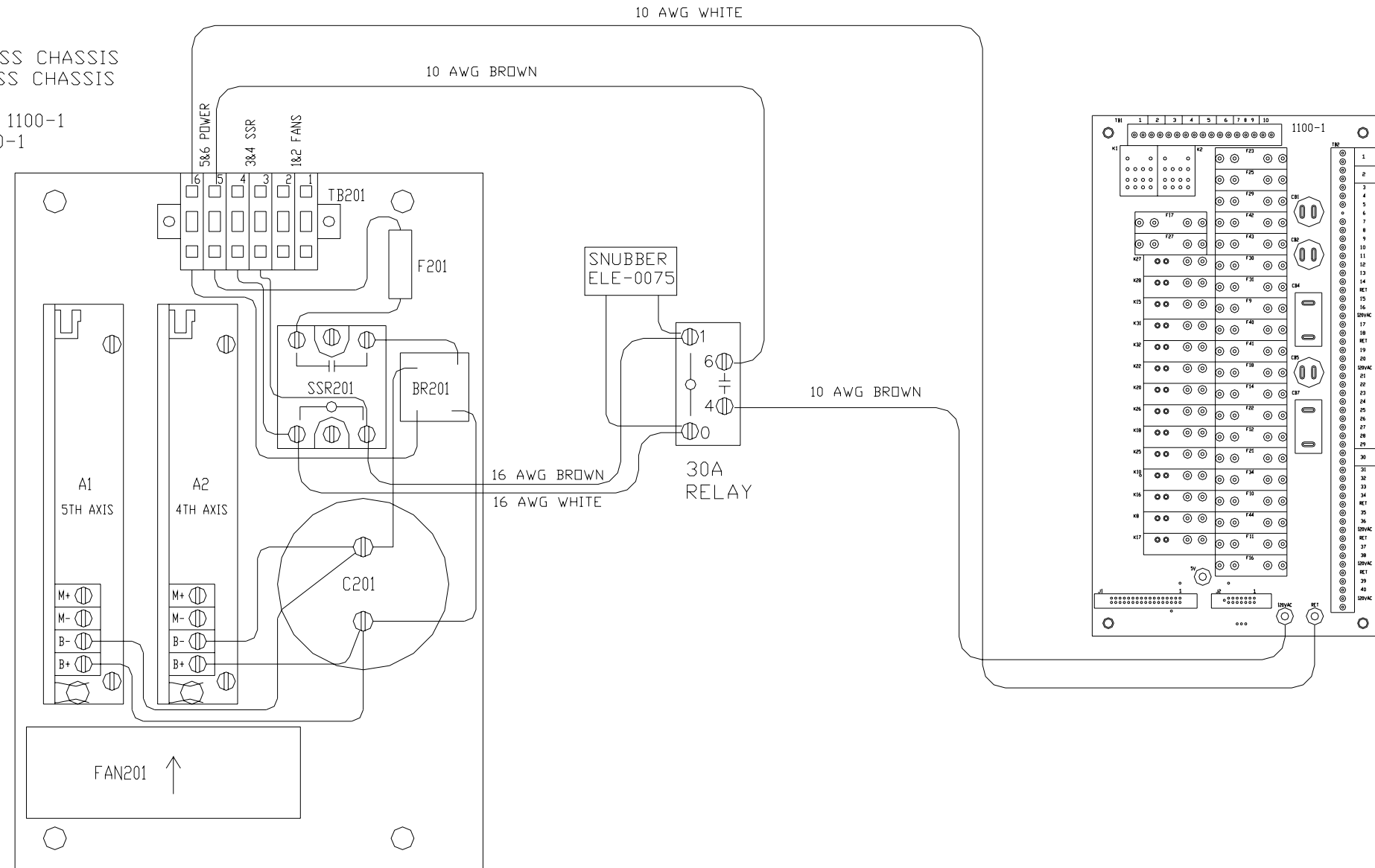
Wrg_0696B_ce_door_interlock_wiring_diagram_4th_5th_axis_sheet_3of3

FOR CONNECTION TO BRUSHLESS SYSTEM:

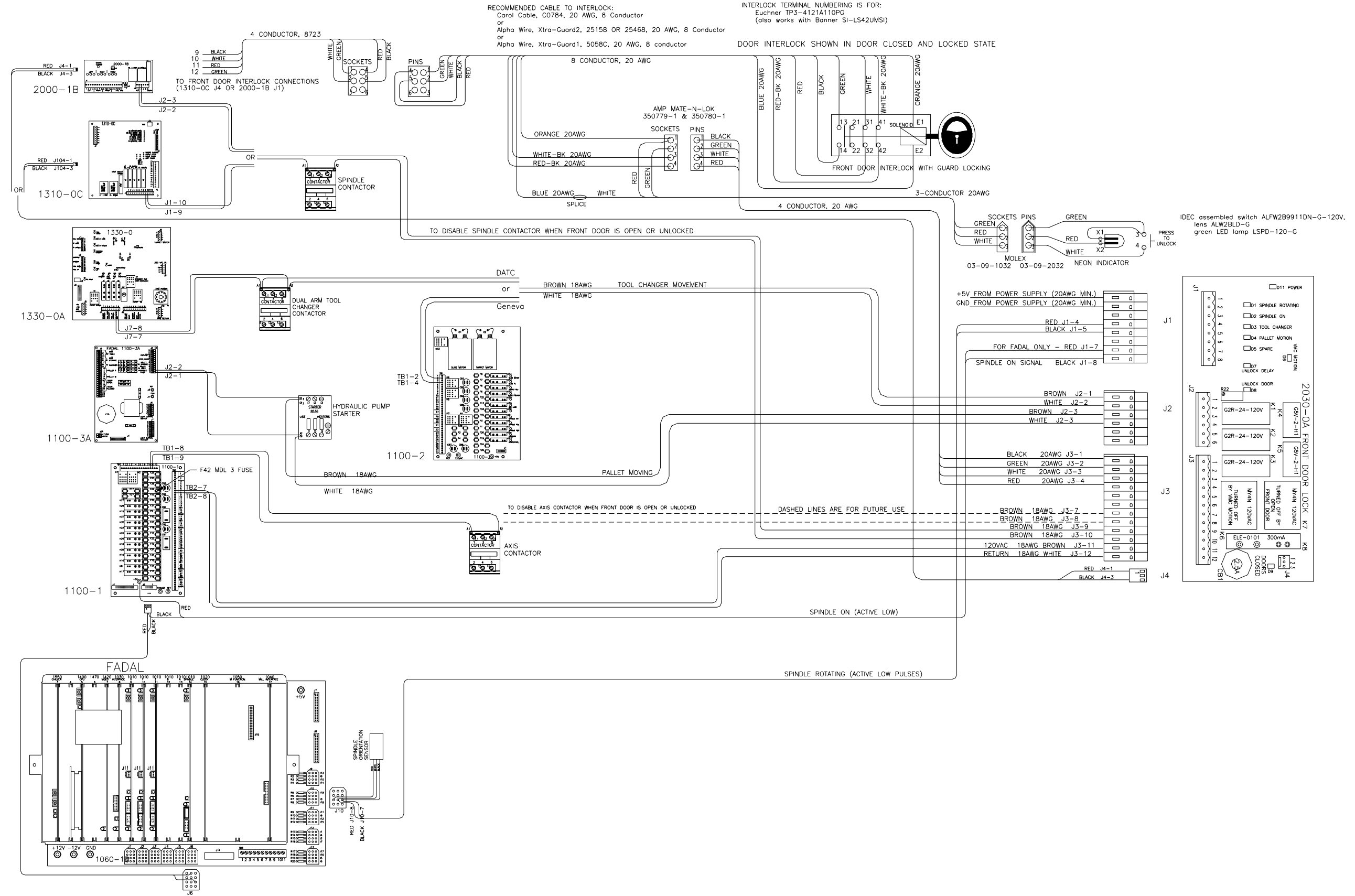
INPUT 1 - BROWN 16 GA. WIRE TO 1100-1 TB2-2
 INPUT 2 - WHITE 16 GA. WIRE TO 1100-1 TB2-1

INPUT 3 - BROWN 16 GA. WIRE TO INPUT 5 ON BRUSHLESS CHASSIS
 INPUT 4 - WHITE 16 GA. WIRE TO INPUT 4 ON BRUSHLESS CHASSIS

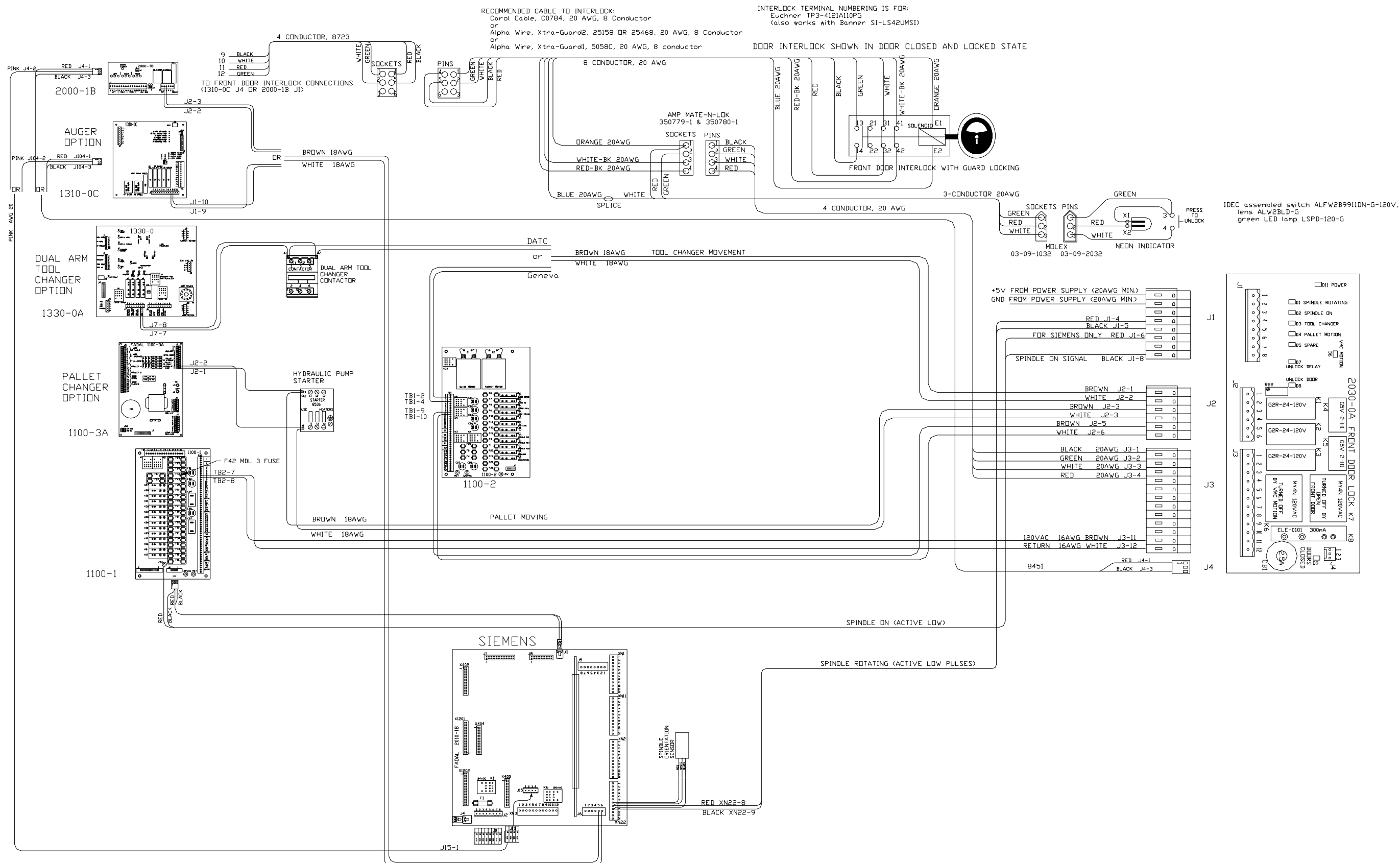
INPUT 5 - BROWN 10 GA. WIRE TO 120VAC TERMINAL ON 1100-1
 INPUT 6 - WHITE 10 GA. WIRE TO RET TERMINAL ON 1100-1



Wrg_0041F_ce_door_lock_2030-0A_wiring_diagram_1of3



Wrg_0041F_ce_door_lock_2030-0A_wiring_diagram_2of3



WRG_0040C_coolant_pump

