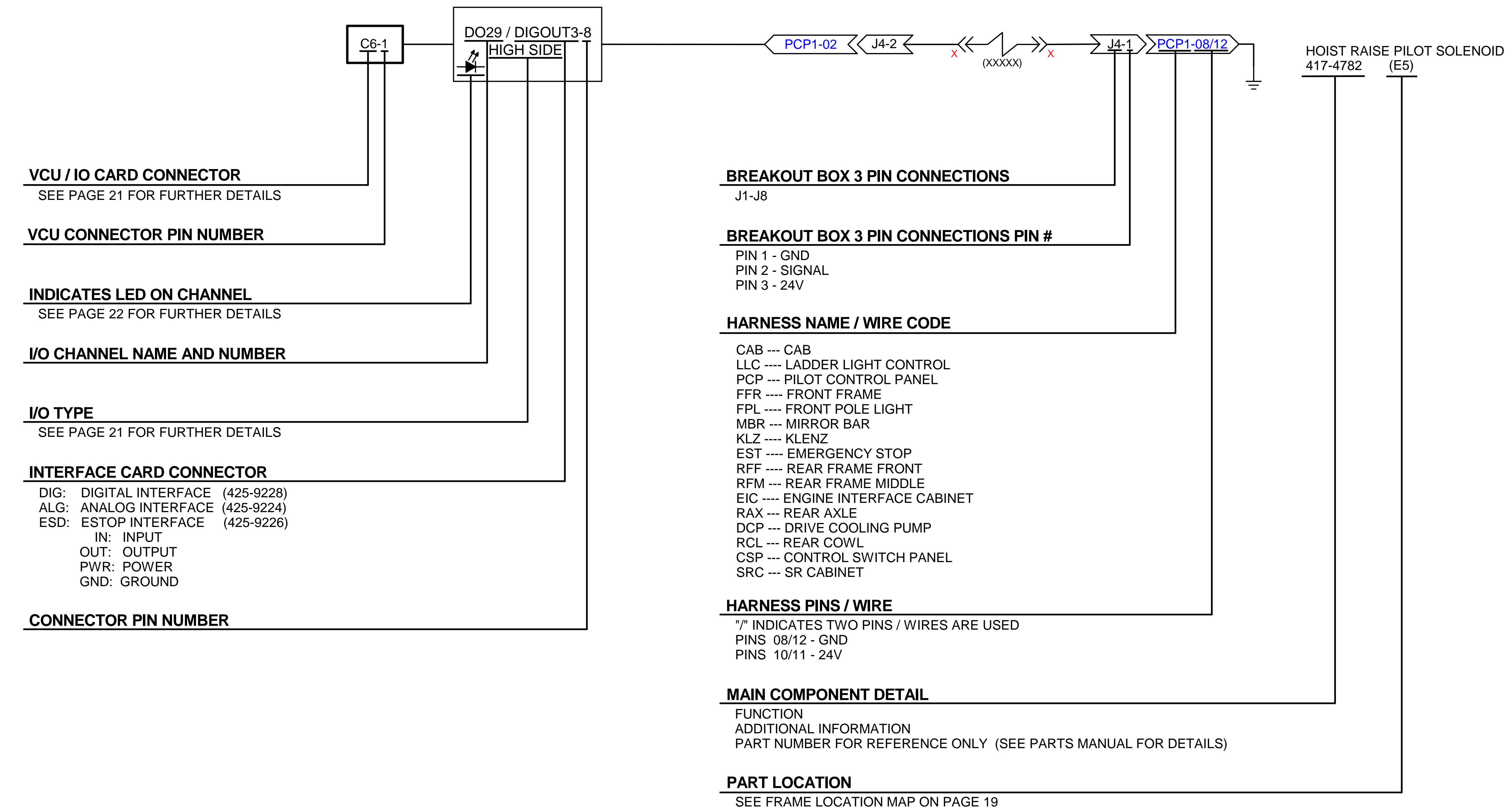


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REV		DESCRIPTION	ECN	DATE	CHK	APP
00	RELEASE		NL12-1909	8-29	FL	BS
01	SEE CHANGES ON SHEETS - 13 & 20		NL12-1915	9-27	FL	BS
02	SEE CHG ON SHEET-14 CUMMINS SOL212 WIRING		NL12-1921	12-18	FL	BS

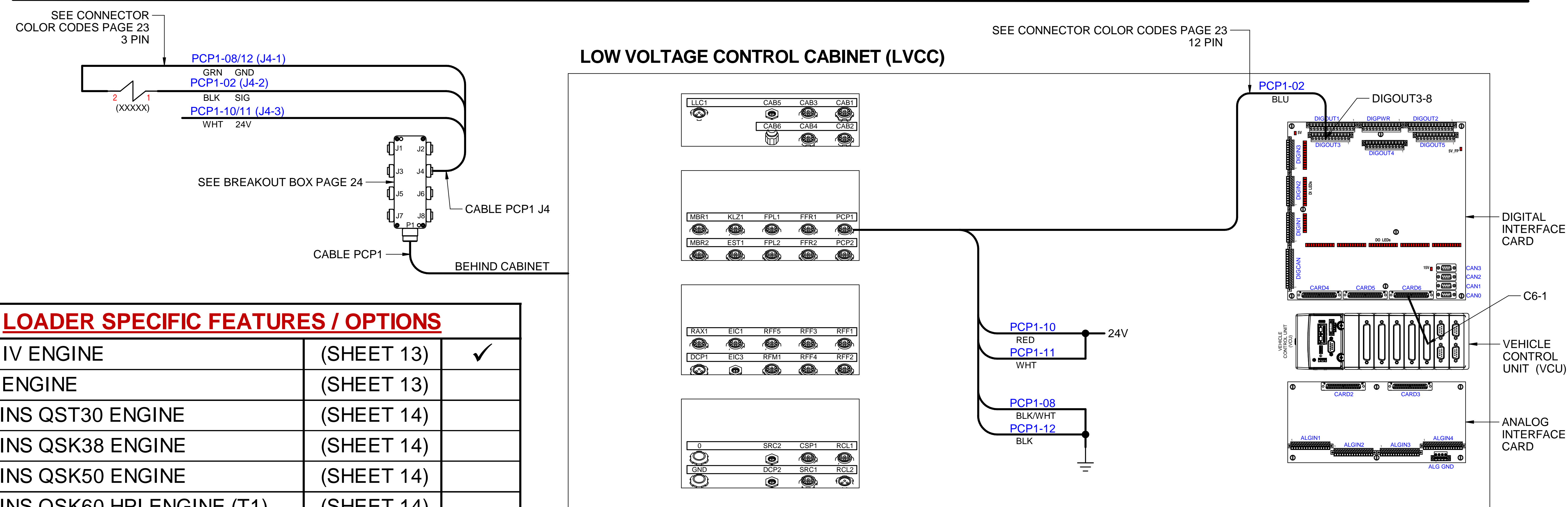
LEGEND



NOTES:

- COLOR CODE**
BLUE: WIRE CODE
RED: CONNECTION PIN
MAGENTA: MODEL SPECIFIC
- CROSS REFERENCE**
(01239)
SHEET NO. | LINE NO.
| COLUMN
- GROUND SYMBOLS**
⊥ GROUND IN LVCC
⏏ FRAME GROUND
- SEE NOTE(S) AT BOTTOM OF PAGE**
- POWER FLOWS LEFT TO RIGHT**
- OUTPUTS ON LEFT
- INPUTS ON RIGHT
- MACHINE STATE:**
- BATTERIES ISOLATED
- STARTER ISOLATED
- E-STOP NOT PRESSED
- PARK BRAKES ENGAGED
- ALL LIGHTS OFF
- LADDER DOWN
- KEYSWITCHES OFF
- KLENZ ENABLE
- FLUIDS FULL
- FUSES NOT BLOWN
- HV CABINET DOOR CLOSED

EXAMPLE CIRCUIT



THIS DRAWING AND ALL DATA THEREIN IS THE PROPERTY OF LETOURNEAU TECHNOLOGIES. IT IS CONFIDENTIAL AND MUST NOT BE COPIED, IT IS LOANED SUBJECT TO RETURN UPON DEMAND AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO OUR INTEREST.

UNLESS OTHERWISE SPECIFIED:
• DIMENSIONS ARE IN INCHES & APPLY BEFORE PLATING OR FINISH COATINGS.
• TOLERANCES ON: ANGLES ±1° FRACTIONS ±0.10 XX DECIMAL ±0.01 XXX DECIMAL ±0.015
• MACHINED CORNERS 156°X 60°
• WELD PROPERTIES SHALL MEET THE MINIMUM REQUIREMENTS OF THE BASE MATERIAL.

THIRD ANGLE PROJECTION

FIRST USED ON CONTRACT NO	G2 LOADER
DWN	flovett
CHK	BS 8-29-2012
ENGR	BS 8-29-2012
PROJ ENGR	BS 8-29-2012
PROJ APPROVAL	
MATL	

LeTourneau Technologies™

ELECTRICAL SCHEMATIC L18502232

DO NOT SCALE

4277251

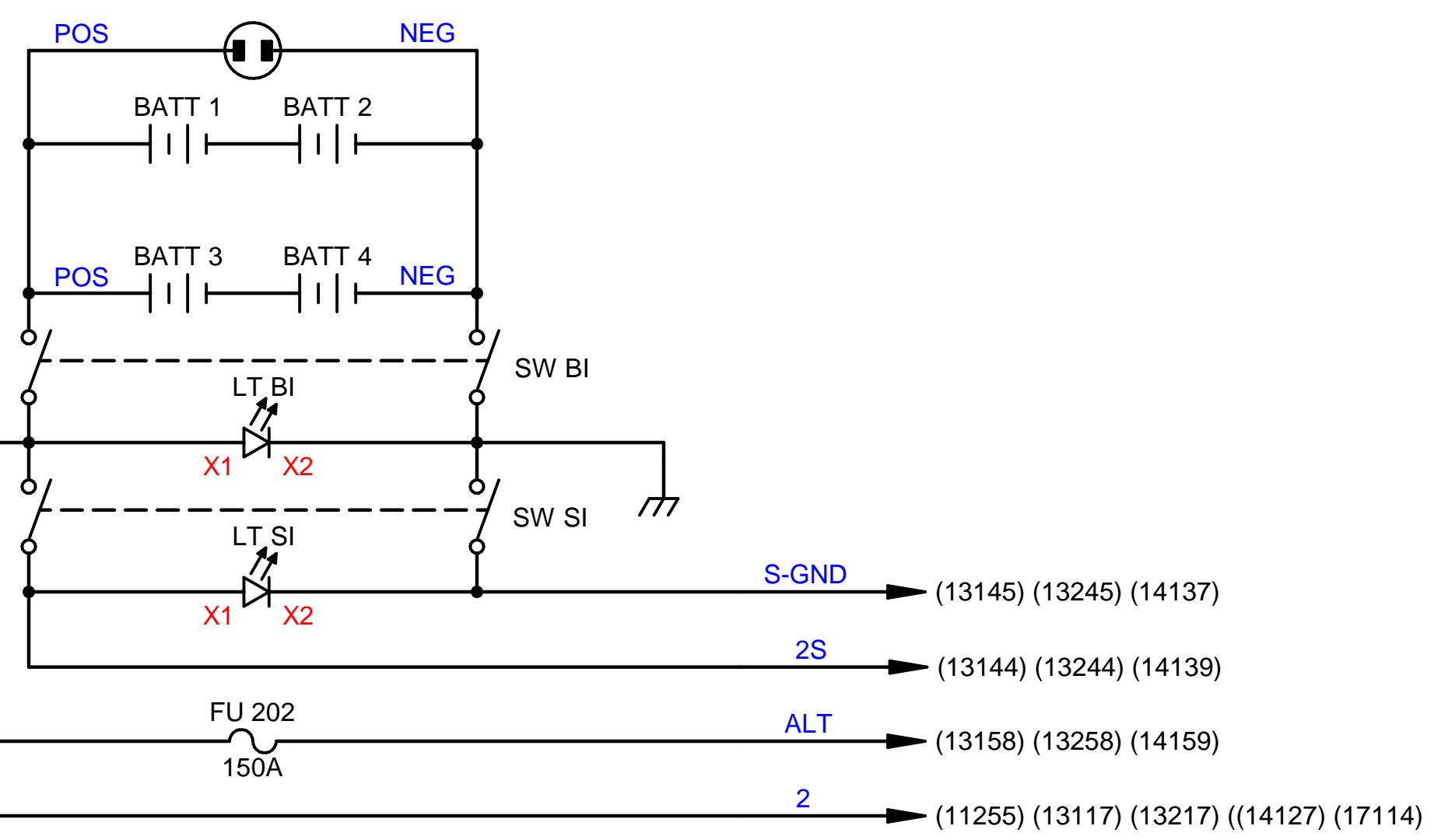
02

SCALE 1/1 EST WT SHEET 1 OF 29

24V ELECTRICS

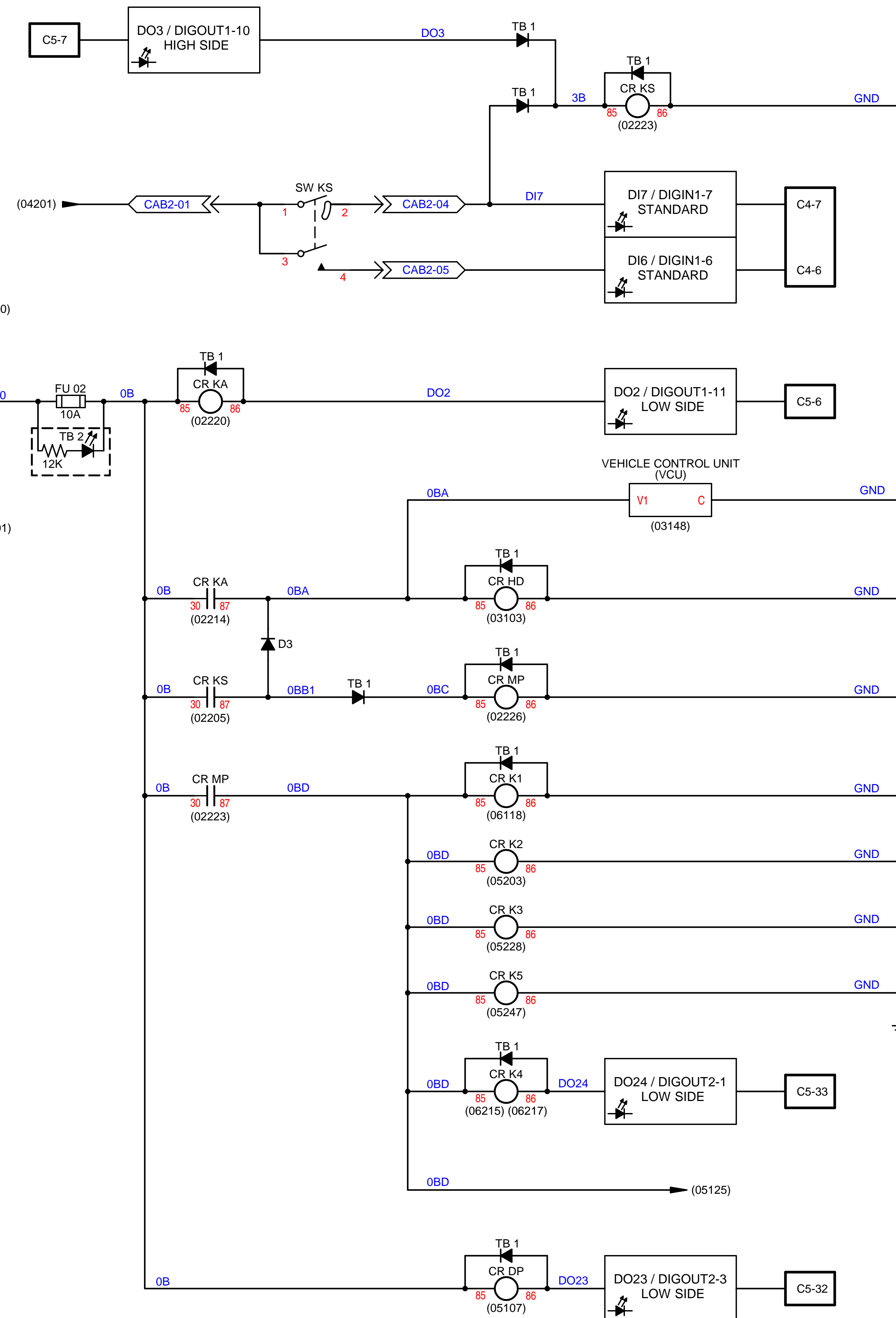
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	00		RELEASE	NL12-1909	8-29	FL	BS
	01		NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS
	02		NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS

BATTERY



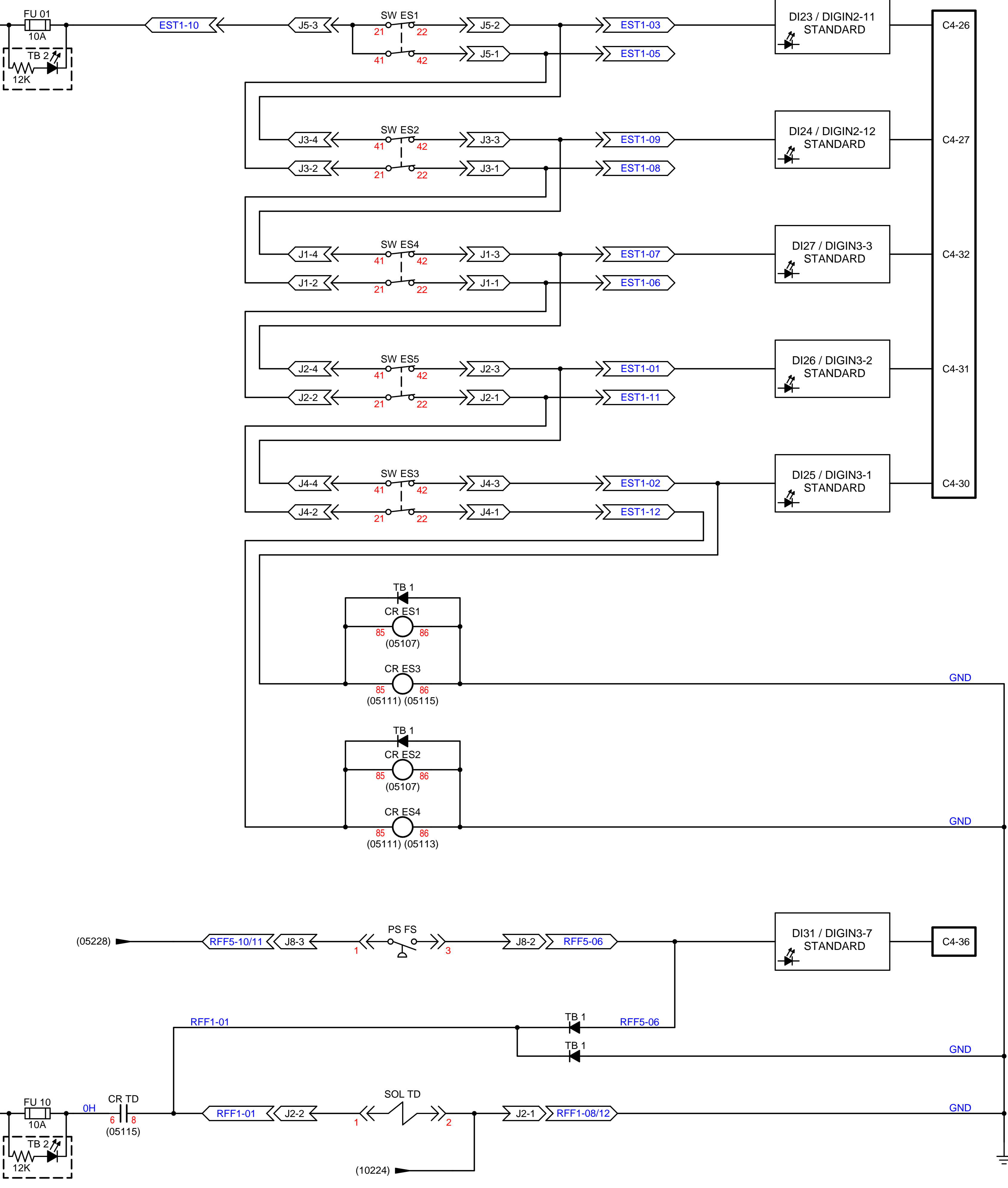
- BATTERY CHARGING SOCKET 416-3355 (D1)
- BATTERY 1 & 2
- BATTERY 3 & 4
- BATTERY ISOLATION SWITCH 426-7269 (D1)
- FU 201 425-9237 (E2)
- LT BI 424-0049 (D1)
- STARTER ISOLATION SWITCH 426-7268 (D1)
- LT SI 424-0048 (D1)
- FU 202 425-9237 (E2)

KEYSWITCH



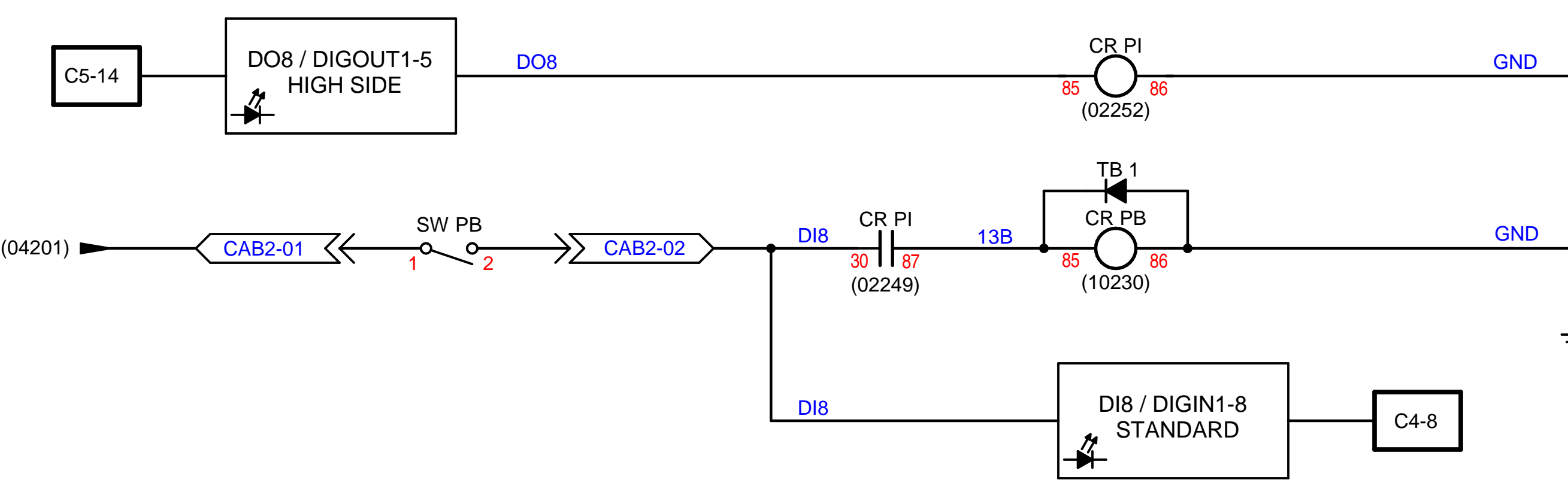
- IGNITION KEEP ALIVE OUTPUT
- KEYSWITCH RELAY 426-0950 (D4)
- KEYSWITCH 427-0330 (B4)
- KEYSWITCH IGNITION
- KEYSWITCH CRANK SWITCH
- VCU / HMI KEEP ALIVE 426-0950 (D4)
- VEHICLE CONTROL UNIT (VCU) (D4)
- HMI DISPLAY POWER RELAY 426-0950 (D4)
- D3 413-5968 (D4)
- MASTER POWER RELAY 426-0950 (D4)
- KEYSWITCH POWER RELAY 1 411-9992 (D4)
- KEYSWITCH POWER RELAY 2 411-9992 (D4)
- KEYSWITCH POWER RELAY 3 411-9992 (D4)
- KEYSWITCH POWER RELAY 5 411-9992 (D4)
- DRIVE SWITCH POWER OUTPUT KEYSWITCH POWER RELAY 4 426-0950 (D4)
- 24V CAN
- DIGITAL OUTPUT POWER 411-9992 (D4)

EMERGENCY STOP



- CAB E-STOP SWITCH 427-4443 (B5)
- HV CABINET E-STOP SWITCH 427-4442 (C4)
- RIGHT REAR E-STOP SWITCH 427-4442 (E1)
- LEFT REAR E-STOP SWITCH 427-4442 (D1)
- HYD RESERVOIR E-STOP SWITCH 427-4442 (F4)
- E-STOP RELAY 1 411-9992 (D4)
- E-STOP RELAY 3 426-0950 (D4)
- E-STOP RELAY 2 411-9992 (D4)
- E-STOP RELAY 4 426-0950 (D4)
- FIRE SYSTEM STATUS 415-5057 (D4)
- HYD TANK DUMP SOL 426-1177 (D4)

PARK BRAKE

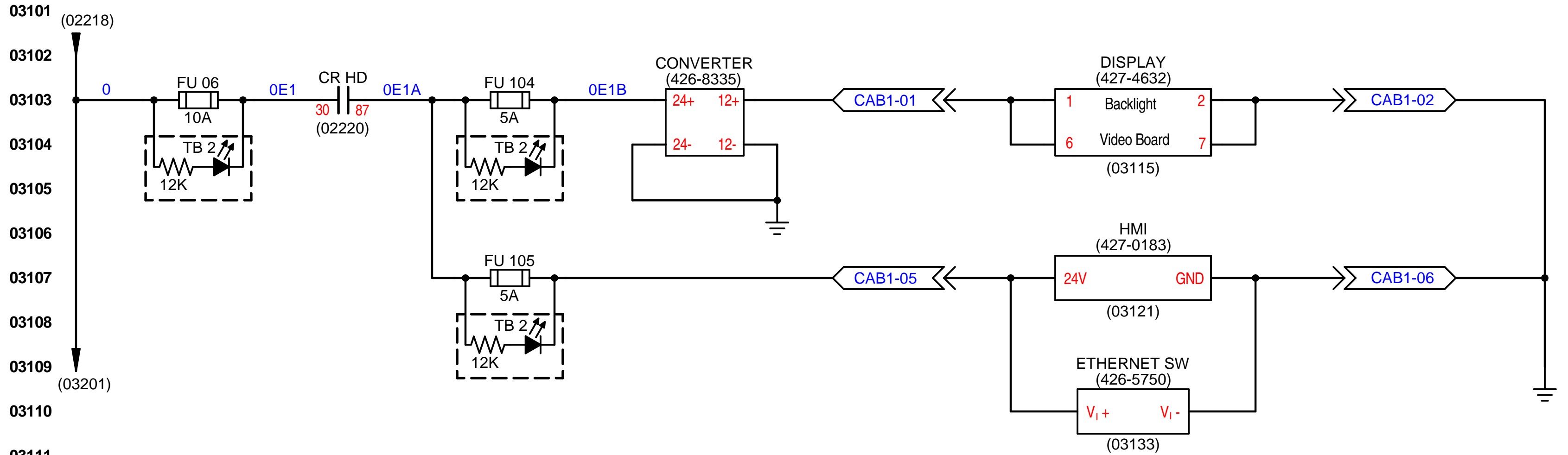


- PARK BRAKE INTERLOCK OUTPUT 426-0950 (D4)
- PARK BRAKE SWITCH 426-5193 (B4)
- PARK BRAKE RELAY DRIVE 426-0950 (D4)
- PARK BRAKE SWITCH

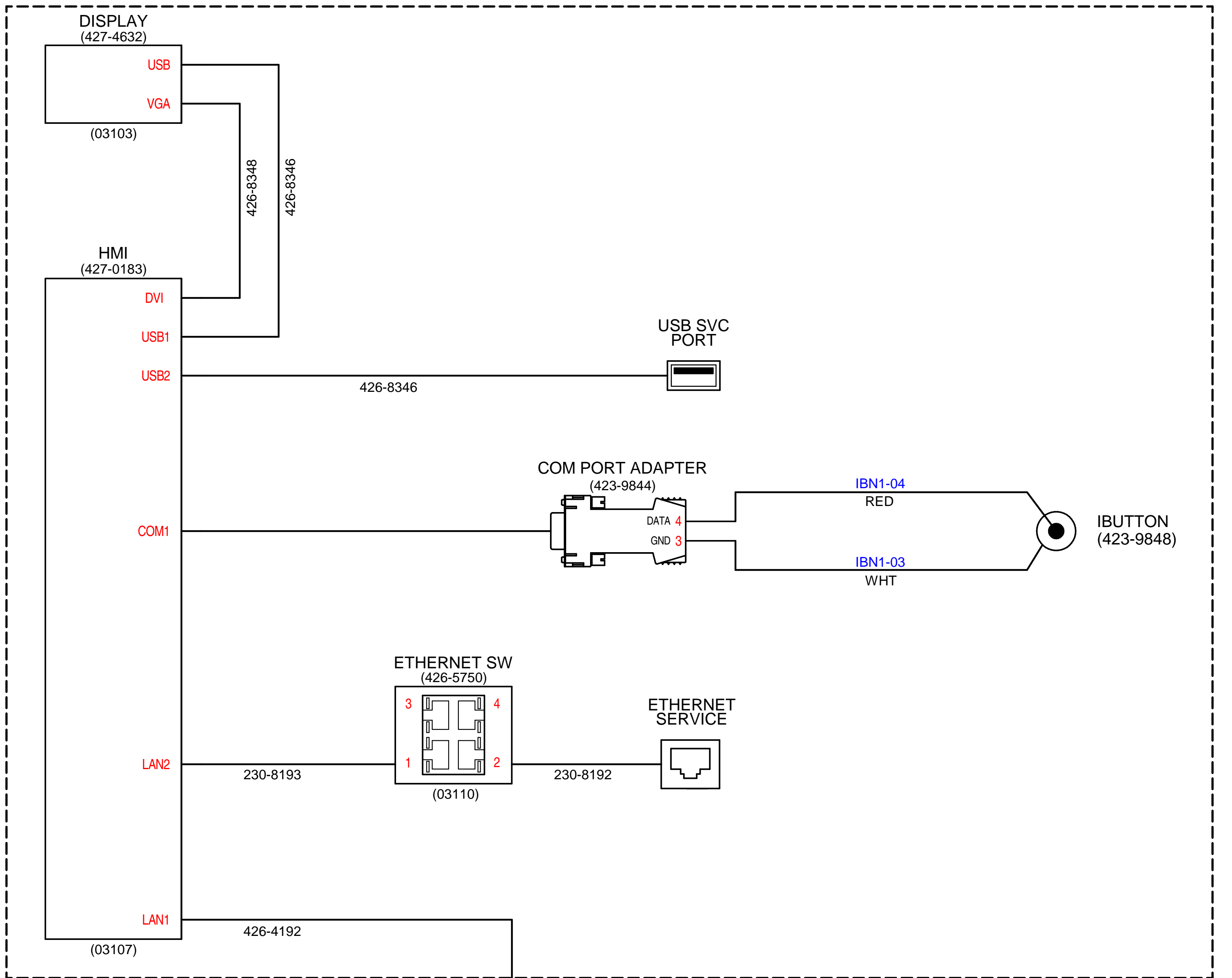
24V ELECTRICS

REV		DESCRIPTION	ECN	DATE	CHG	CHK	APP
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01	NO CHANGE THIS SHEET		NL12-1915	9-27	FL	BS	BS
02	NO CHANGE THIS SHEET		NL12-1921	12-18	FL	BS	BS

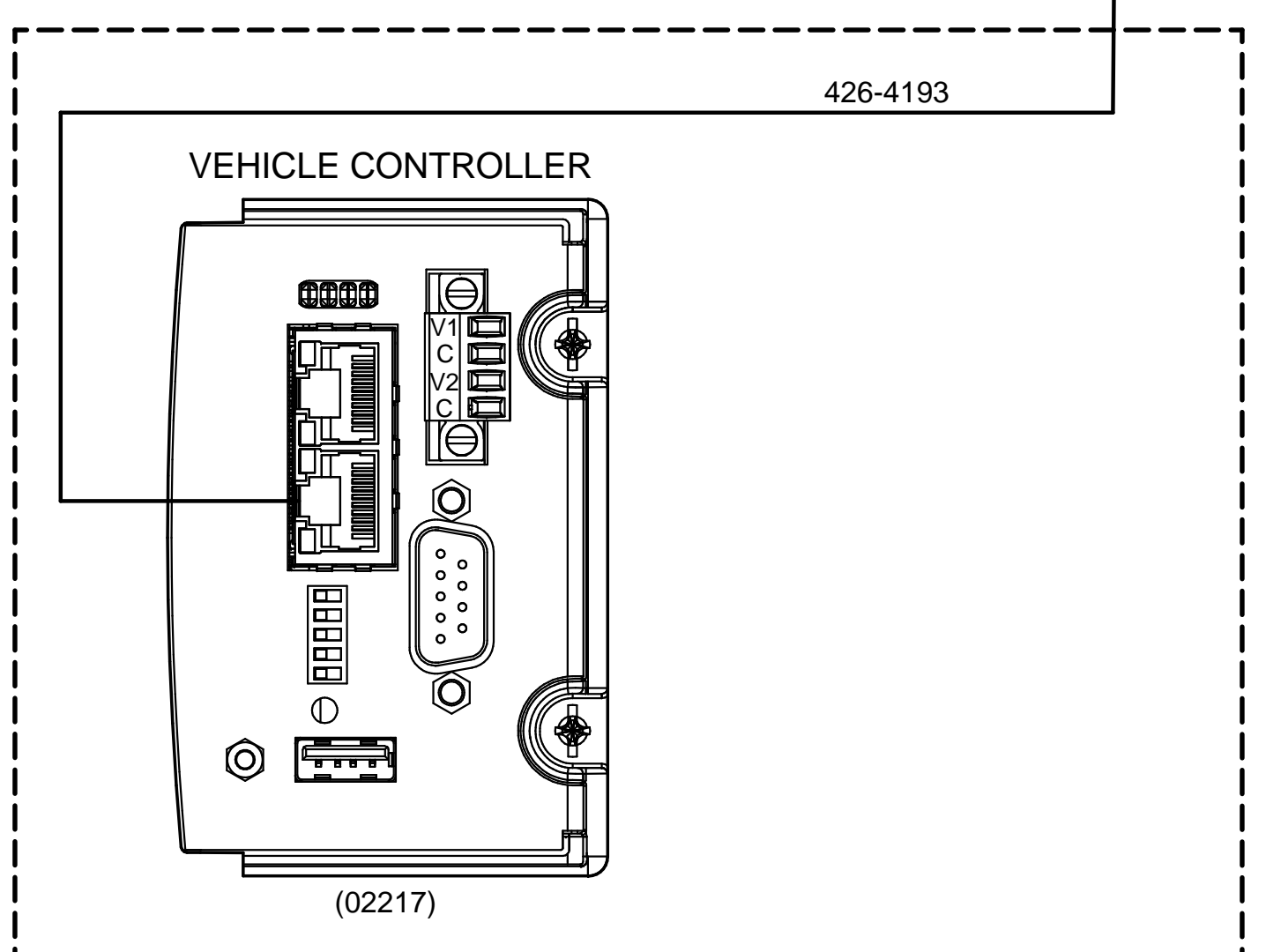
HUMAN MACHINE INTERFACE (HMI)



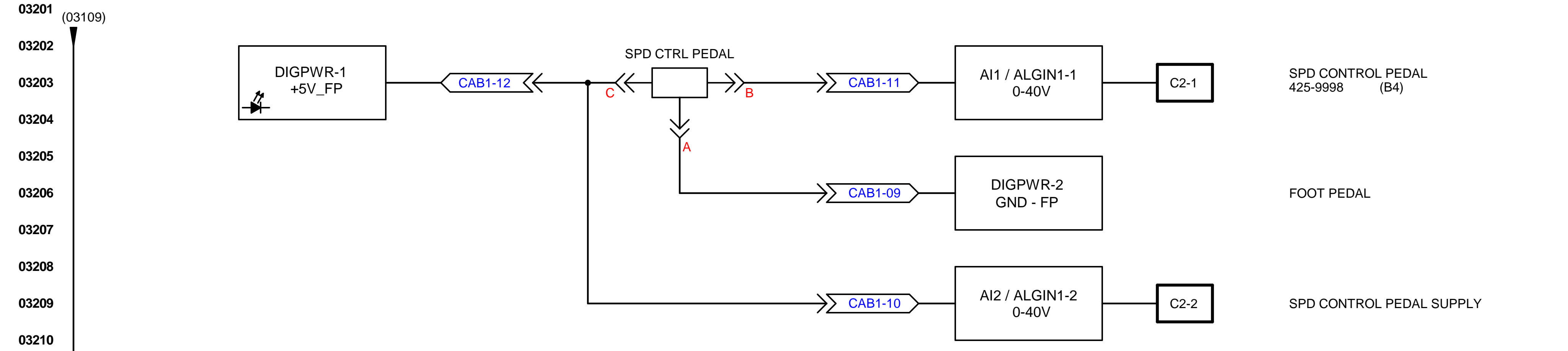
CAB



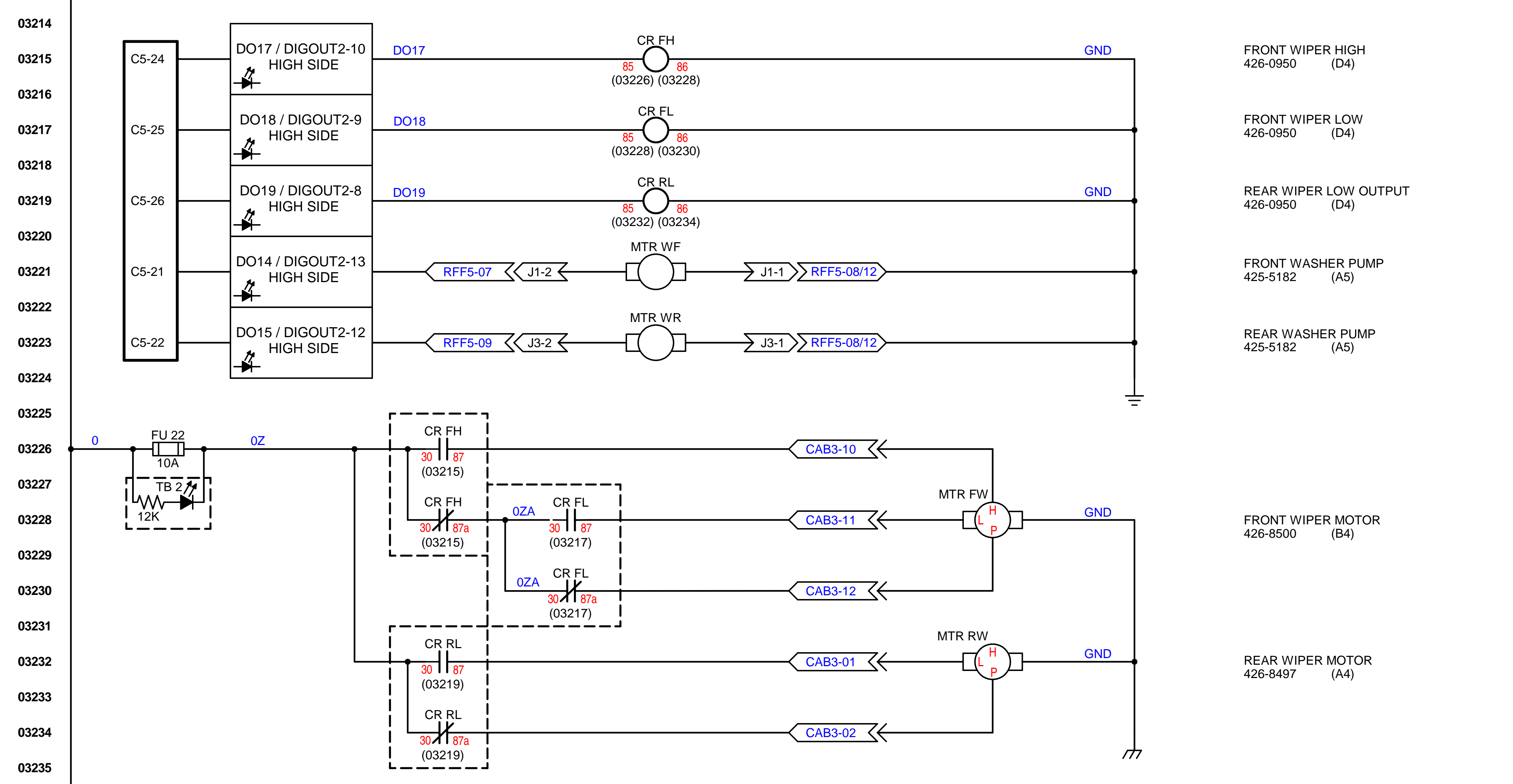
LOW VOLTAGE CONTROL CABINET (LVCC)



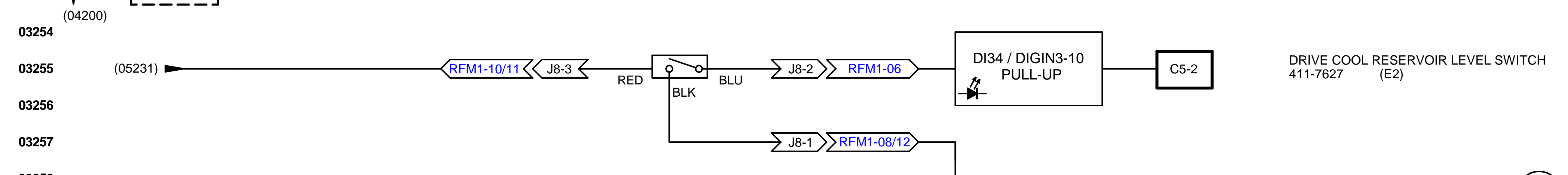
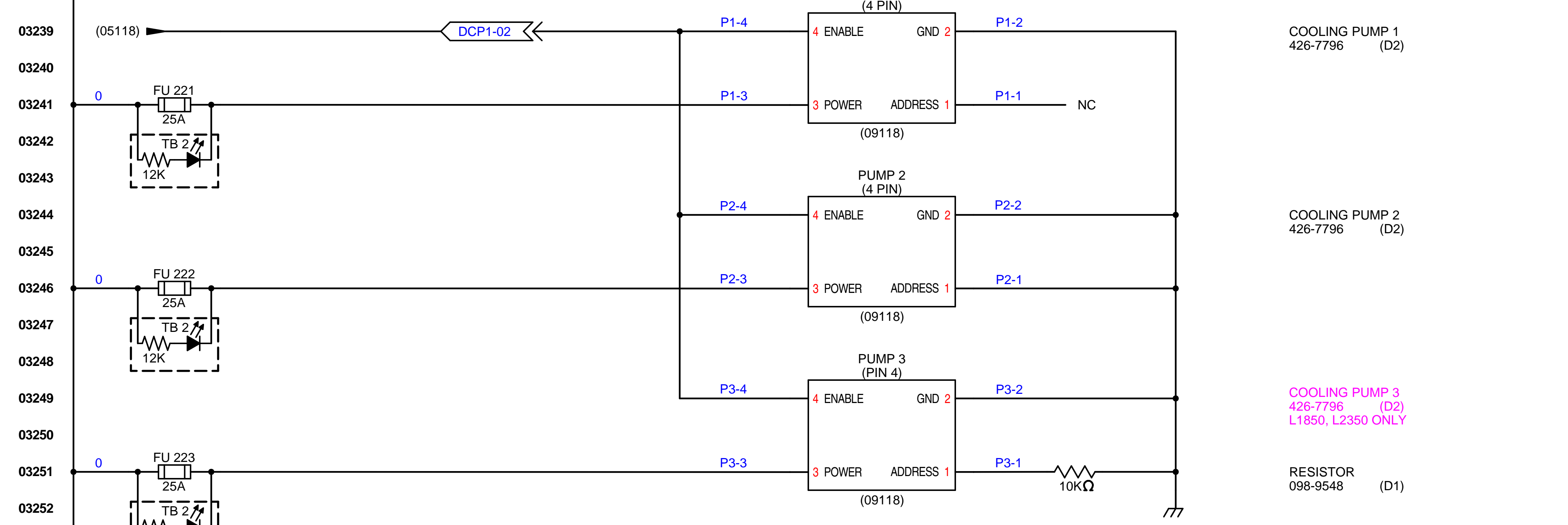
SPEED CONTROL PEDAL



WIPERS



COOLING PUMPS

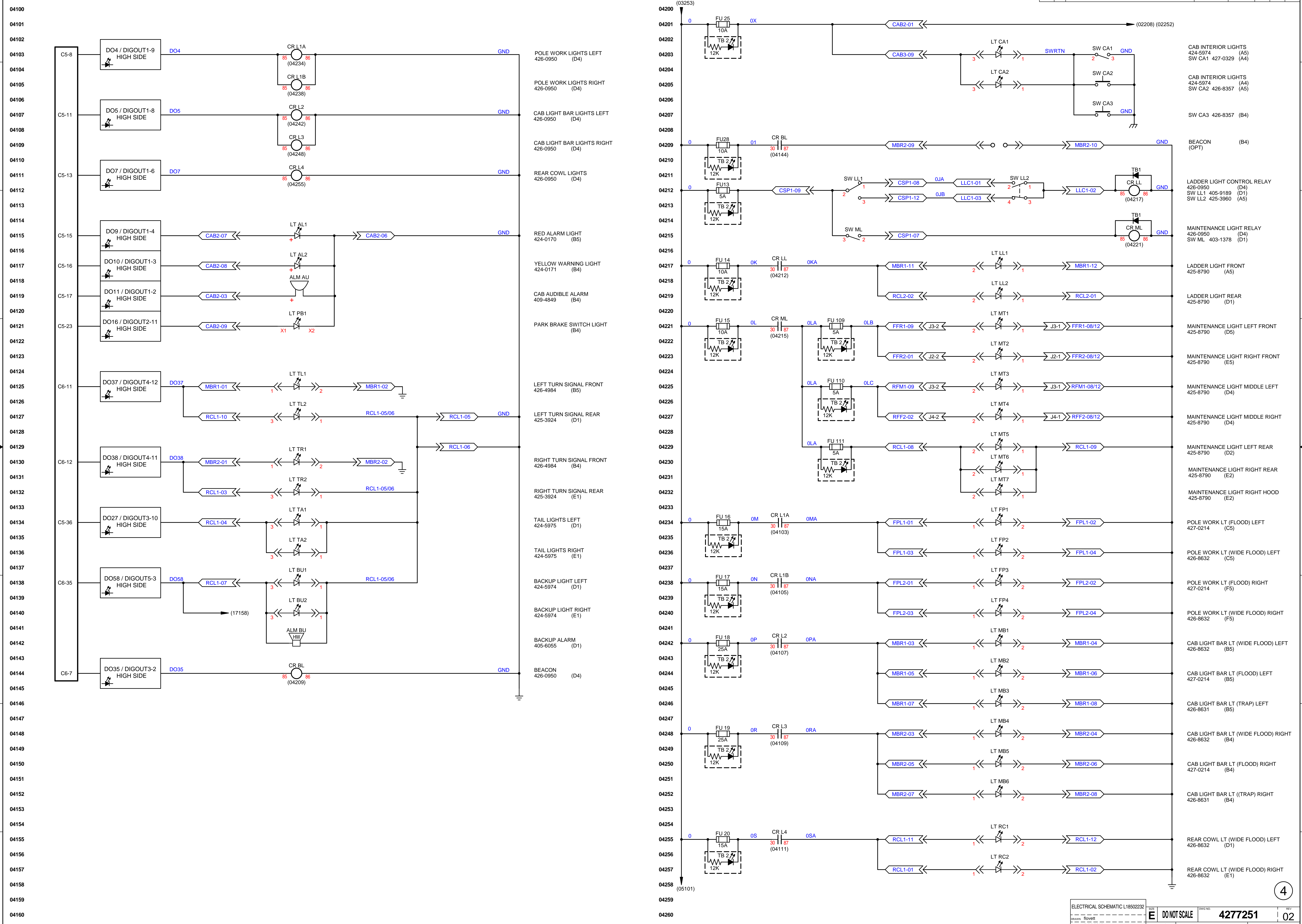


24V ELECTRICS

LIGHTS & ALARMS

LIGHTS & ALARMS (CONT.)

REVISIONS						
ZONE	REV	DESCRIPTION	ENR	DATE	CHK	APP
	00	RELEASE	NL12-1909	8-29	FL	BS
	01	NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS
	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS

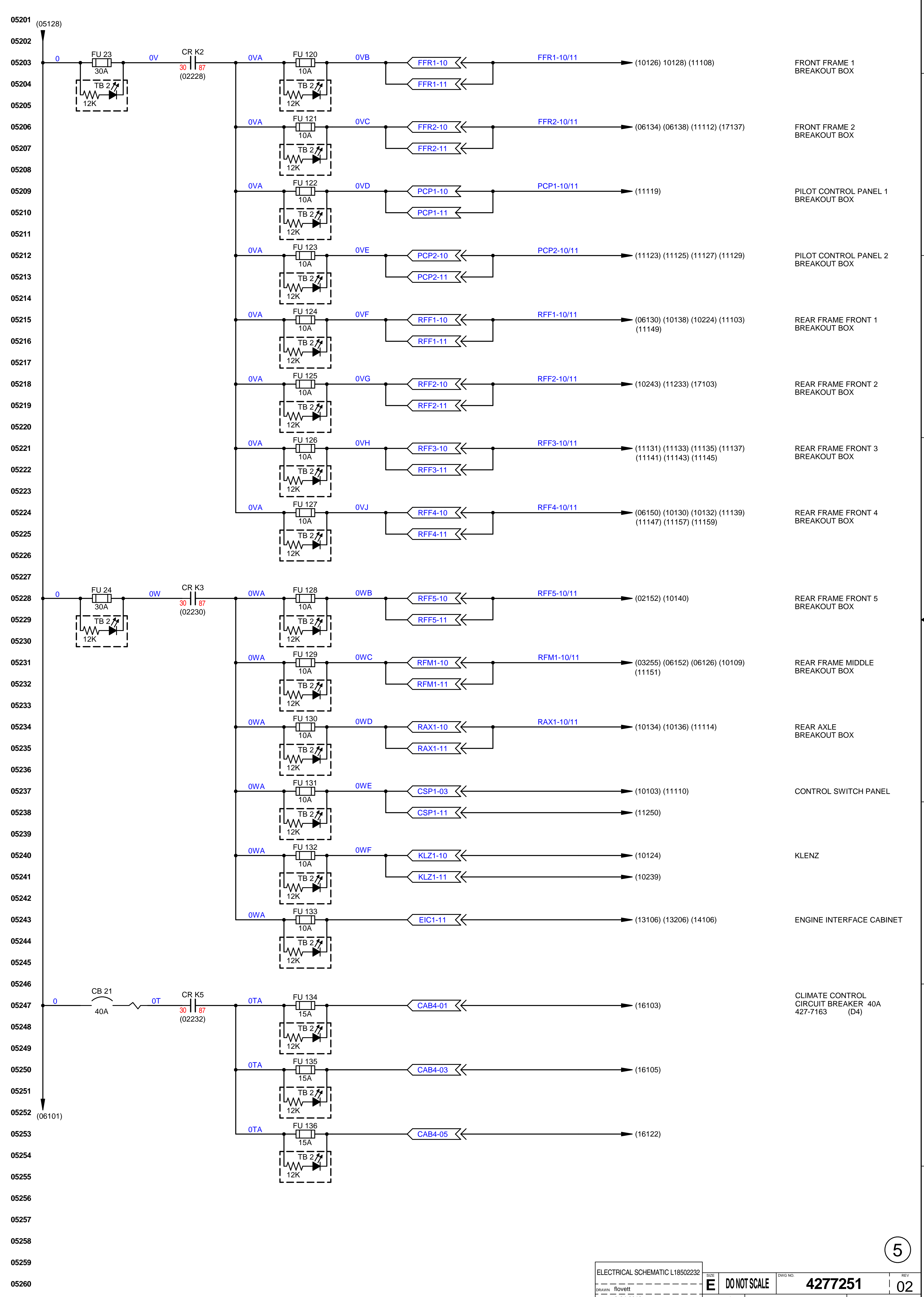
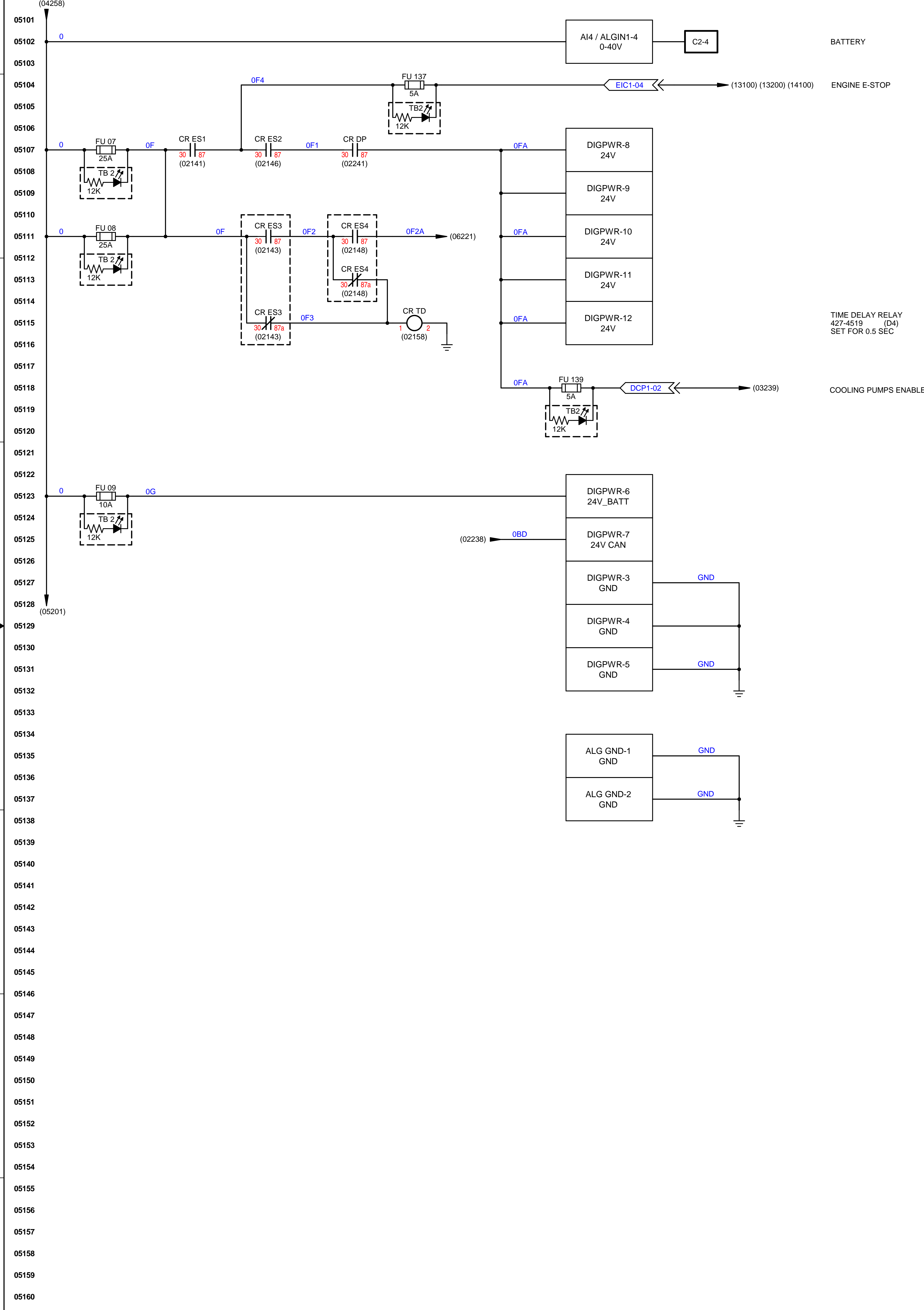


24V ELECTRICS

REV		DESCRIPTION	ECN	DATE	CHG	CHK	APP
00	RELEASE		NL12-1909	8-29	FL	BS	BS
01	NO CHANGE THIS SHEET		NL12-1915	9-27	FL	BS	BS
02	NO CHANGE THIS SHEET		NL12-1921	12-18	FL	BS	BS

POWER DISTRIBUTION

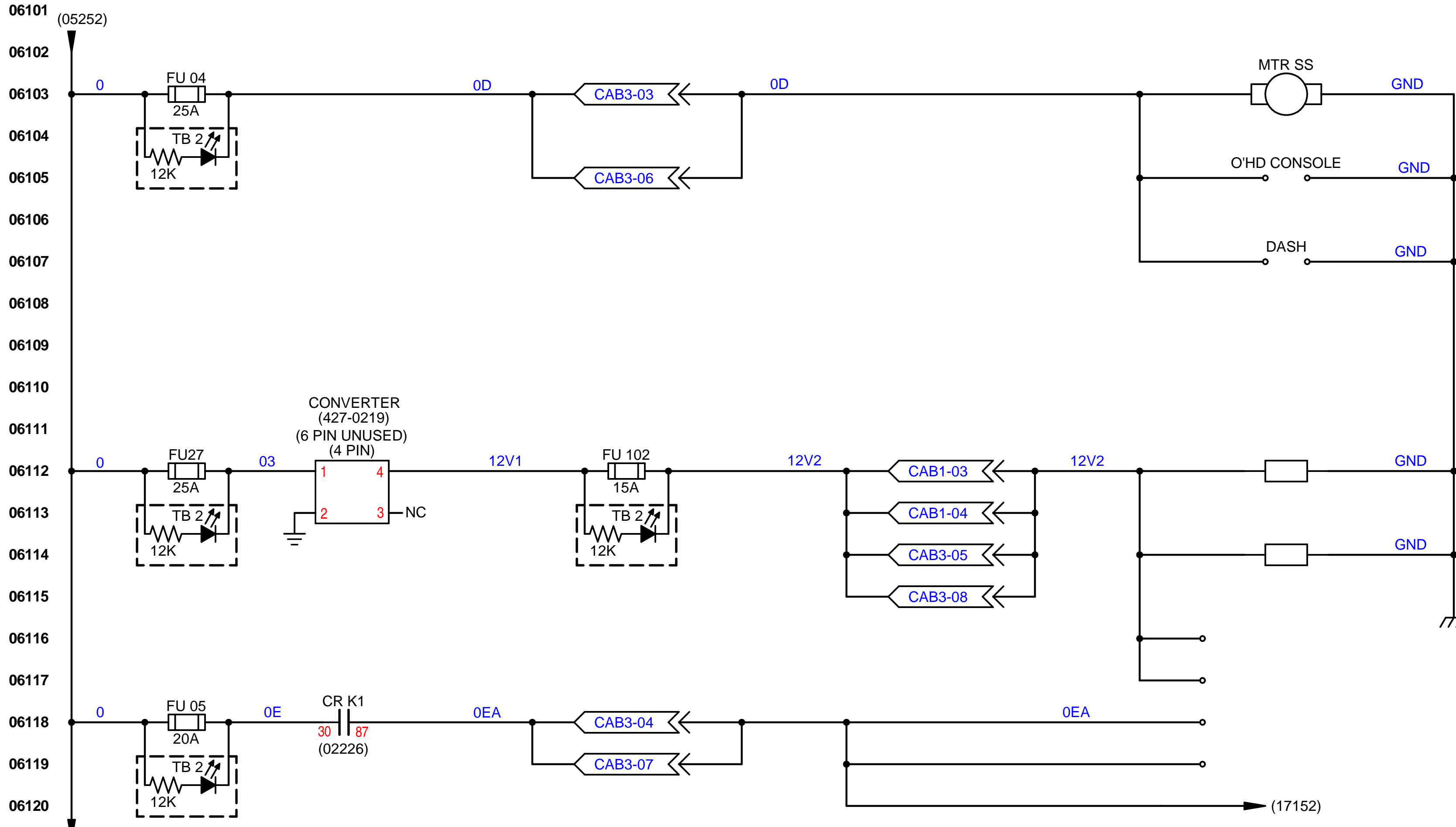
POWER DISTRIBUTION (CONT.)



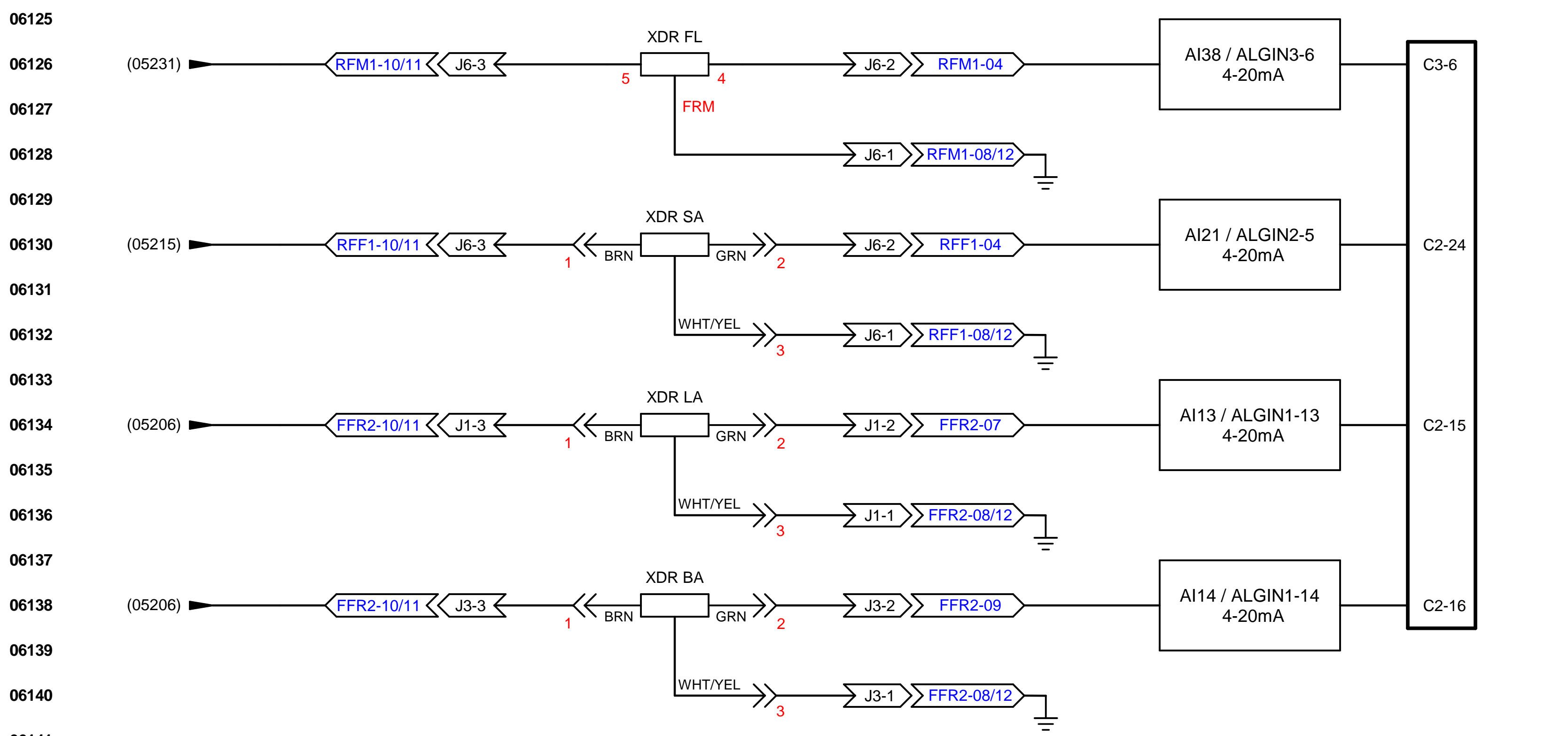
24V ELECTRICS

REVISIONS						
ZONE	REV	DESCRIPTION	EON	DATE	CHK	APP
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	01	NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS
	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS

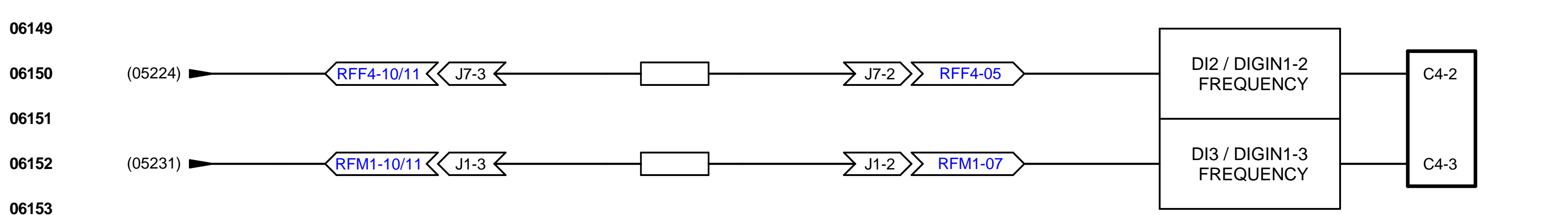
DEALER OPTIONS



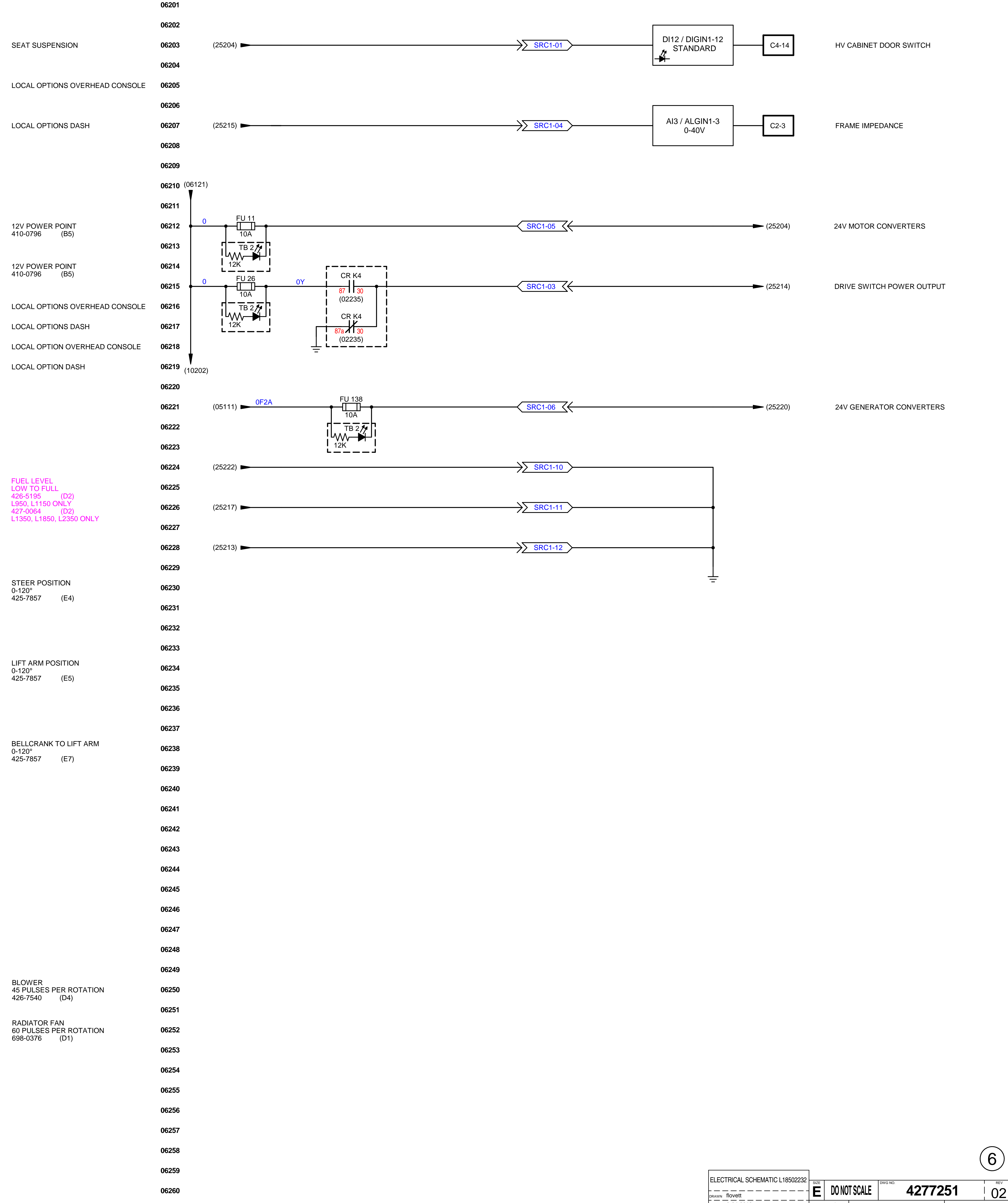
POSITION SENSORS



SPEED SENSORS



DRIVE SYSTEM INTERFACE



FUEL LEVEL
LOW TO FULL
426-5195 (D2)
L950, L1150 ONLY (D2)
427-0064 (D2)
L1350, L1850, L2350 ONLY

STEER POSITION
0-120°
425-7857 (E4)

LIFT ARM POSITION
0-120°
425-7857 (E5)

BELLCRANK TO LIFT ARM
0-120°
425-7857 (E7)

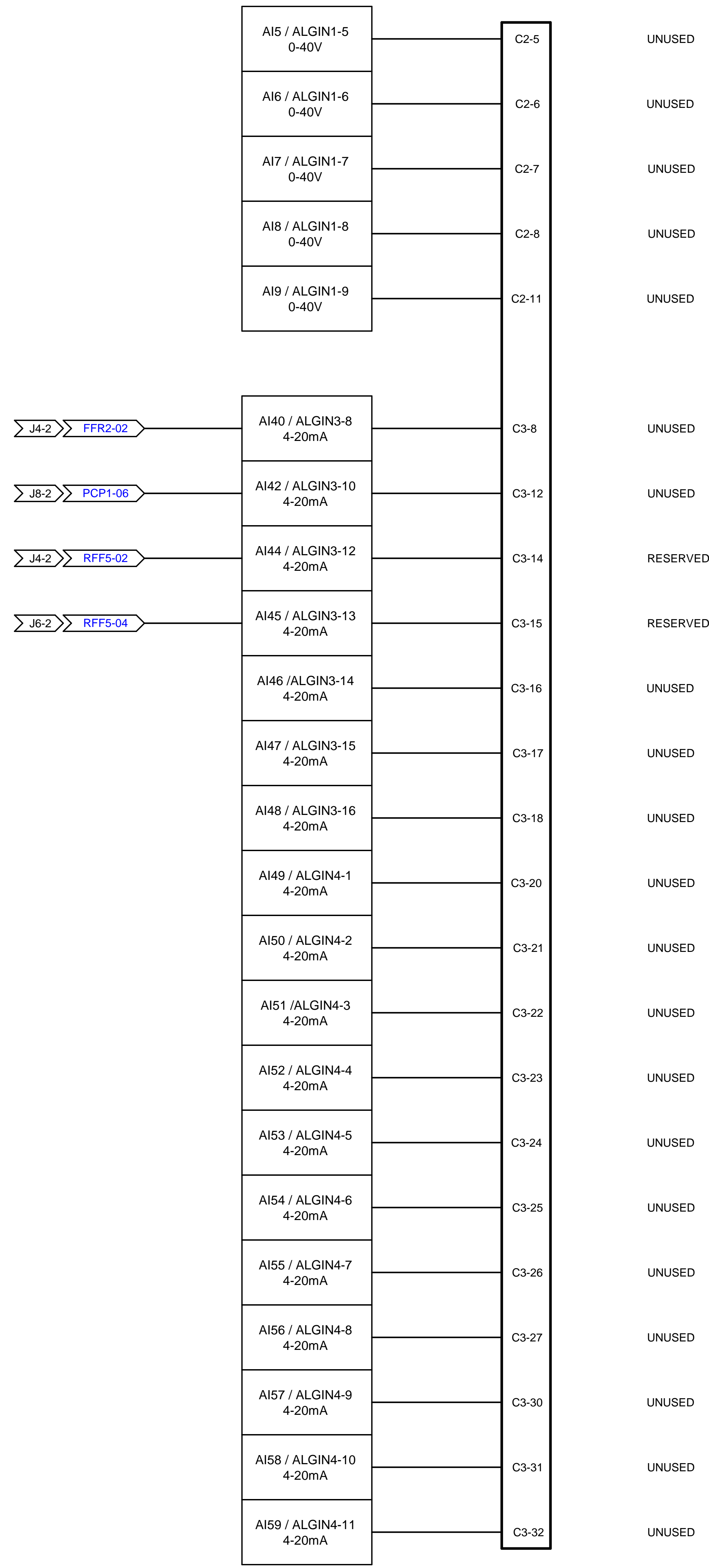
BLOWER
45 PULSES PER ROTATION
426-7540 (D4)

RADIATOR FAN
60 PULSES PER ROTATION
698-0376 (D1)

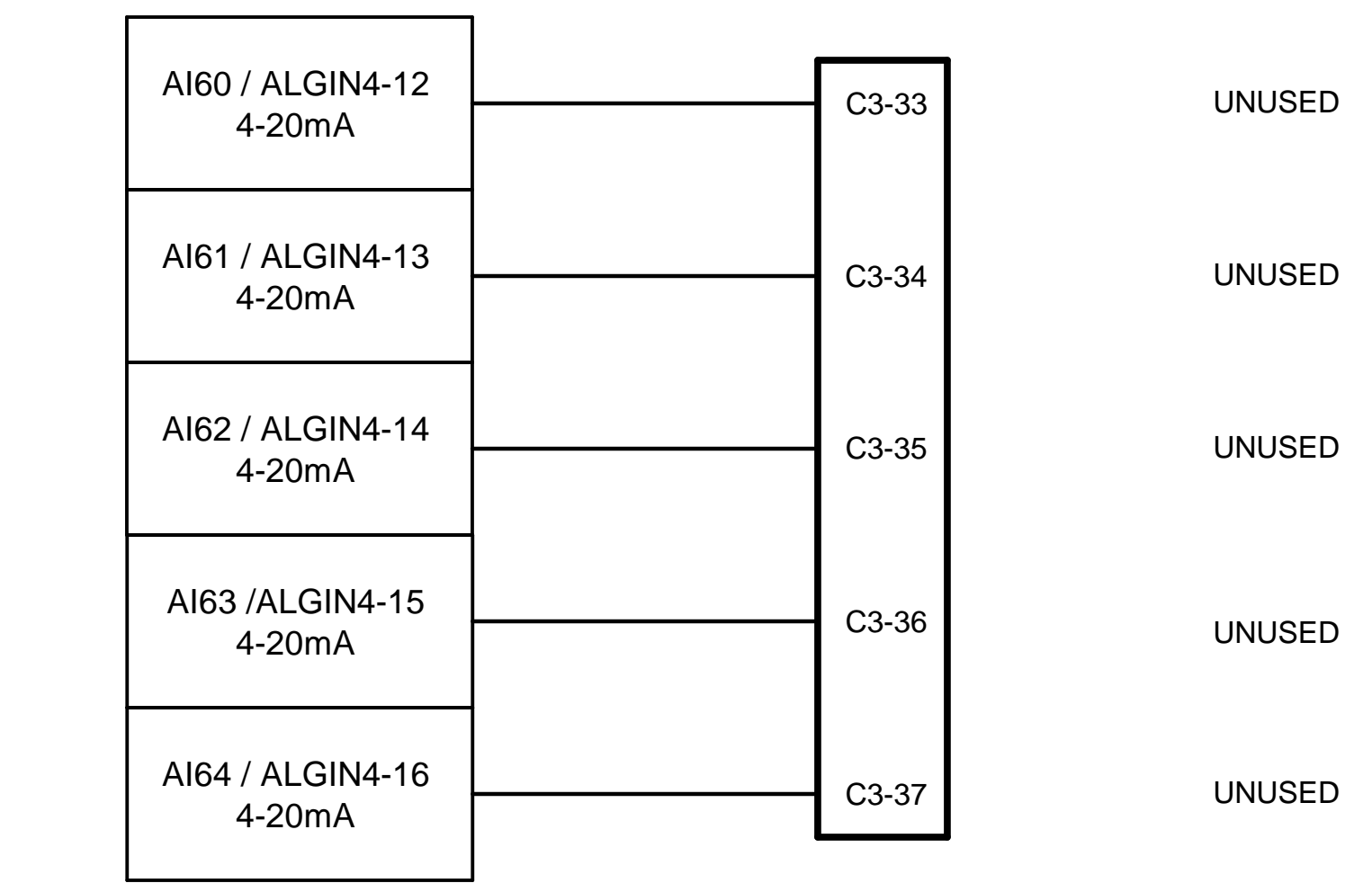
24V ELECTRICS

REVISIONS						
ZONE	REV	DESCRIPTION	EON	DATE	CHK	APP
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	01	NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS
	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS

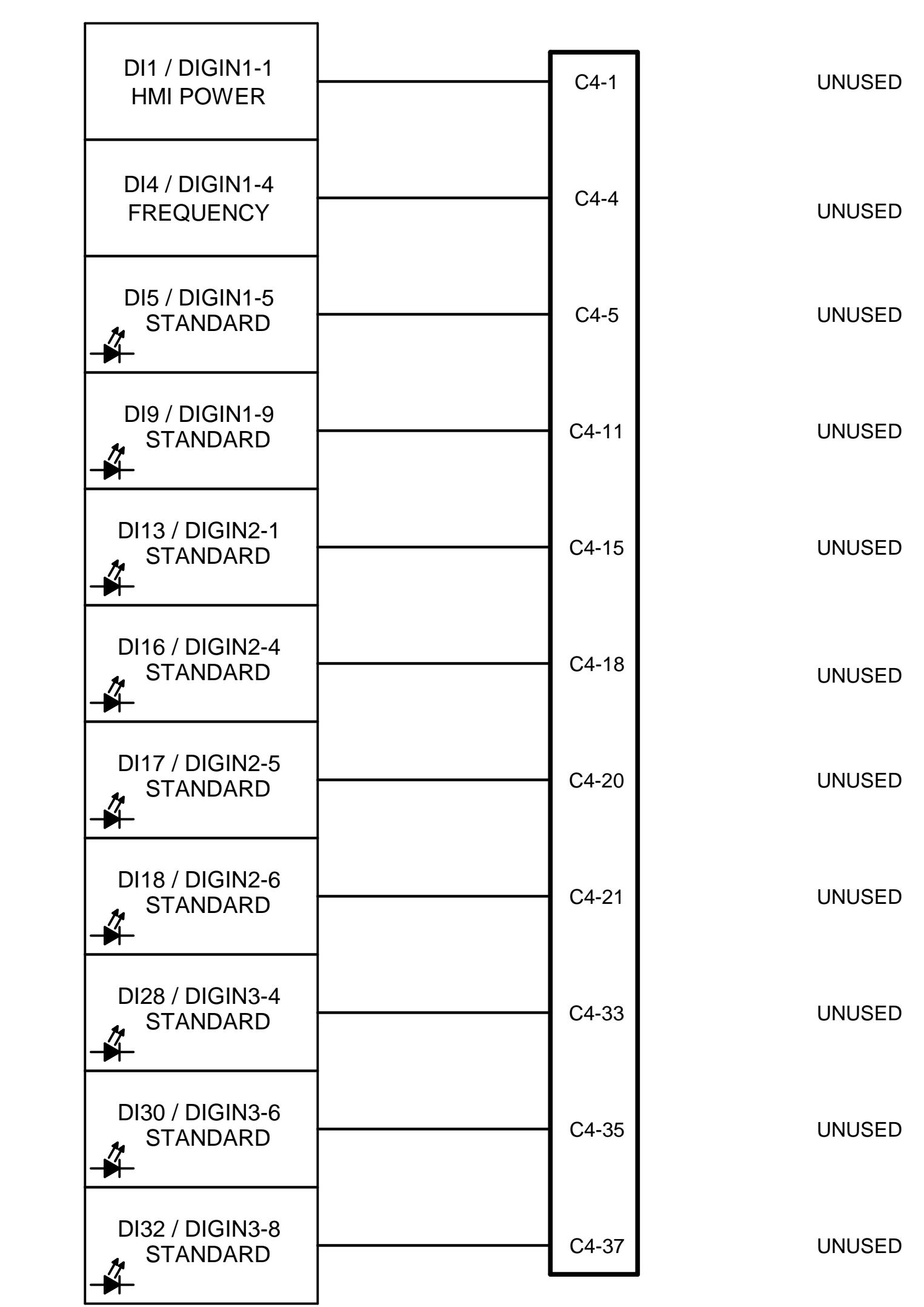
SPARE I/O - ANALOG INPUT



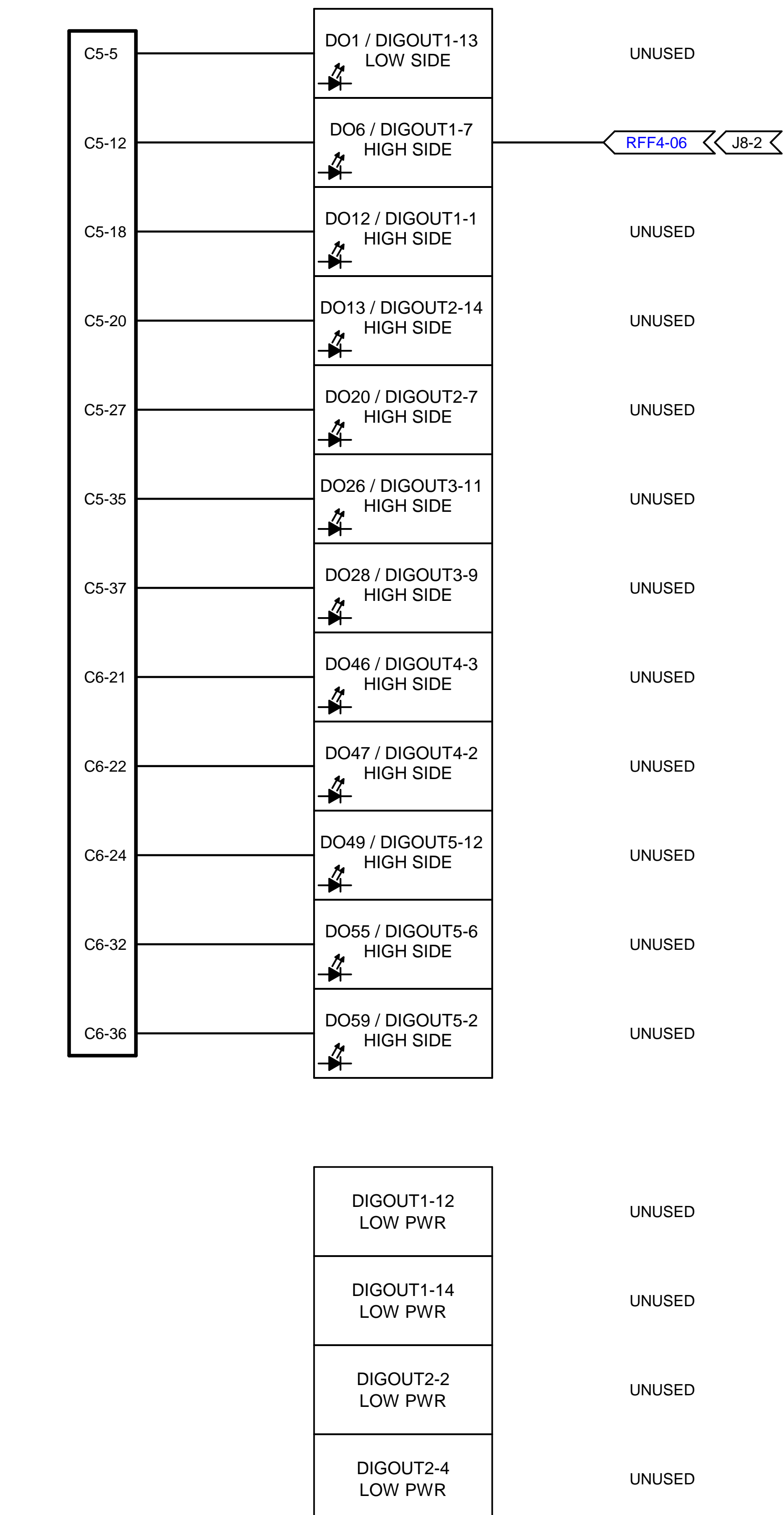
SPARE I/O ANALOG INPUT (CONT.)



SPARE I/O DIGITAL INPUT



SPARE I/O DIGITAL OUTPUT



8

7

6

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2

1

REVISIONS							
ZONE	REV	DESCRIPTION	EON	DATE	CHK	CHK	APP
	00	RELEASE	NL12-1909	8-29	FL	BS	BS
	01	NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS	BS
	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS	BS

BLANK

8

ELECTRICAL SCHEMATIC L18502232		SCALE	1/1	EST WY		DATE	8-24-2012
DRAWN: florett		DO NOT SCALE		DWG NO.		4277251	
ISSUED: 8-24-2012		SCALE		SHEET		8 OF 29	

02

8

7

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4

3

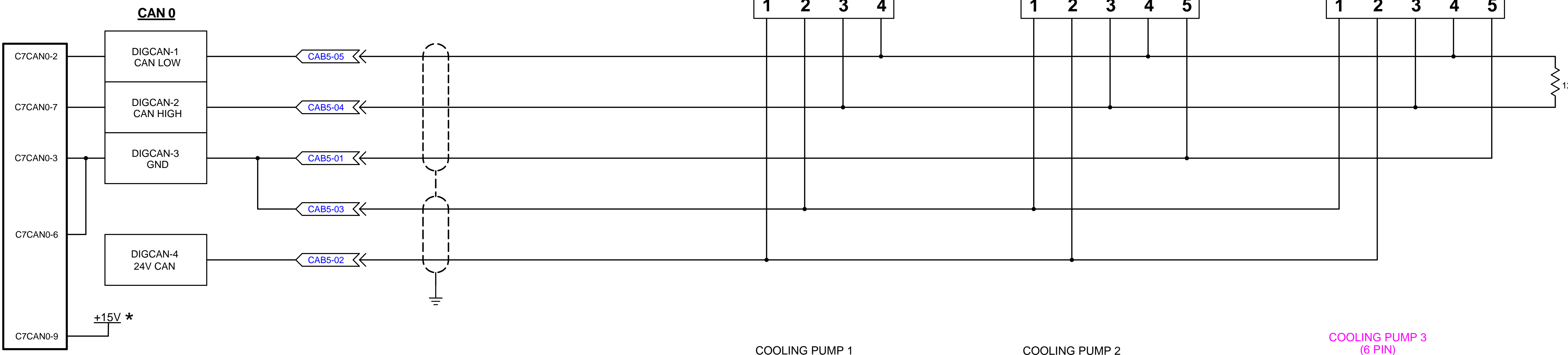
2

1

CAN

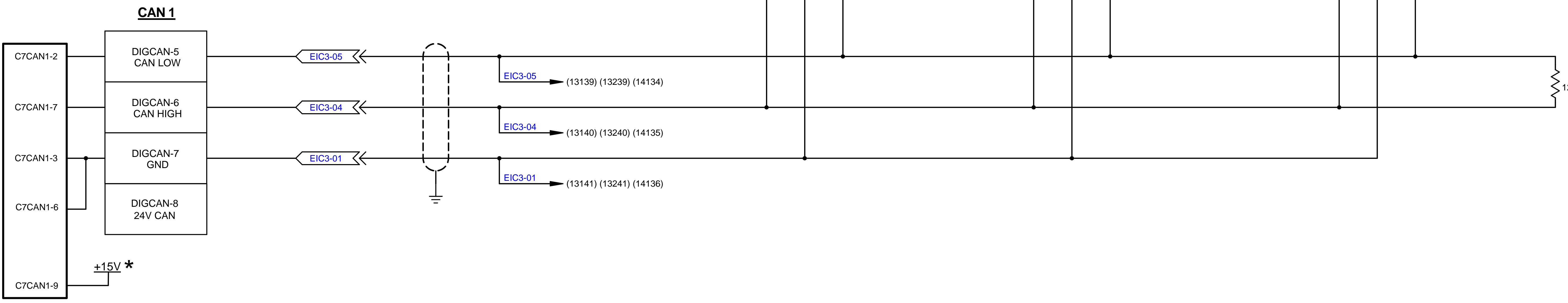
REVISIONS						
ZONE	REV	DESCRIPTION	EON	DATE	CHG	CHK
	00	RELEASE	NL12-1909	8-29	FL	BS
	01	NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS
	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS

CAB



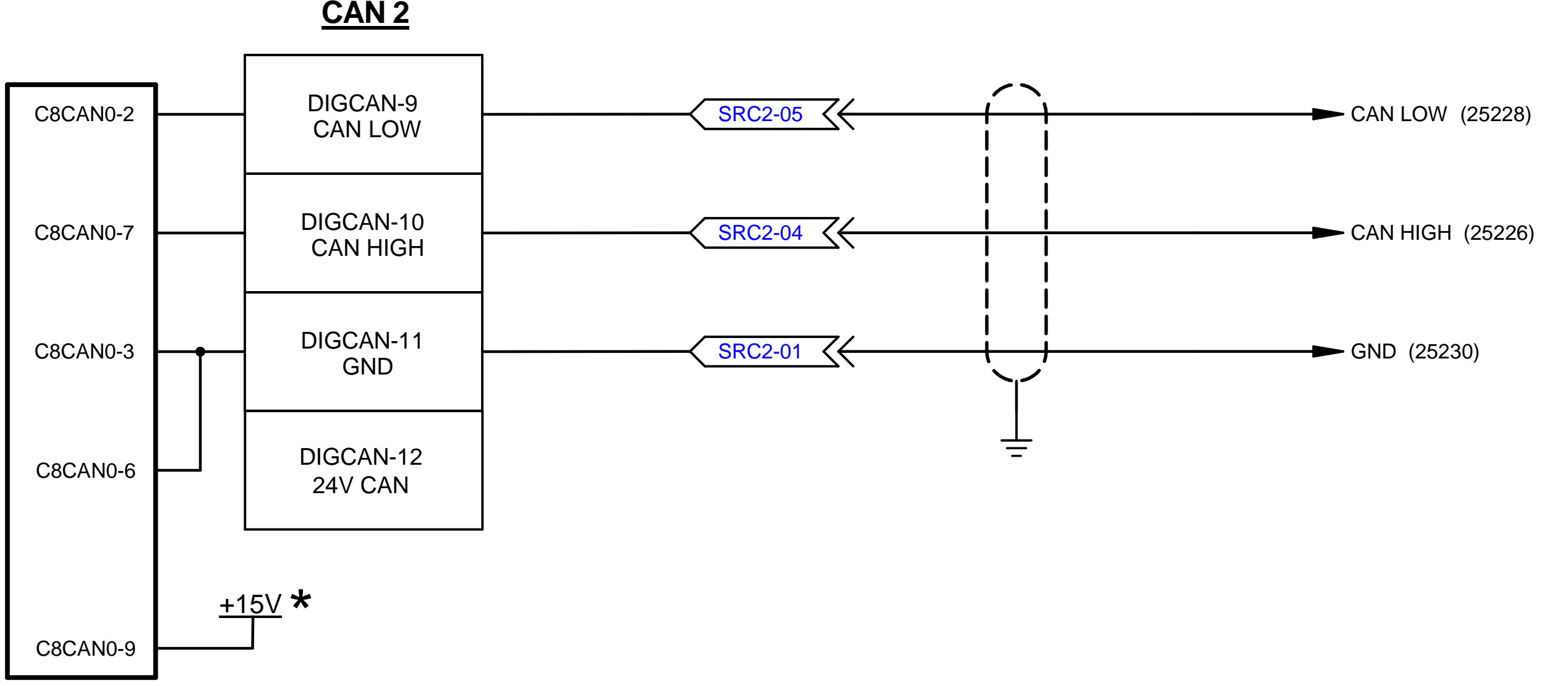
RESISTOR
426-6254 (A4)

ENGINE / COOLING PUMP

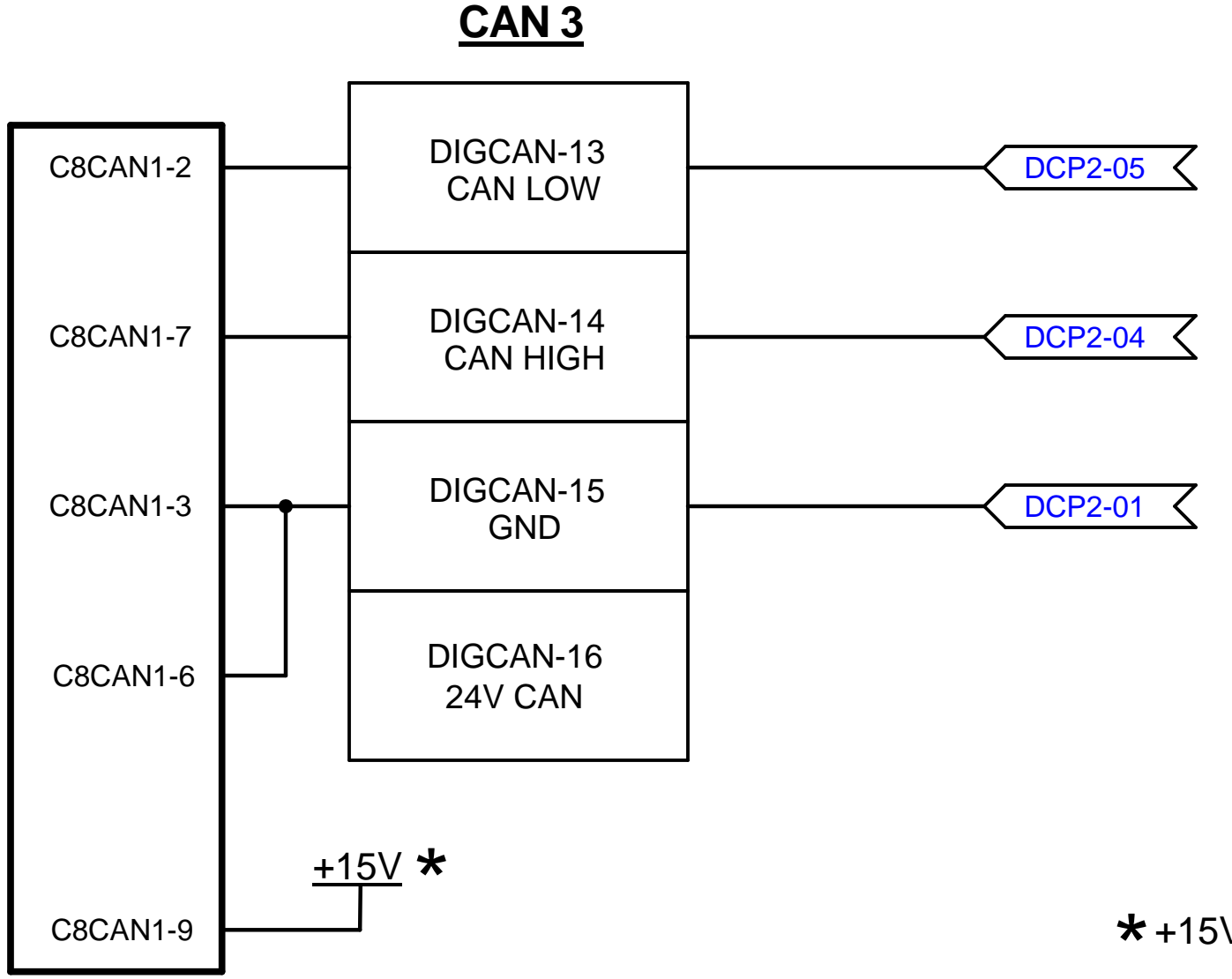


RESISTOR
426-6254 (D2)

DRIVE SYSTEM



SPARE CAN

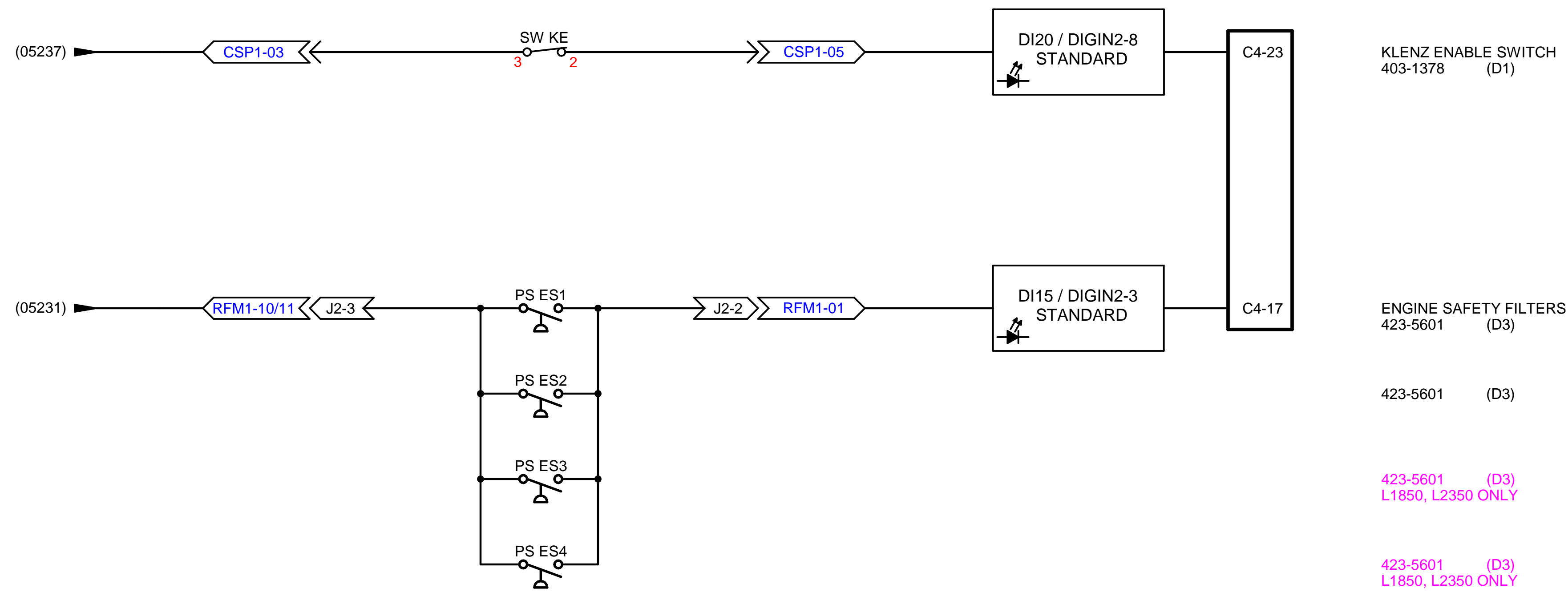


*+15V SUPPLIED FROM DIGITAL INTERFACE CARD

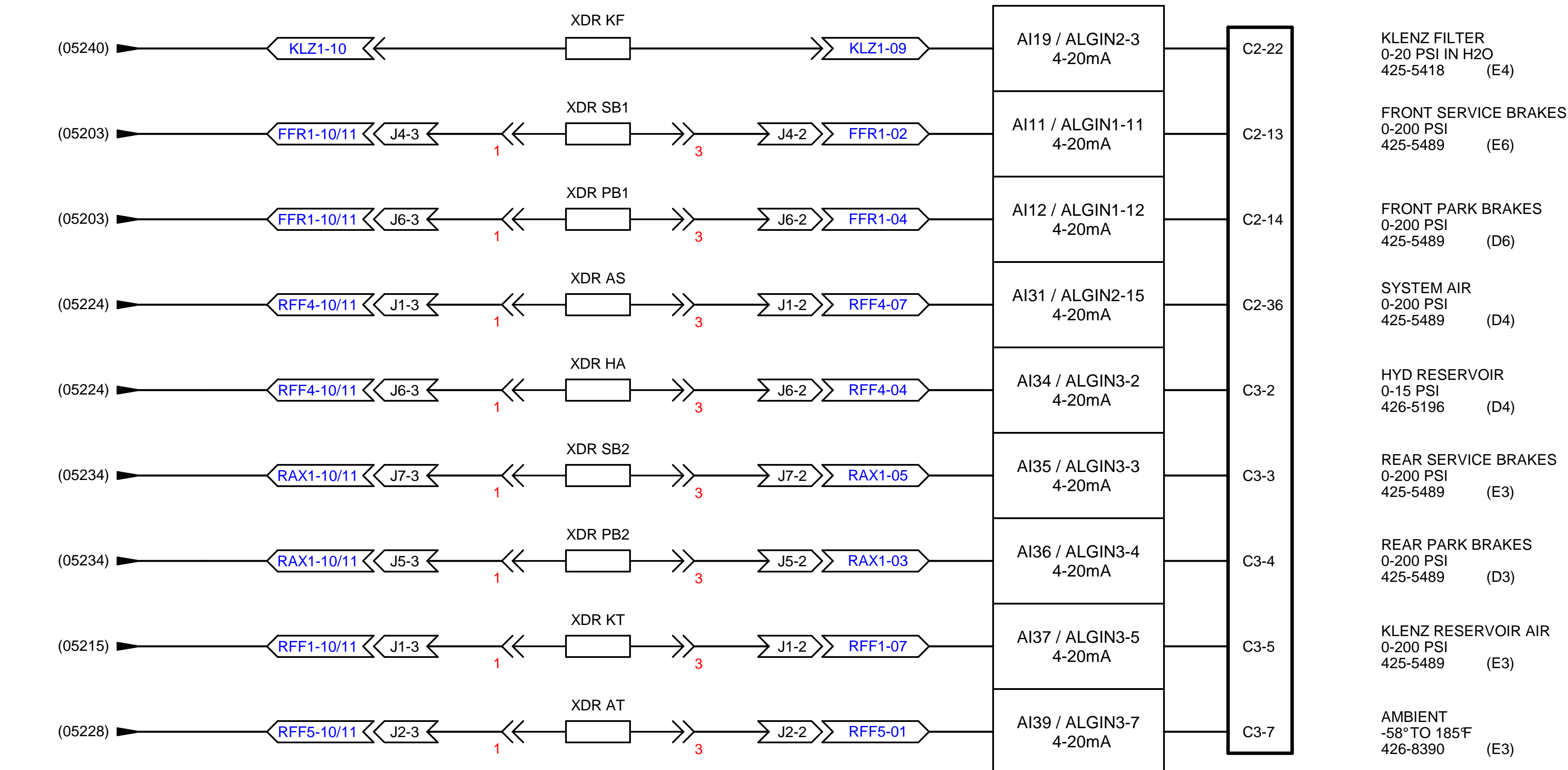
REVISIONS						
ZONE	REV	DESCRIPTION	EON	DATE	CHK	APP
	00	RELEASE	NL12-1909	8-29	FL	BS
	01	NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS
	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS

AIR

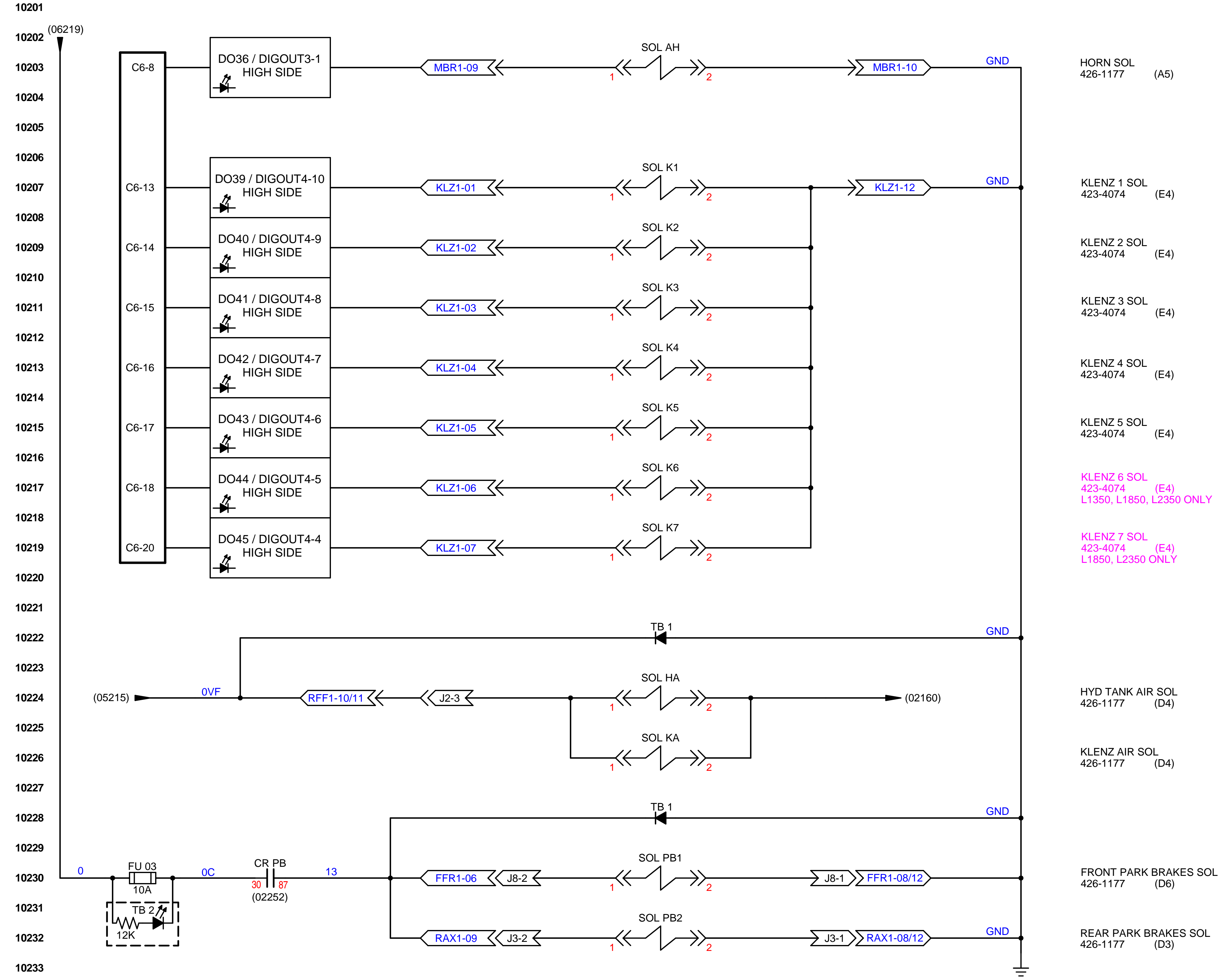
SWITCHES



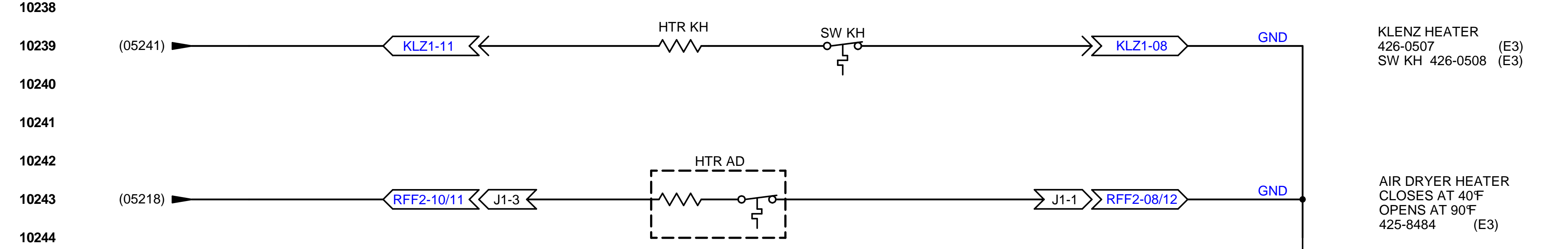
TRANSDUCERS



SOLENOIDS



HEATERS



8

7

6

5

4

3

2

1

REVISIONS							
ZONE	REV	DESCRIPTION	EON	DATE	CHK	CHK	APP
	00	RELEASE	NL12-1909	8-29	FL	BS	BS
	01	NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS	BS
	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS	BS

BLANK

12

8

7

6

5

4

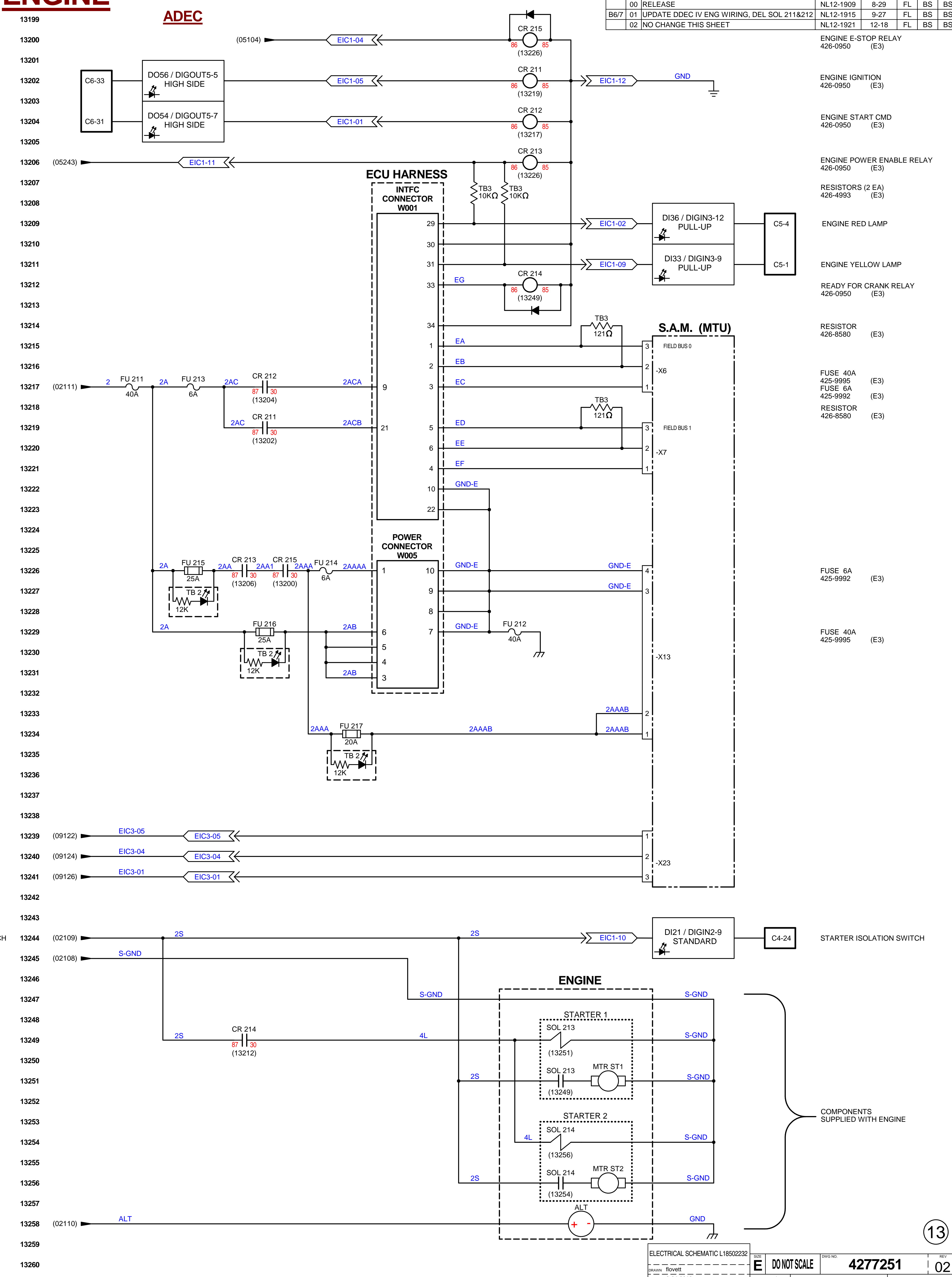
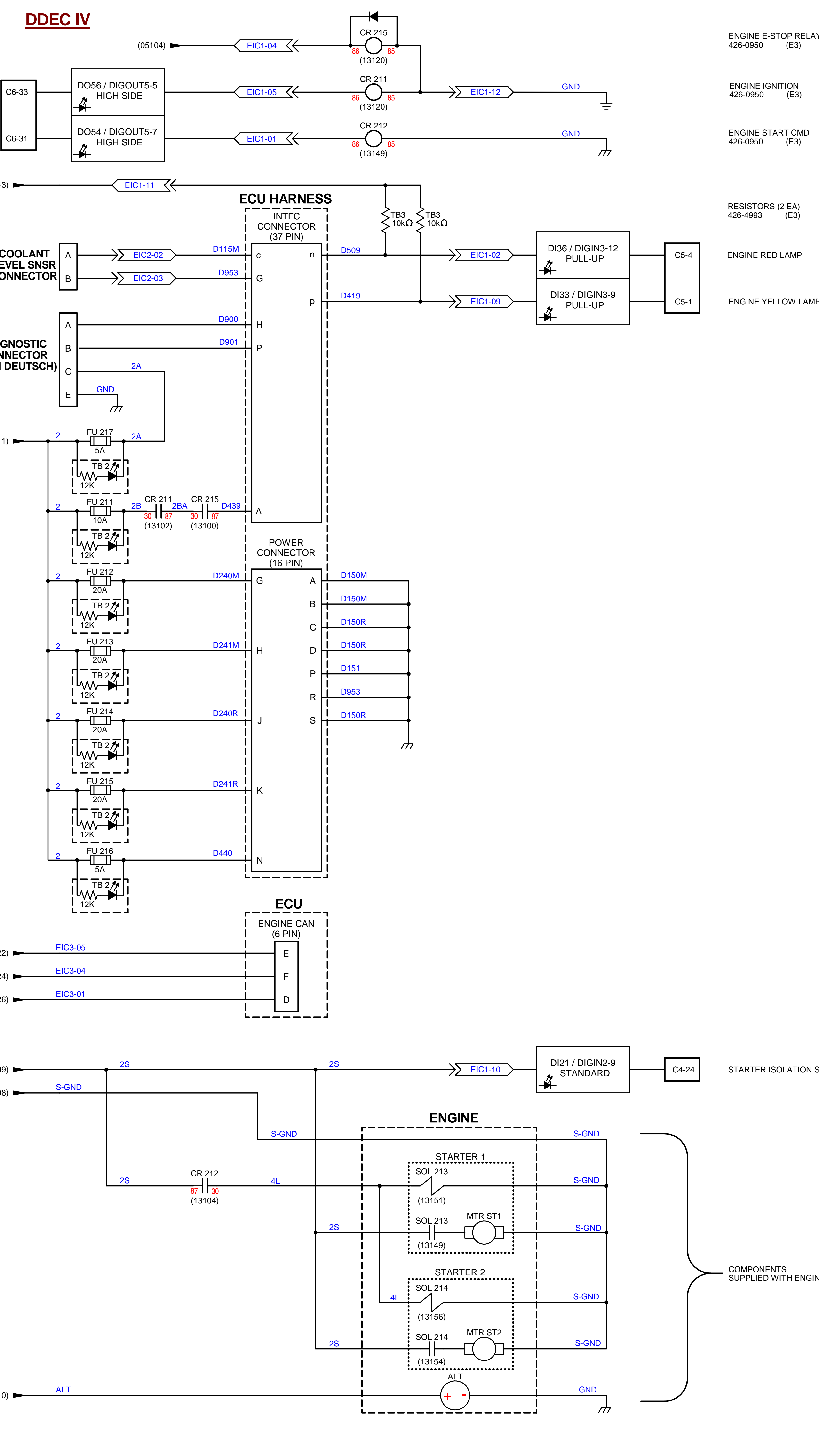
3

2

1

REV		DESCRIPTION	EON	DATE	CHG	CHK	APP
00	00	RELEASE	NL12-1909	8-29	FL	BS	BS
01	01	UPDATE DDEC IV ENG WIRING, DEL SOL 211&212	NL12-1915	9-27	FL	BS	BS
02	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS	BS

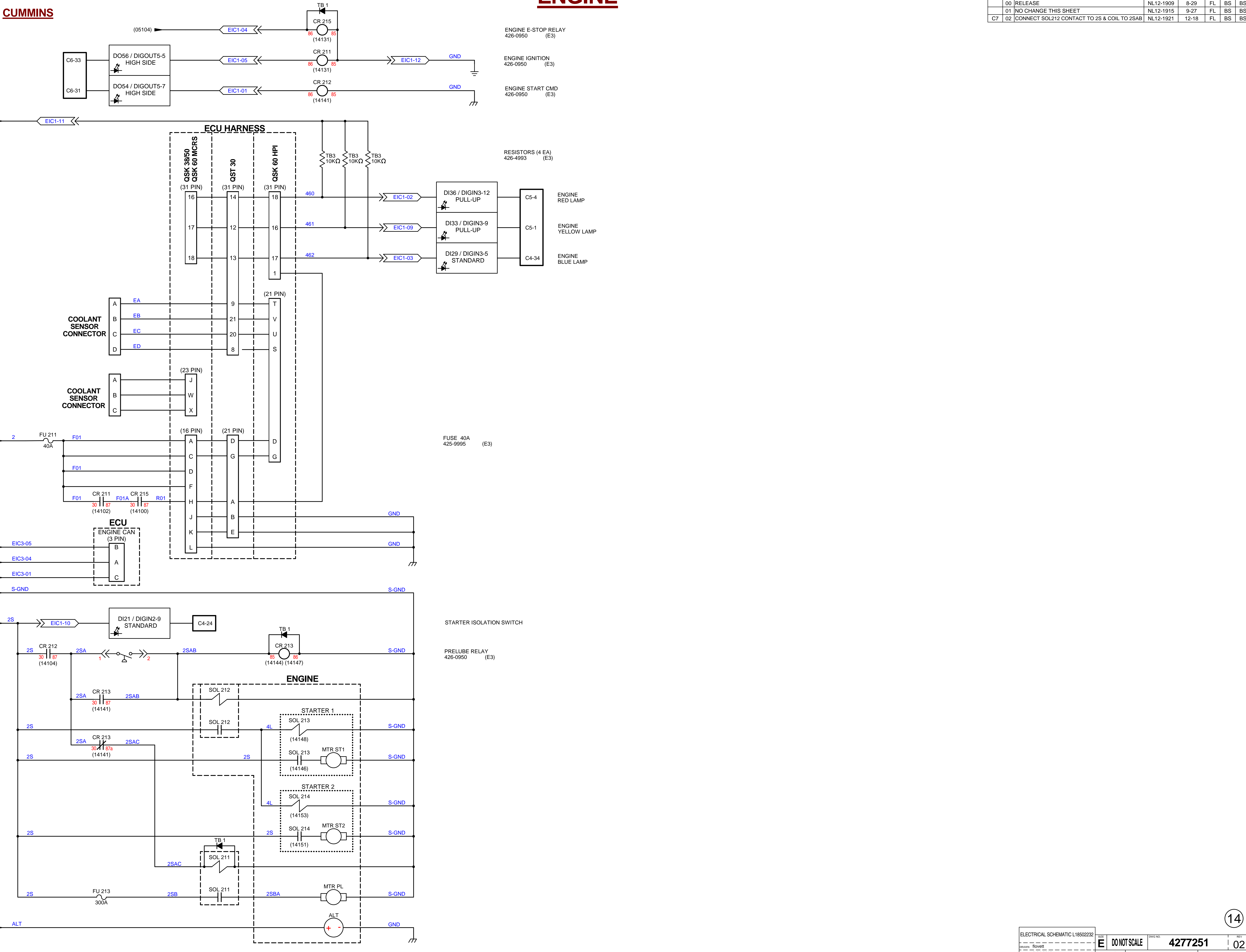
ENGINE



ENGINE

REVISIONS						
ZONE	REV	DESCRIPTION	EON	DATE	CHK	APP
	00	RELEASE	NL12-1909	8-29	FL	BS
	01	NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS
C7	02	CONNECT SOL212 CONTACT TO 2S & COIL TO 2SAB	NL12-1921	12-18	FL	BS

CUMMINS



8 7 6 5 4 3 2 1

REVISIONS							
ZONE	REV	DESCRIPTION	EON	DATE	CHK	CHK	APP
	00	RELEASE	NL12-1909	8-29	FL	BS	BS
	01	NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS	BS
	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS	BS

BLANK

H
G
F
E
D
C
B
A

H
G
F
E
D
C
B
A

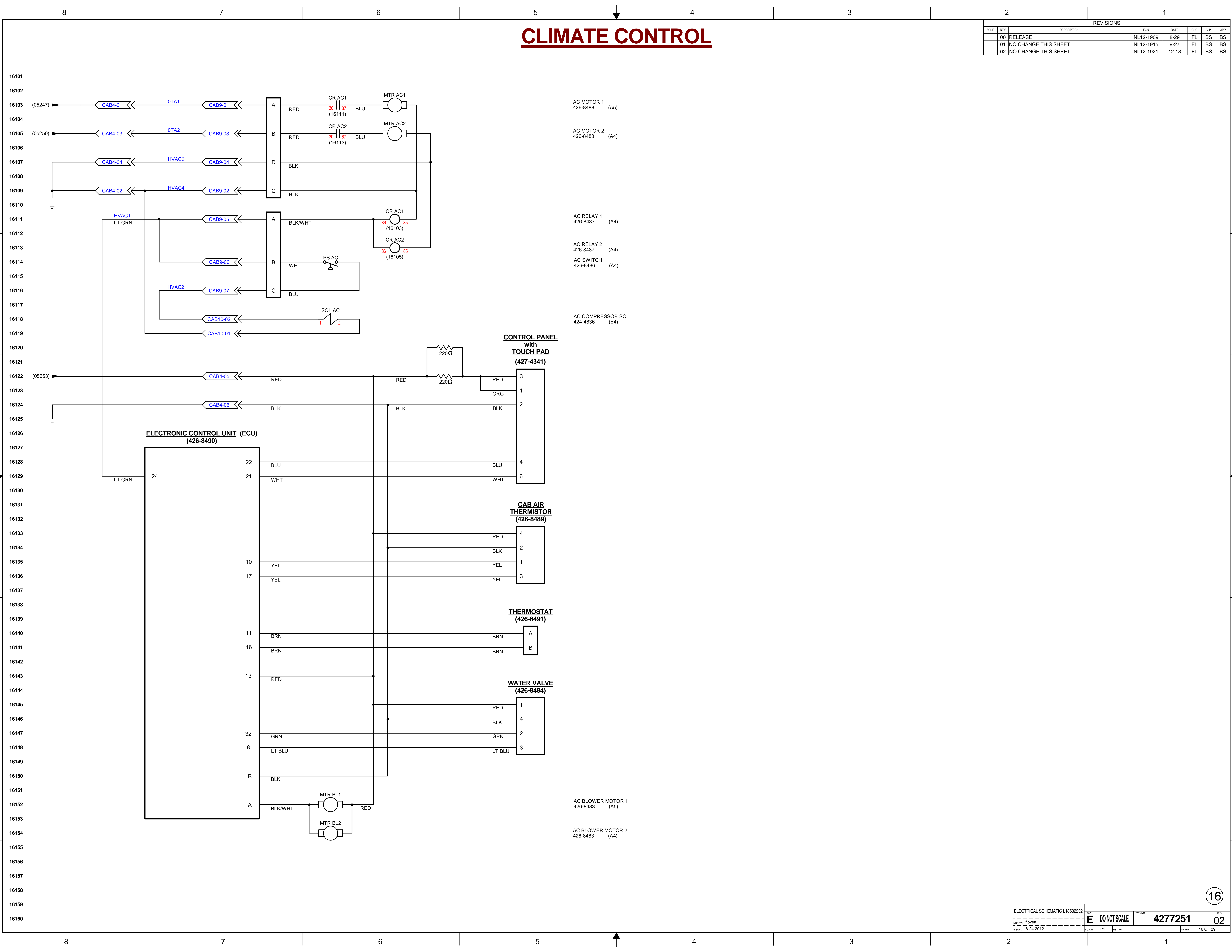
8 7 6 5 4 3 2 1

ELECTRICAL SCHEMATIC L18502232		SCALE 1/1	EST WY	DATE	REV
DRAWN: florett	ISSUED: 8-24-2012	DO NOT SCALE		DWG NO: 4277251	REV: 02
			SHEET	15 OF 29	

15

CLIMATE CONTROL

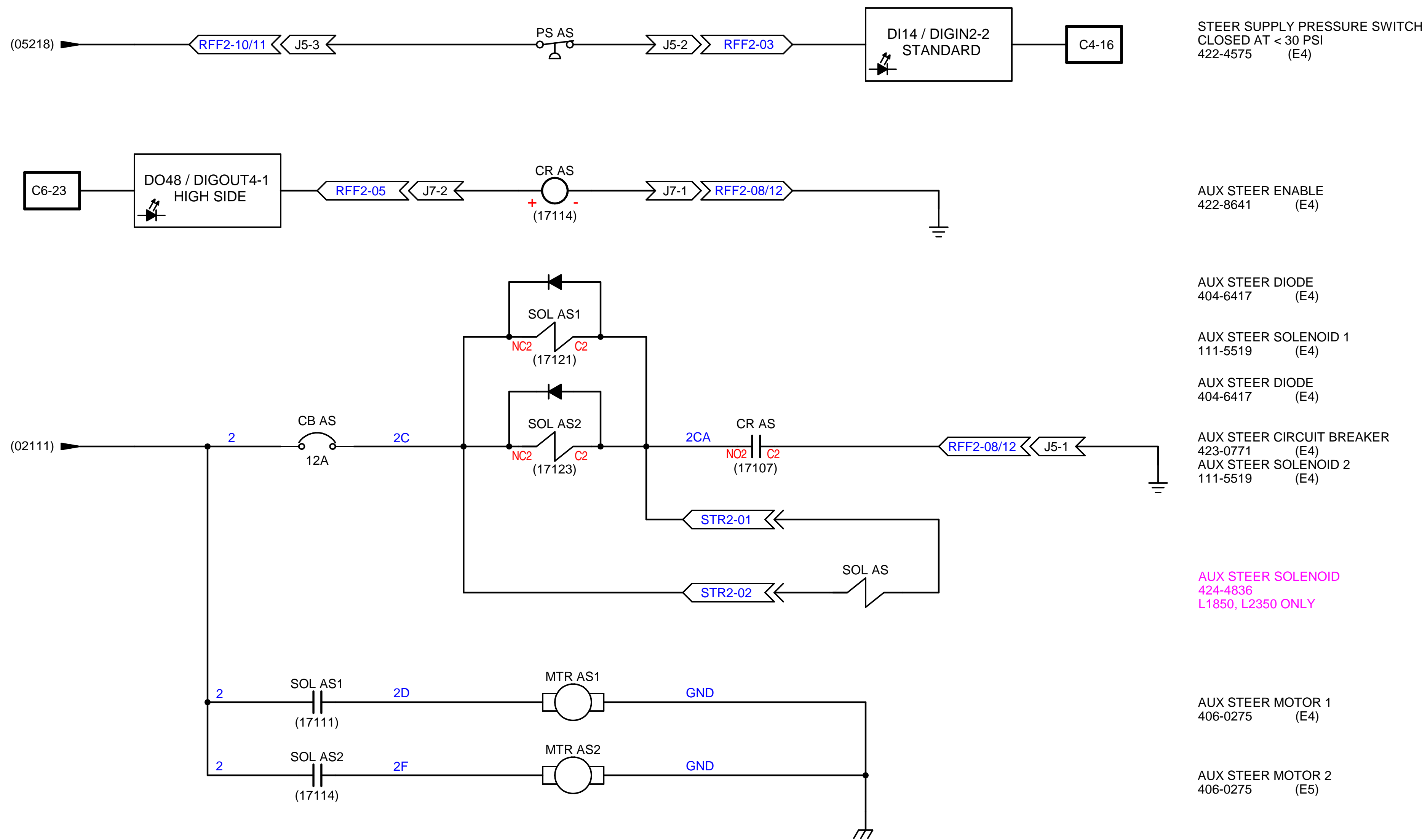
REVISIONS						
ZONE	REV	DESCRIPTION	EON	DATE	CHK	APP
	00	RELEASE	NL12-1909	8-29	FL	BS
	01	NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS
	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS



COMPONENT OPTIONS

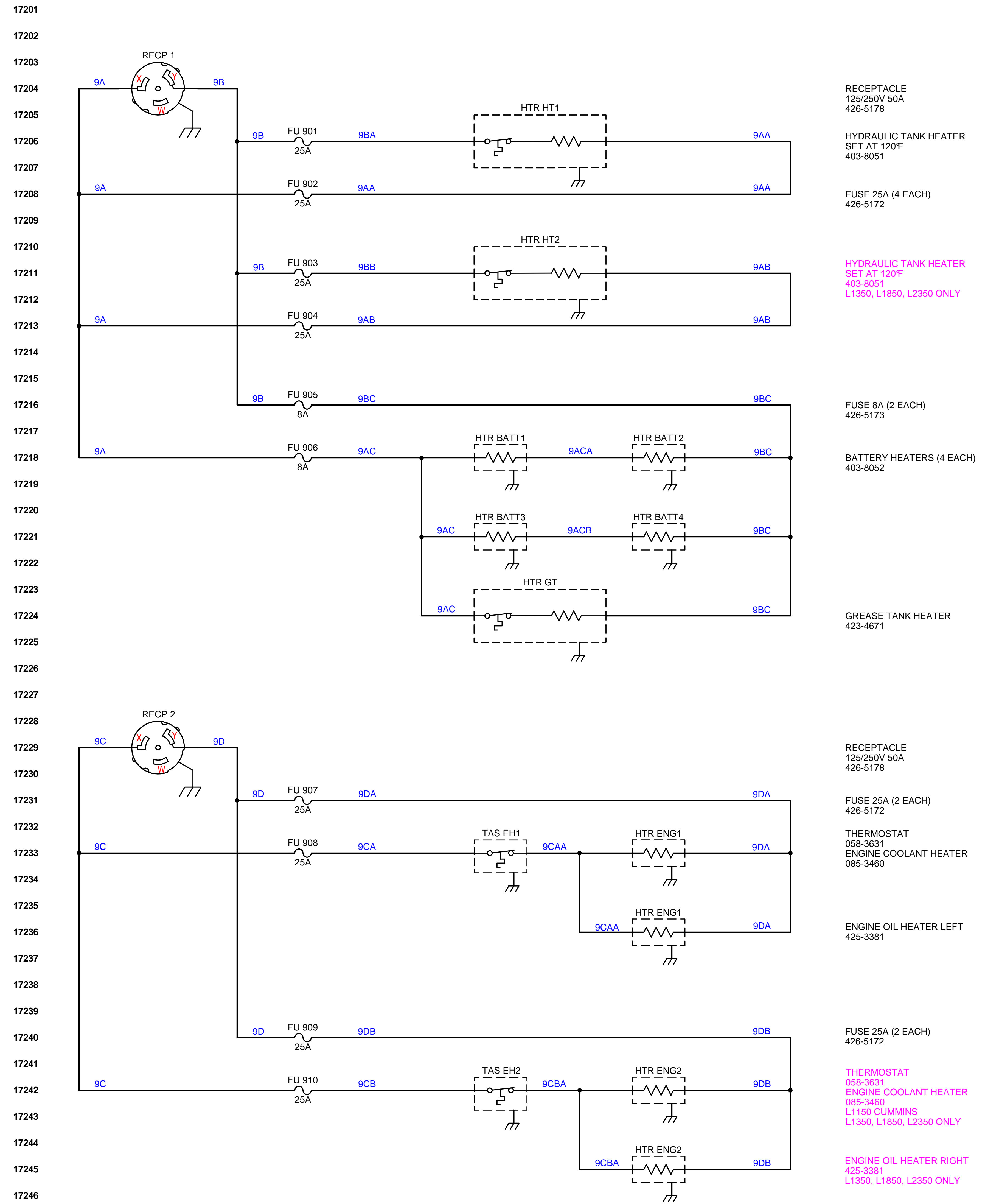
REV		DESCRIPTION	EON	DATE	CHG	CHK	APP
00	RELEASE		NL12-1909	8-29	FL	BS	BS
01	NO CHANGE THIS SHEET		NL12-1915	9-27	FL	BS	BS
02	NO CHANGE THIS SHEET		NL12-1921	12-18	FL	BS	BS

AUXILIARY STEER



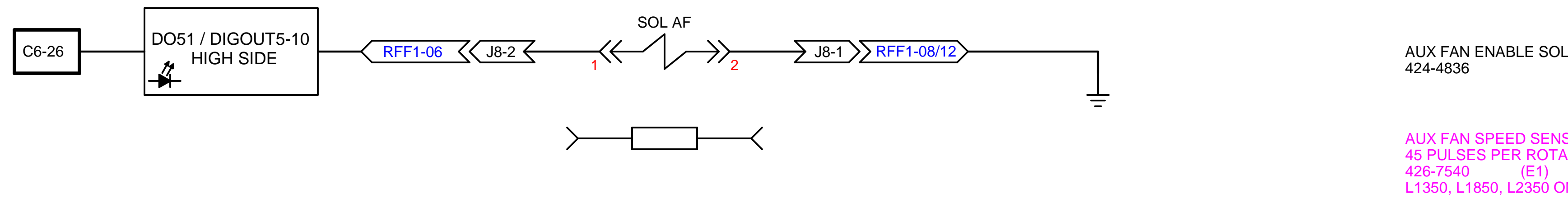
- STEER SUPPLY PRESSURE SWITCH
CLOSED AT <30 PSI
422-4575 (E4)
- AUX STEER ENABLE
422-8641 (E4)
- AUX STEER DIODE
404-6417 (E4)
- AUX STEER SOLENOID 1
111-5519 (E4)
- AUX STEER DIODE
404-6417 (E4)
- AUX STEER CIRCUIT BREAKER
423-0771 (E4)
- AUX STEER SOLENOID 2
111-5519 (E4)
- AUX STEER SOLENOID
424-4836
L1850, L2350 ONLY
- AUX STEER MOTOR 1
406-0275 (E4)
- AUX STEER MOTOR 2
406-0275 (E5)

HEATERS (COLD CLIMATE)



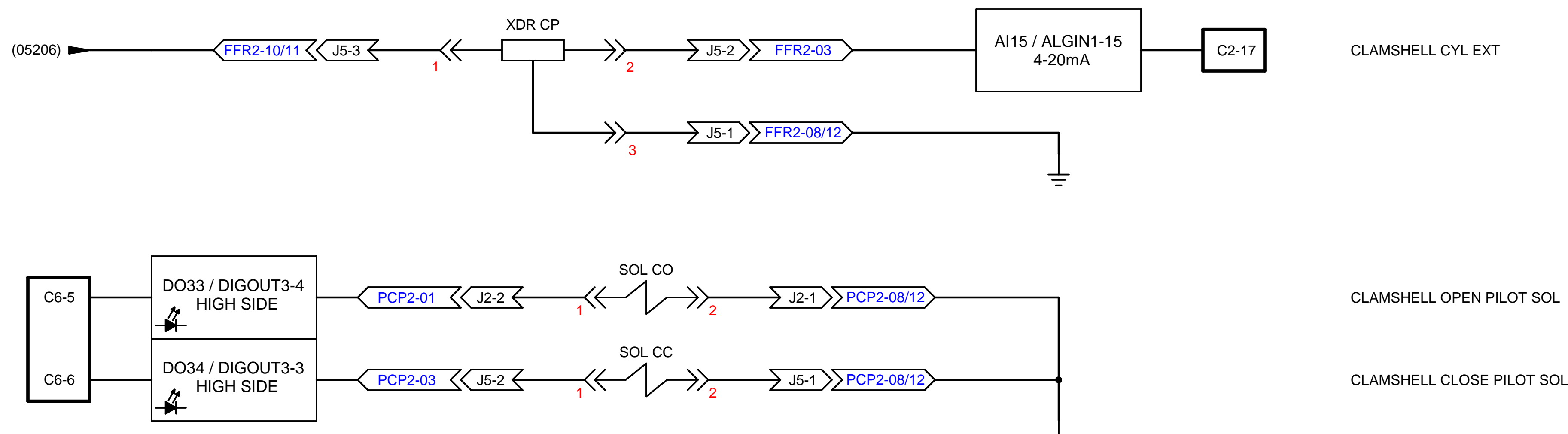
- RECEPTACLE
125/250V 50A
426-5178
- HYDRAULIC TANK HEATER
SET AT 120°F
403-8051
- FUSE 25A (4 EACH)
426-5172
- HYDRAULIC TANK HEATER
SET AT 120°F
403-8051
L1350, L1850, L2350 ONLY
- FUSE 8A (2 EACH)
426-5173
- BATTERY HEATERS (4 EACH)
403-8052
- GREASE TANK HEATER
423-4671
- RECEPTACLE
125/250V 50A
426-5178
- FUSE 25A (2 EACH)
426-5172
- THERMOSTAT
058-3631
ENGINE COOLANT HEATER
085-3460
- ENGINE OIL HEATER LEFT
425-3381
- FUSE 25A (2 EACH)
426-5172
- THERMOSTAT
058-3631
ENGINE COOLANT HEATER
085-3460
L1150 CUMMINS
L1350, L1850, L2350 ONLY
- ENGINE OIL HEATER RIGHT
425-3381
L1350, L1850, L2350 ONLY

AUXILIARY OIL COOLER



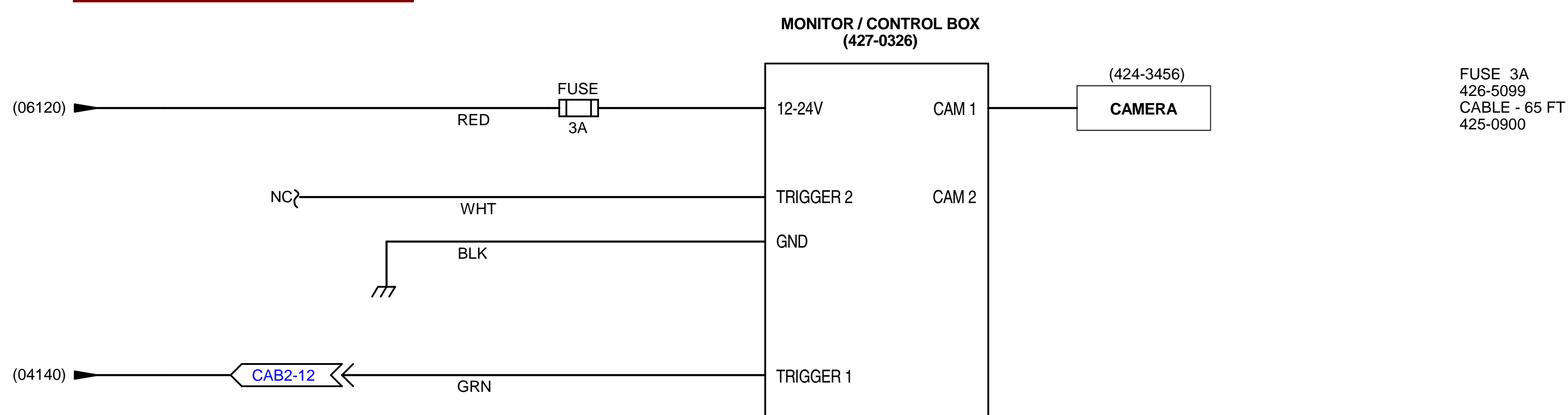
- AUX FAN ENABLE SOL
424-4836
- AUX FAN SPEED SENSOR
45 PULSES PER ROTATION
426-7540 (E1)
L1350, L1850, L2350 ONLY

CLAMSHHELL



- CLAMSHHELL CYL EXT
C2-17
- CLAMSHHELL OPEN PILOT SOL
C2-17
- CLAMSHHELL CLOSE PILOT SOL
C2-17

REAR VISION CAMERA



- FUSE 3A
426-5099
CABLE - 65 FT
425-0900

8

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1

REVISIONS							
ZONE	REV	DESCRIPTION	EON	DATE	CHK	CHK	APP
	00	RELEASE	NL12-1909	8-29	FL	BS	BS
	01	NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS	BS
	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS	BS

BLANK

18

8

7

6

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4

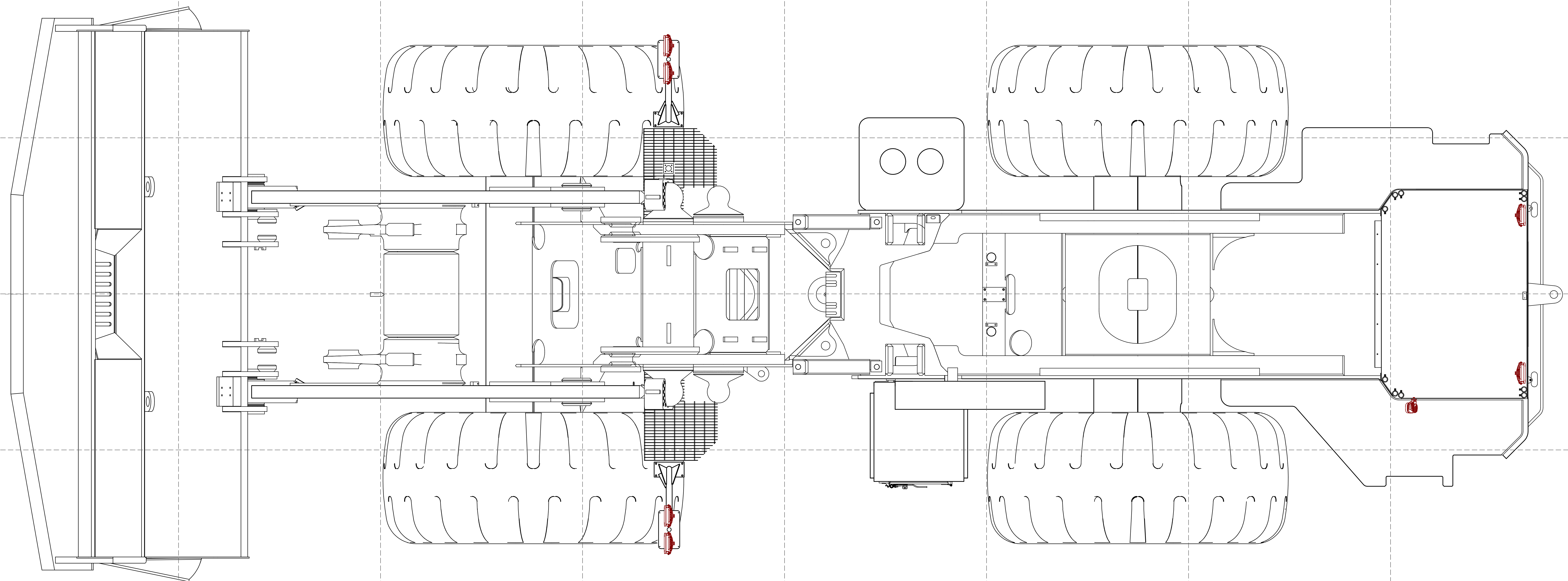
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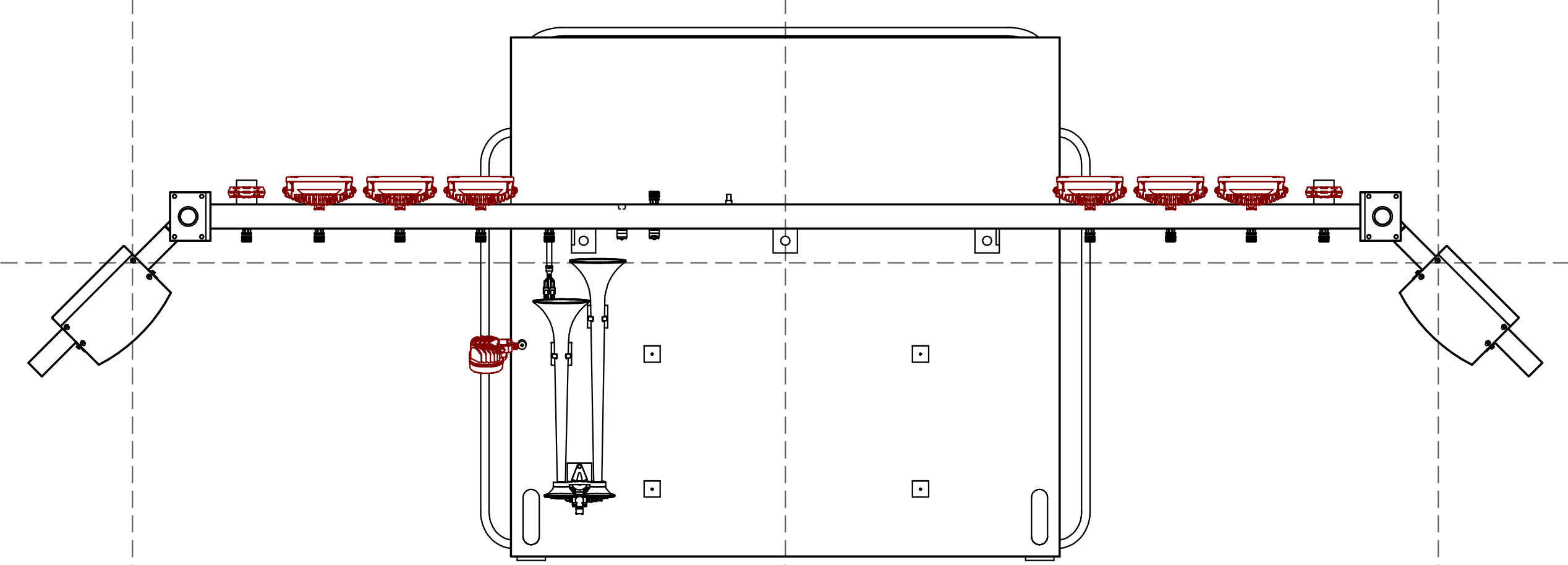
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		REVISIONS					
ZONE	REV	DESCRIPTION	EON	DATE	CHG	CHK	APP
	00	RELEASE	NL12-1909	8-29	FL	BS	BS
	01	NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS	BS
	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS	BS

FRAME LOCATION MAP



CAB & LIGHT BAR LIGHTS



BREAKOUT BOX LOCATIONS	
NAME	LOCATION
PCP1	E5
PCP2	E5
FFR1	D6
FFR2	E6
EST1	D4
RFF1	E4
RFF2	E4
RFF3	E4
RFF4	D4
RFF5	D4
RFM1	D4
RAX1	E3

REFERENCE INFORMATION

WIRE LOCATION CHART

REVISIONS						
ZONE	REV	DESCRIPTION	EON	DATE	CHK	APP
	00	RELEASE	NL12-1909	8-29	FL	BS BS
	01	UPDATE WIRE NOS. PER SCHEMATIC CHANGE	NL12-1915	9-27	FL	BS BS
	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS BS

WIRE CODE	LINE NO.
0	02106
0B	02214
0BA	02220
0BB1	02223
0BC	02223
0BD	02226,05125
0C	10230
0D	06103
0E	06118
0E1	03103
0E1A	03103
0E1B	03103
0EA	06118
0F	05107
0F1	05107
0F2	05111
0F2A	05111,06221
0F3	05115
0F4	05104
0FA	05107,05118
0G	05123
0H	02158
0JA	04211
0JB	04212
0K	04217
0KA	04217
0L	04221
0LA	04221
0LB	04221
0LC	04225
0M	04234
0MA	04234
0N	04238
0NA	04238
0P	04242
0PA	04242
0R	04248
0RA	04248
0S	04255
0SA	04255
0T	05247
0TA	05247
0TA1	16103
0TA2	16105
0V	05203
0VA	05203
0VB	05203
0VC	05206
0VD	05209
0VE	05212
0VF	05215,10224
0VG	05218
0VH	05221
0VJ	05224
0W	05228
0WA	05228
0WB	05228
0WC	05231
0WD	05234
0WE	05237
0WF	05240
0X	04201
0Y	06215
0Z	03226
0ZA	03228
01	04209
02A	11249
02B	11252
03	06112
12V1	06112
12V2	06112
13	10230
13B	02252
2	02106,02111, 13117,13217, 14127,17114
2A	13117,13217
2AA	13226
2AA1	13226
2AAA	13226
2AAAA	13226
2AAAB	13234

WIRE CODE	LINE NO.
2AB	13229
2AC	13217
2ACA	13217
2ACB	13219
2B	13120
2BA	13120
2C	17114
2CA	17114
2D	17121
2F	17123
2S	02109,13144, 13156,13244, 13256,14139
2SA	14141,14147
2SAB	14141,14146
2SAC	14147,14155
2SB	14157
2SBA	14157
3B	02205
4L	13149,13154, 13249,13254, 14146,14151
9A	17204,17218
9AA	17208
9AB	17213
9AC	17218
9ACA	17218
9ACB	17221
9B	17204,17216
9BA	17206
9BB	17211
9BC	17216
9C	17229,17242
9CA	17233
9CAA	17233
9CB	17242
9CBA	17242
9D	17229,17240
9DA	17231
9DB	17240
460	14111
461	14113
462	14115
ALT	02110,13158, 13258,14159,
CAB1-01	03103
CAB1-02	03103
CAB1-03	06112
CAB1-04	06113
CAB1-05	03107
CAB1-06	03107
CAB1-09	03206
CAB1-10	03209
CAB1-11	03203
CAB1-12	03203
CAB2-01	02208,02252, 04201
CAB2-02	02252
CAB2-03	04119
CAB2-04	02208
CAB2-05	02210
CAB2-06	04115
CAB2-07	04115
CAB2-08	04117
CAB2-09	04121
CAB2-12	17158
CAB3-01	03232
CAB3-02	03234
CAB3-03	06103
CAB3-04	06118
CAB3-05	06114
CAB3-06	06105
CAB3-07	06119
CAB3-08	06115
CAB3-09	04203
CAB3-10	03226
CAB3-11	03228
CAB3-12	03230

WIRE CODE	LINE NO.
CAB4-01	05247,16103
CAB4-02	16109
CAB4-03	05250,16105
CAB4-04	16107
CAB4-05	05253,16122
CAB4-06	16124
CAB5-01	09108
CAB5-02	09112
CAB5-03	09110
CAB5-04	09106
CAB5-05	09104
CAB9-01	16103
CAB9-02	16109
CAB9-03	16105
CAB9-04	16107
CAB9-05	16111
CAB9-06	16114
CAB9-07	16116
CAB10-01	16119
CAB10-02	16118
CSP1-03	05237,10103, 11110
CSP1-04	11110
CSP1-05	10103
CSP1-07	04215
CSP1-08	04211
CSP1-09	04212
CSP1-10	11250
CSP1-11	05238,11250
CSP1-12	04212
CSP2-01	11249
CSP2-02	11250
CSP2-03	11250
D115M	13109
D150M	13123
D150R	13125
D151	13127
D240M	13123
D240R	13129
D241M	13126
D241R	13132
D419	13111
D439	13120
D440	13135
D509	13109
D900	13112
D901	13113
D953	13110,13128
DCP1-02	03239,05118
DCP2-01	09154
DCP2-04	09152
DCP2-05	09150
DI7	02208
DI8	02252
DI10	11108
DO2	02214
DO3	02203
DO4	04103
DO5	04107
DO7	04111
DO8	02249
DO17	03215
DO18	03217
DO19	03219
DO23	02241
DO24	02235
DO35	04144
DO37	04125
DO38	04130
DO58	04138

WIRE CODE	LINE NO.
EA	13215,14118
EB	13216,14119
EC	13217,14120
ED	13219,14121
EE	13220
EF	13221
EG	13212
EIC1-01	13104,13204, 14104
EIC1-02	13109,13209, 14111
EIC1-03	14115
EIC1-04	05104,13100, 13200,14100
EIC1-05	13102,13202, 14102
EIC1-09	13111,13211, 14113
EIC1-10	13144,13244, 14139
EIC1-11	05243,13106, 13206,14106
EIC1-12	13102,13202, 14102
EIC2-02	13109
EIC2-03	13110
EIC3-01	09125,13141, 13241,14136
EIC3-04	09123,13140, 13240,14135
EIC3-05	09121,13139, 13239,14134
EST1-01	02132
EST1-02	02136
EST1-03	02120
EST1-05	02121
EST1-06	02129
EST1-07	02128
EST1-08	02125
EST1-09	02124
EST1-10	02120
EST1-11	02133
EST1-12	02137
F01	14127
F01A	14131
FFR1-02	10126
FFR1-03	11225
FFR1-04	10128
FFR1-06	10230
FFR1-07	11108
FFR1-08	04221,10230, 11225
FFR1-09	04221
FFR1-10	05203,10126, 11108
FFR1-11	05204,10126, 11108
FFR1-12	04221,10230, 11225
FFR2-01	04223
FFR2-02	07117
FFR2-03	17137
FFR2-05	11112
FFR2-07	06134
FFR2-08	04223,06136, 06140,17139
FFR2-09	06138
FFR2-10	05206,06134, 06138,11112, 17137
FFR2-11	05207,06134, 06138,11112, 17137
FFR2-12	04223,06136, 06140,17139

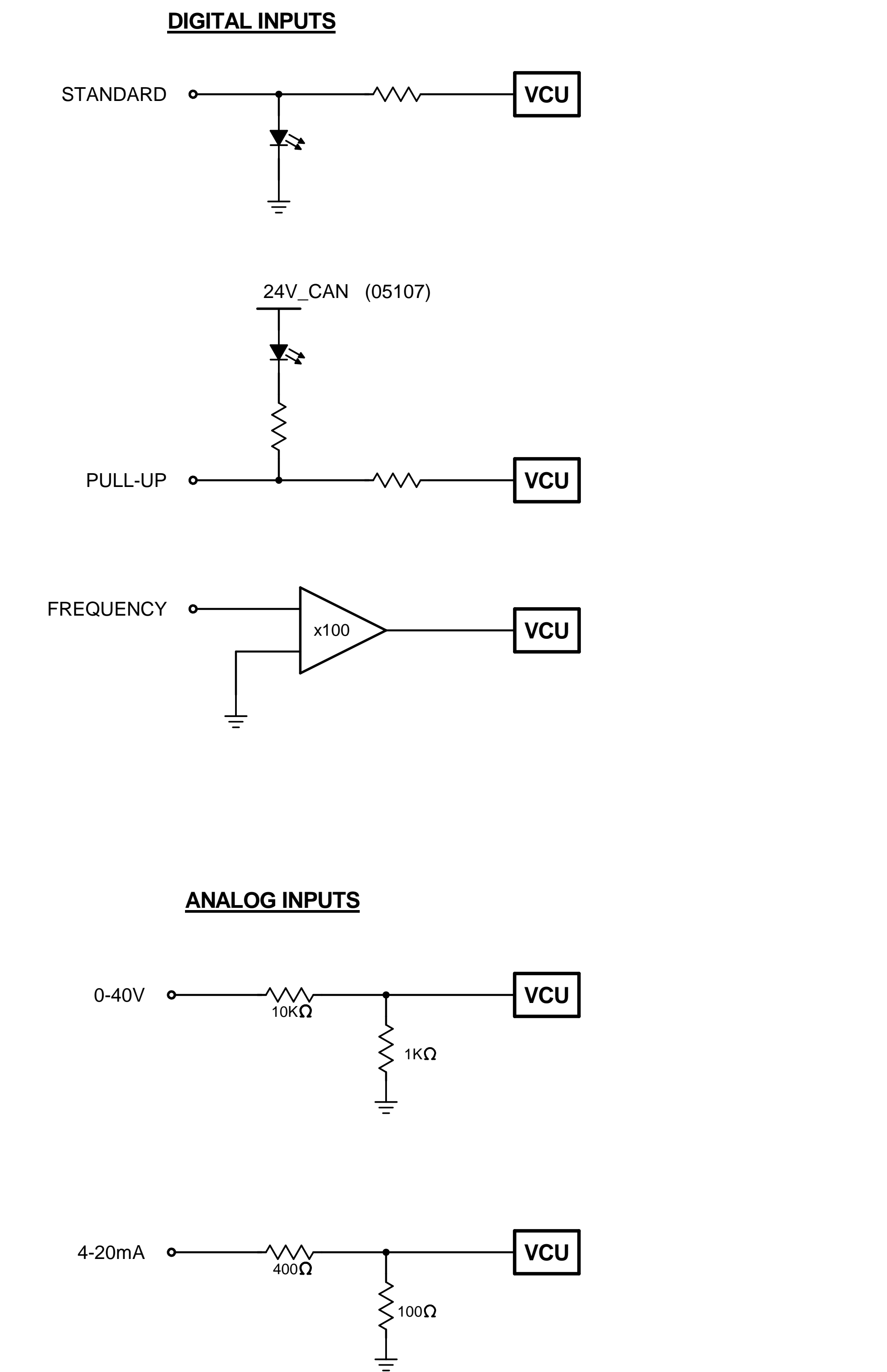
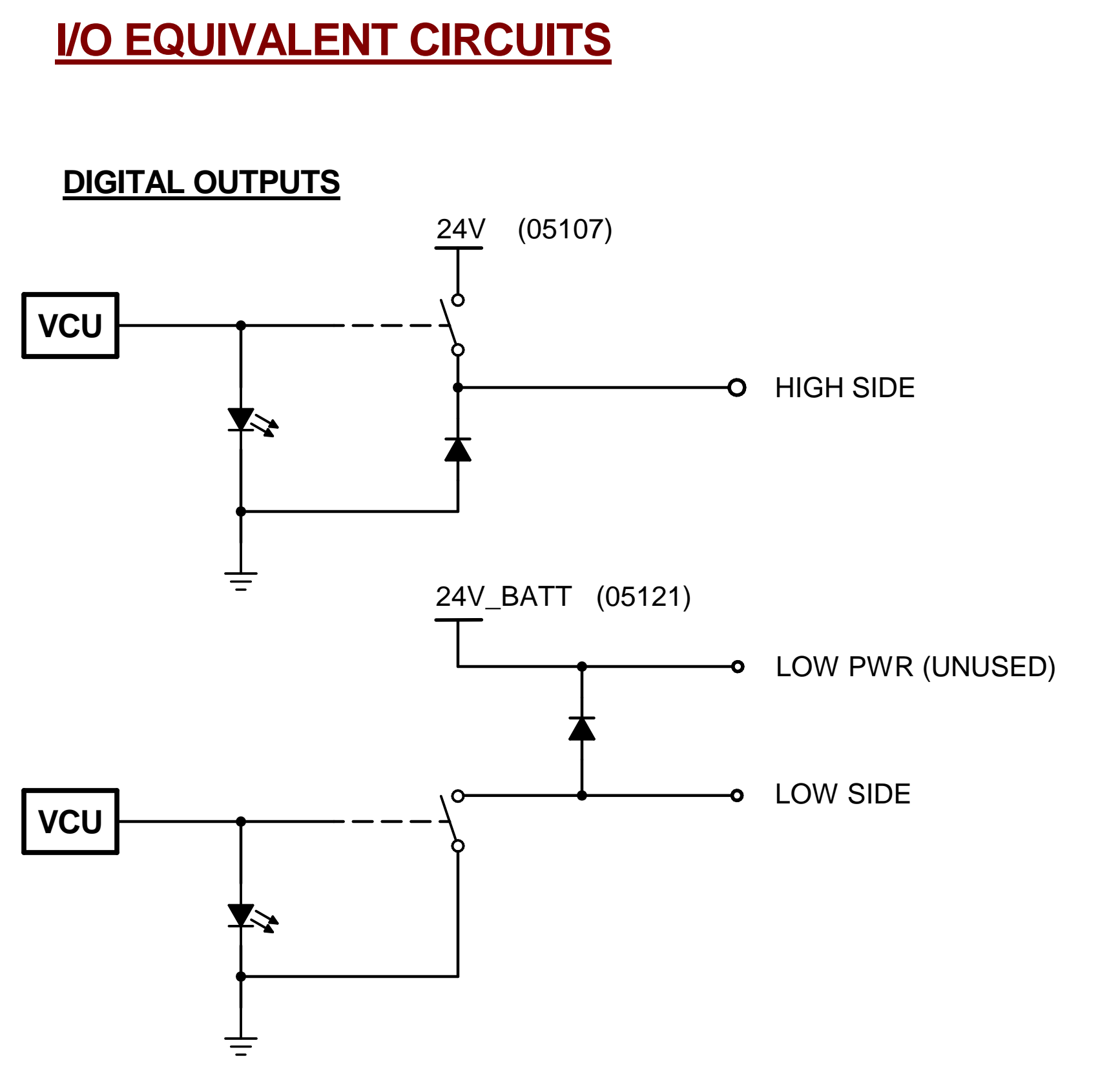
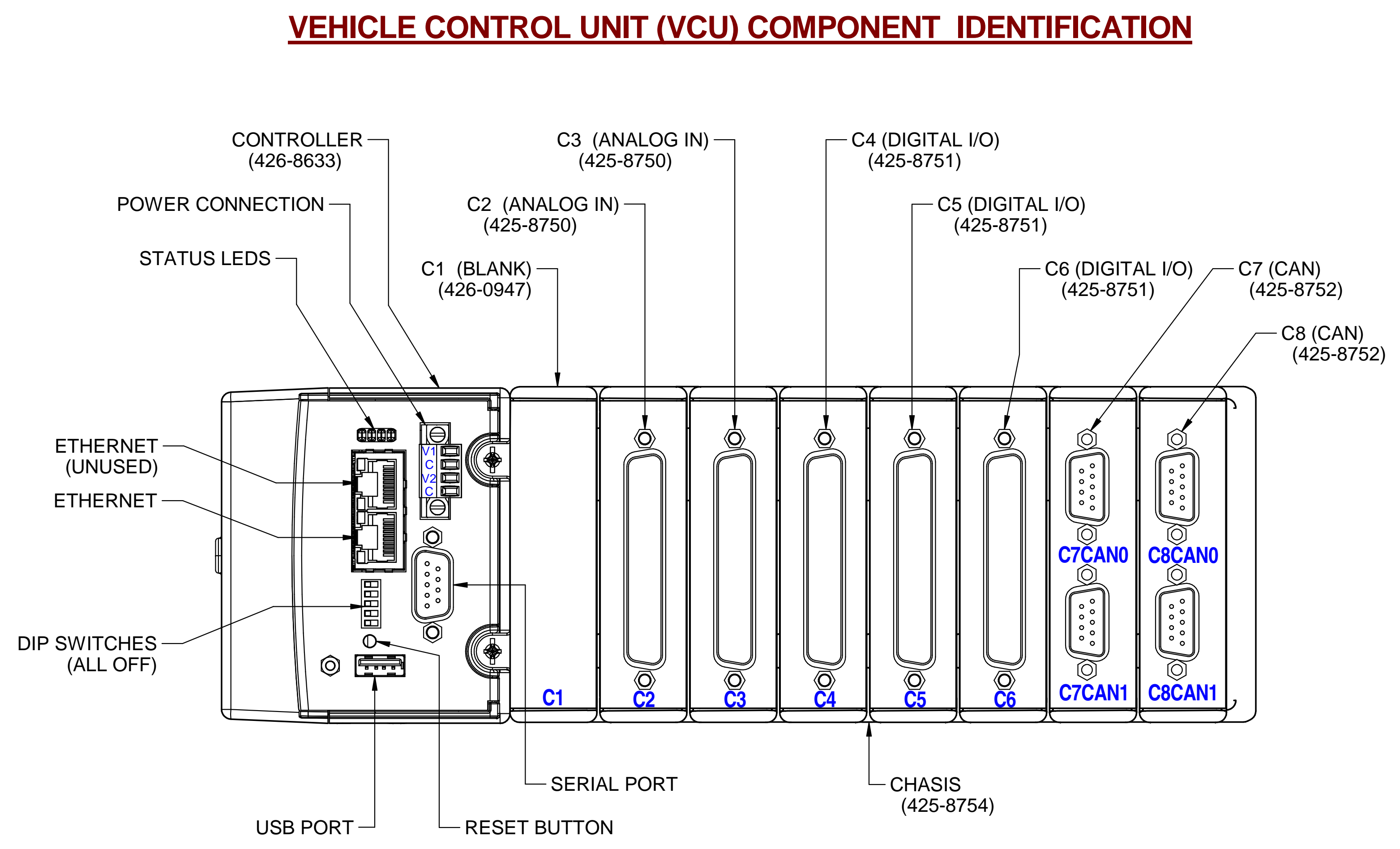
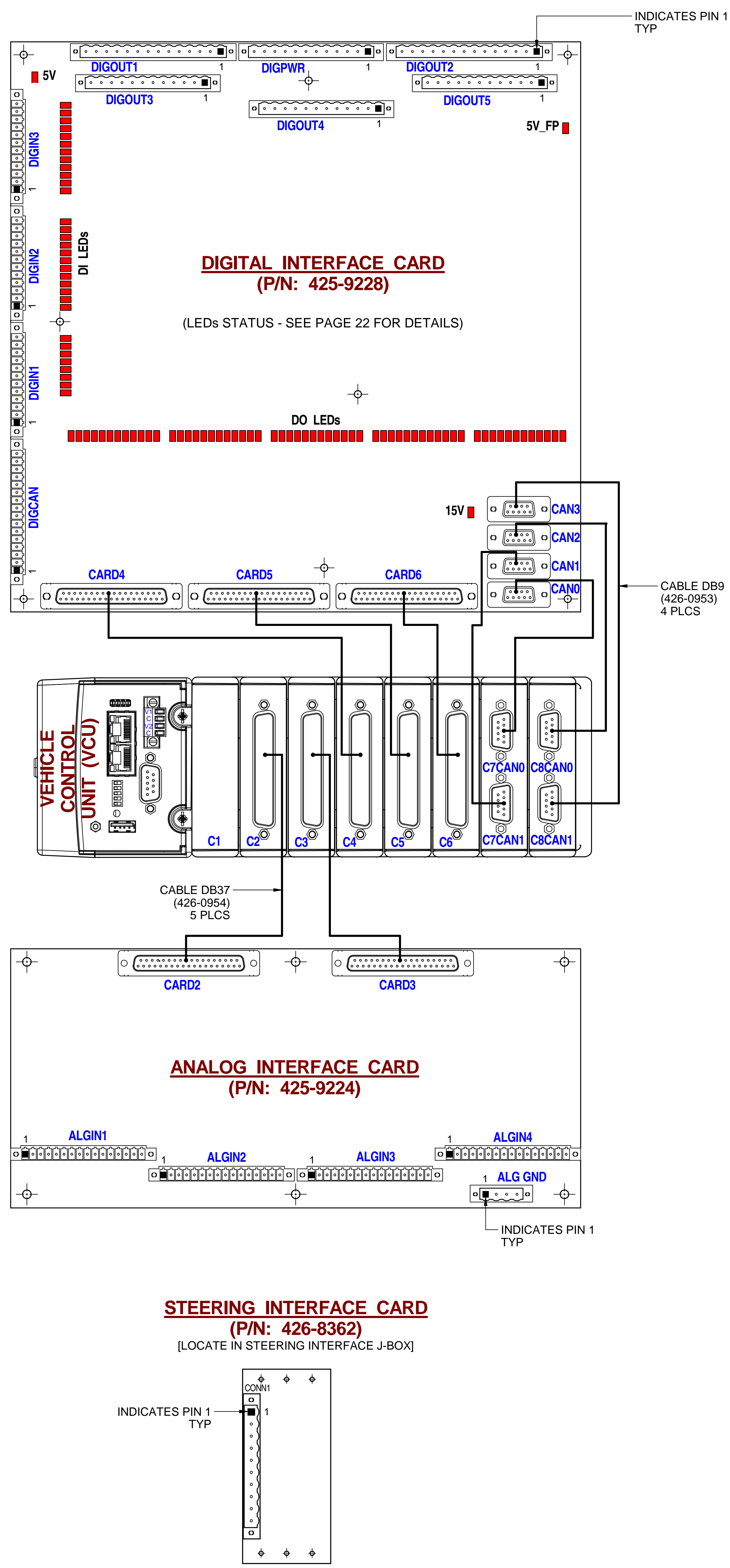
WIRE CODE	LINE NO.
FPL1-01	04234
FPL1-02	04234
FPL1-03	04236
FPL1-04	04236
FPL2-01	04238
FPL2-02	04238
FPL2-03	04240
FPL2-04	04240
GND	02143
GND-E	13222,13226, 13229
HVAC1	16111
HVAC2	16116
HVAC3	16107
HVAC4	16109
IBN1-03	03128
IBN1-04	03126
KLZ1-01	10207
KLZ1-02	10209
KLZ1-03	10211
KLZ1-04	10213
KLZ1-05	10215
KLZ1-06	10217
KLZ1-07	10219
KLZ1-08	10239
KLZ1-09	10124
KLZ1-10	05240,10124
KLZ1-11	05241,10239
KLZ1-12	10207
LLC1-01	04211
LLC1-02	04212
LLC1-03	04212
MBR1-01	04125
MBR1-02	04125
MBR1-03	04242
MBR1-04	04242
MBR1-05	04244
MBR1-06	04244
MBR1-07	04246
MBR1-08	04246
MBR1-09	10203
MBR1-10	10203
MBR1-11	04217
MBR1-12	04217
MBR2-01	04130
MBR2-02	04130
MBR2-03	04248
MBR2-04	04248
MBR2-05	04250
MBR2-06	04250
MBR2-07	04252
MBR2-08	04252
MBR2-09	04209
MBR2-10	04209
NEG	02100,02104
POS	02100,02104
PCP1-01	11205
PCP1-02	11203
PCP1-04	11119
PCP1-06	07119
PCP1-07	11207
PCP1-08	11203
PCP1-09	11209
PCP1-10	05209,11119
PCP1-11	05210,11119
PCP1-12	11203
PCP2-01	17143
PCP2-02	11123
PCP2-03	17145
PCP2-04	11211
PCP2-05	11129
PCP2-06	11213
PCP2-07	11125
PCP2-08	11211,17143
PCP2-09	11127
PCP2-10	05212,11123
PCP2-11	05213,11123
PCP2-12	11211,17143

WIRE CODE	LINE NO.
P1-1	03241
P1-2	03239
P1-3	03241
P1-4	03239
P2-1	03246
P2-2	03244
P2-3	03246
P2-4	03244
P3-1	03251
P3-2	03249
P3-3	03251
P3-4	03249
R01	14131
RAX1-03	10136
RAX1-05	10134
RAX1-07	11114
RAX1-08	10232
RAX1-09	10232
RAX1-10	05234,10134, 11114
RAX1-11	05235,10134, 11114
RAX1-12	10232
RCL1-01	04257
RCL1-02	04257
RCL1-03	04132
RCL1-04	04134
RCL1-05	04127
RCL1-06	04129
RCL1-07	04138
RCL1-08	04229
RCL1-09	04229
RCL1-10	04127
RCL1-11	04255
RCL1-12	04255
RCL2-01	04219
RCL2-02	04219
RFF1-01	02155,02158
RFF1-03	11149
RFF1-04	06130
RFF1-05	11103
RFF1-06	17129
RFF1-07	10138
RFF1-08	02158,06132, 11105,17129, 10138,10224, 11103,11149
RFF1-11	05216,06130, 10138,10224, 11103,11149
RFF1-12	02158,06132, 11105,17129
RFF2-01	11221
RFF2-02	04227
RFF2-03	17103
RFF2-04	11236
RFF2-05	17107
RFF2-06	11238
RFF2-08	04227,10240, 11221,17107
RFF2-10	05218,10240, 11233,17103
RFF2-11	05219,10240, 11233,17103
RFF2-12	04227,10240, 11221,17107
RFF3-01	11145
RFF3-02	11141
RFF3-03	11133
RFF3-04	11143
RFF3-05	11131
RFF3-06	11219
RFF3-07	11137
RFF3-08	11219
RFF3-09	11135
RFF3-10	05221,11131
RFF3-11	05222,11131
RFF3-12	11219

WIRE CODE	LINE NO.
RFF4-01	11157
RFF4-02	11159
RFF4-03	11139
RFF4-04	10132
RFF4-05	06150
RFF4-06	07307
RFF4-07	10130
RFF4-09	11147
RFF4-10	05224,06150, 10130,11139, 11147,11157
RFF4-11	05225,06150, 10130,11139, 11147,11157

REFERENCE INFORMATION

REV		DESCRIPTION	EON	DATE	CHG	CHK	APP
00	RELEASE		NL12-1909	8-29	FL	BS	BS
01	NO CHANGE THIS SHEET		NL12-1915	9-27	FL	BS	BS
02	NO CHANGE THIS SHEET		NL12-1921	12-18	FL	BS	BS



REV		DESCRIPTION	EDN	DATE	CHG	CHK	APP
00	RELEASE		NL12-1909	8-29	FL	BS	BS
01	NO CHANGE THIS SHEET		NL12-1915	9-27	FL	BS	BS
02	NO CHANGE THIS SHEET		NL12-1921	12-18	FL	BS	BS

DIGITAL INTERFACE CARD STATUS LEDs

DI	FUNCTION	LINE #
36	ENGINE RED LAMP	13109, 13209, 14111
35	HYD RESERVOIR LEVEL SW	11103
34	DRIVE COOL RESERVOIR LEVEL SW	03255
33	ENGINE YELLOW LAMP	13111, 13211, 14113
32	UNUSED	----
31	FIRE SYSTEM STATUS	02152
30	UNUSED	----
29	ENGINE BLUE LAMP	14115
28	UNUSED	----
27	RIGHT REAR E-STOP SWITCH	02128
26	LEFT REAR E-STOP SWITCH	02132
25	HYD RESERVOIR E-STOP SW	02136

DI	FUNCTION	LINE #
24	HV CABINET E-STOP SWITCH	02124
23	CAB E-STOP SWITCH	02120
22	LADDER POSITION SWITCH	11250
21	STARTER ISOLATION SWITCH	13144, 13244, 14139
20	KLENZ ENABLE SWITCH	10103
19	REAR DRIVER LUBE FLOW SWITCH	11114
18	UNUSED	----
17	UNUSED	----
16	UNUSED	----
15	ENGINE SAFETY FILTERS	10109
14	STEER SUPPLY PRESSURE SWITCH	17103
13	UNUSED	----

DI	FUNCTION	LINE #
12	HV CABINET DOOR SWITCH	06203
11	FRONT DRIVER LUBE FLOW SWITCH	11112
10	AUTOLUBE SWITCHES	11108
9	UNUSED	----
8	PARK BRAKE SWITCH	02255
7	KEYSWITCH IGNITION	02208
6	KEYSWITCH CRANK SWITCH	02210
5	UNUSED	----

DO	FUNCTION	LINE #
1	UNUSED	----
2	VCU / HMI KEEP ALIVE	02214
3	IGNITION KEEP ALIVE OUTPUT	02203
4	POLE WORK LIGHTS	04103
5	CAB LIGHT BAR LIGHTS	04107
6	UNUSED	----
7	REAR COWL LIGHTS	04111
8	PARK BRAKE INTERLOCK OUTPUT	02249
9	RED ALARM LIGHT	04115
10	YELLOW WARNING LIGHT	04117
11	CAB AUDIBLE ALARM	04119
12	UNUSED	----

25	DUMP PRESS REDUCING SOL	11211
26	UNUSED	----
27	TAIL LIGHTS	04134
28	UNUSED	----
29	HOIST RAISE PILOT SOL	11203
30	BUCKET DUMP PILOT SOL	11209
31	BUCKET ROLL BACK PILOT SOL	11207
32	HOIST LOWER PILOT SOL	11205
33	CLAMSHHELL OPEN PILOT SOL	17143
34	CLAMSHHELL CLOSE PILOT SOL	17145
35	BEACON	04144
36	HORN SOL	10203

37	LEFT TURN SIGNAL	04125
38	RIGHT TURN SIGNAL	04130
39	KLENZ 1 SOL	10207
40	KLENZ 2 SOL	10209
41	KLENZ 3 SOL	10211
42	KLENZ 4 SOL	10213
43	KLENZ 5 SOL	10215
44	KLENZ 6 SOL	10217
45	KLENZ 7 SOL	10219
46	UNUSED	----
47	UNUSED	----
48	AUX STEER ENABLE	17107

49	UNUSED	----
50	OIL COOLER BYPASS SOL	11219
51	AUX FAN ENABLE SOL	17129
52	RADIATOR FAN CONTROL SOL	11221
53	STEER RIGHT OUTPUT	11238
54	ENGINE START CMD	13104, 13204, 14104
55	UNUSED	----
56	ENGINE IGNITION	13102, 13202, 14102
57	BLOWER CONTROL SOL	11223
58	BACKUP LIGHTS & ALARM	04138
59	UNUSED	----
60	STEER LEFT OUTPUT	11236

13	UNUSED	----
14	FRONT WASHER PUMP	03221
15	REAR WASHER PUMP	03223
16	PARK BRAKE SWITCH LIGHT	04121
17	FRONT WIPER HIGH	03215
18	FRONT WIPER LOW	03217
19	REAR WIPER LOW OUTPUT	03219
20	UNUSED	----
21	AUTOLUBE SOL	11225
22	FLOAT SOL	11213
23	DIGITAL OUTPUT POWER	02241
24	DRIVE SW POWER OUTPUT	02235

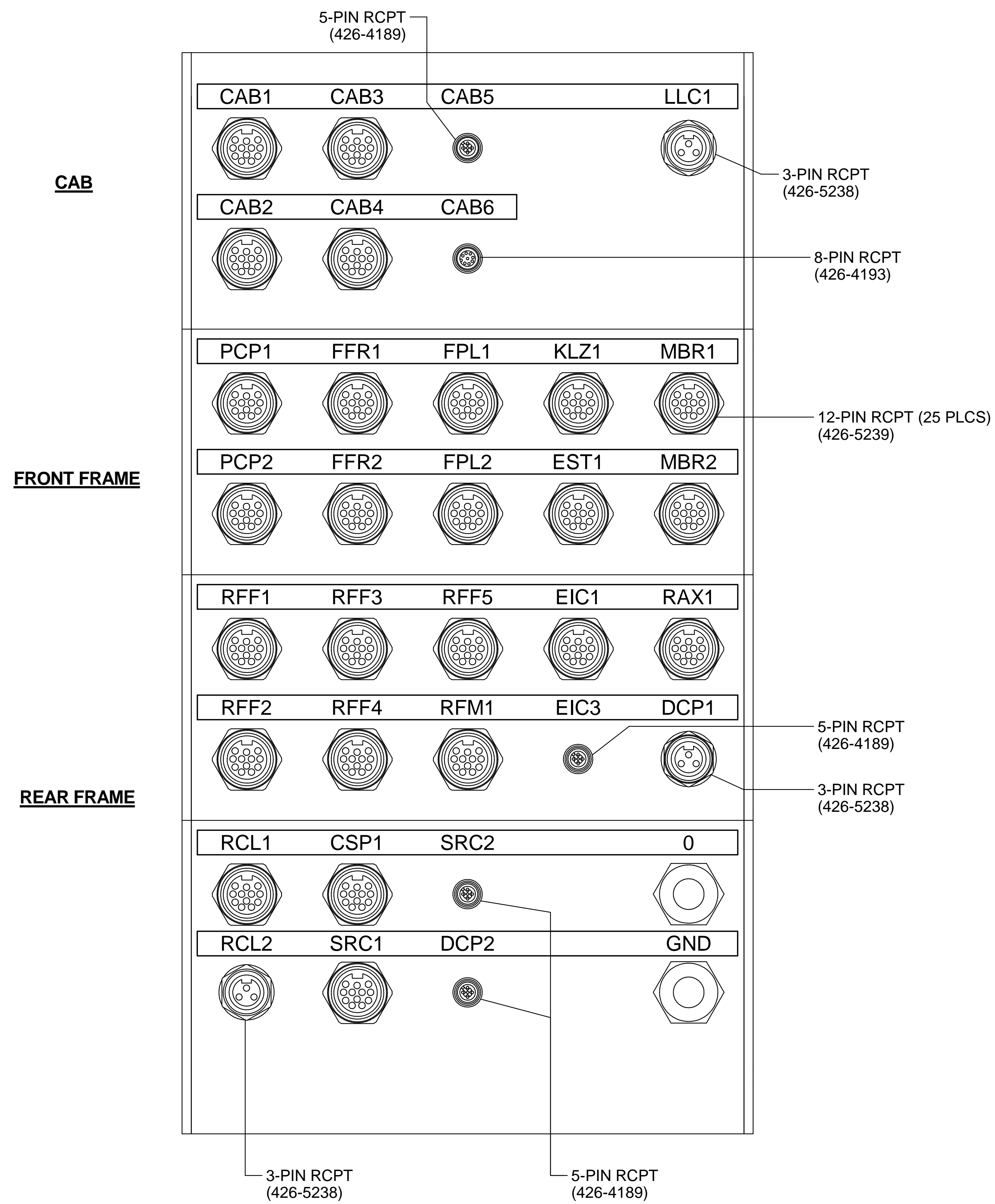
DIGITAL OUTPUTS

LED OFF = 0% DUTY CYCLE
 LED ON = >0% DUTY CYCLE
 (BRIGHTNESS VARIES WITH DUTY CYCLE)

REFERENCE INFORMATION

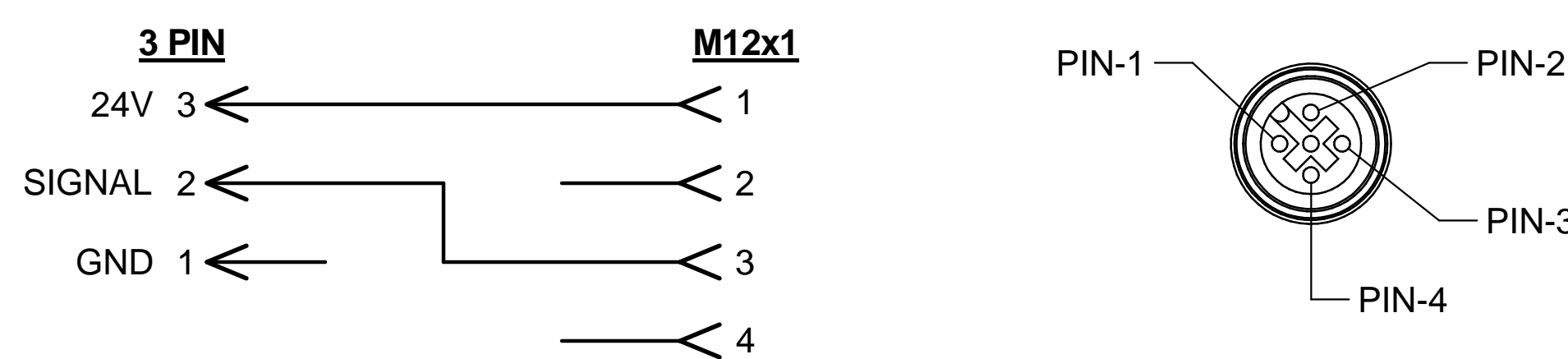
REV		DESCRIPTION	EON	DATE	CHG	CHK	APP
00	RELEASE		NL12-1909	8-29	FL	BS	BS
01	NO CHANGE THIS SHEET		NL12-1915	9-27	FL	BS	BS
02	NO CHANGE THIS SHEET		NL12-1921	12-18	FL	BS	BS

CONNECTOR IDENTIFICATION BACK PANEL CONNECTOR LOW VOLT CONTROL CABINET (LVCC)

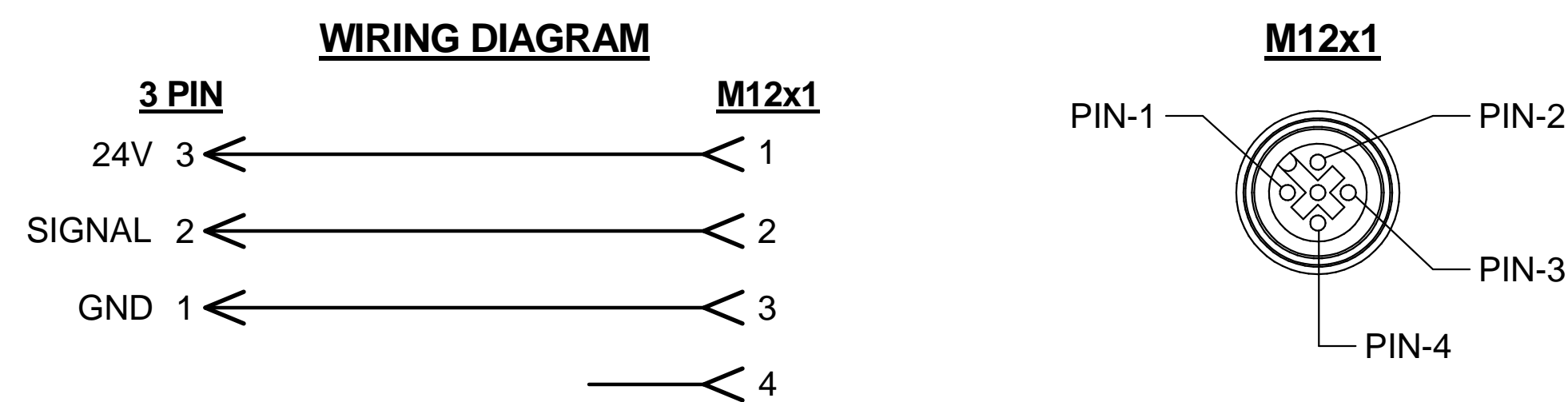


COMMON CABLES

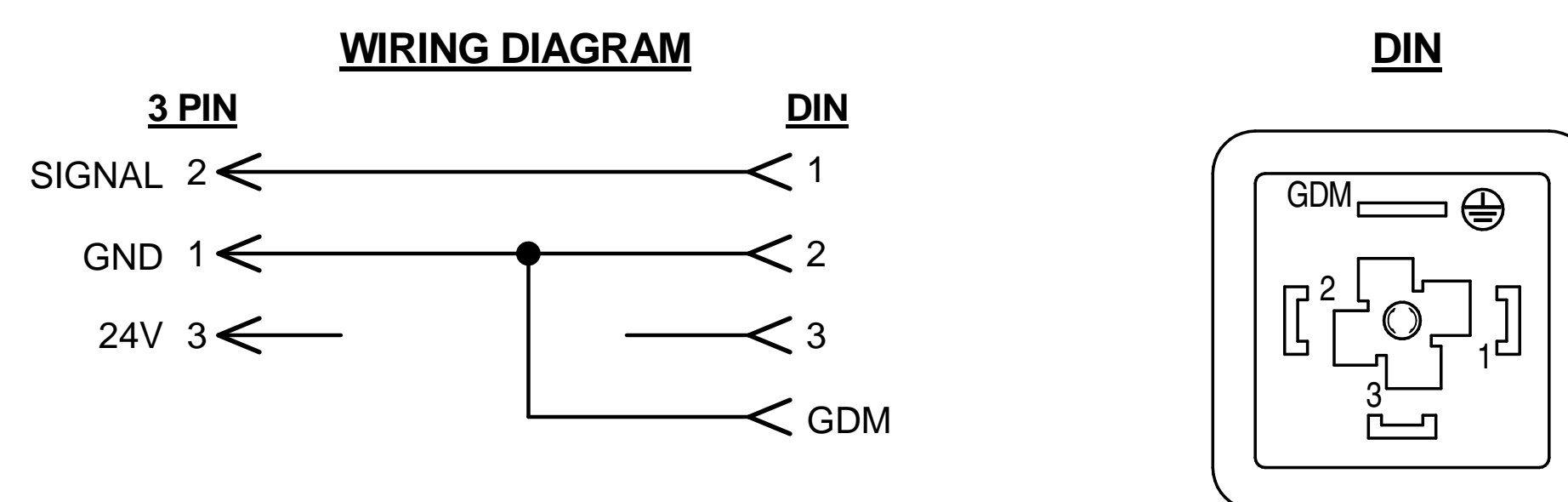
CABLE 3 PIN - M12x1 (GRAY) (426-5234)



CABLE 3 PIN - M12x1 3 CONDUCTOR (YELLOW) (426-7338)

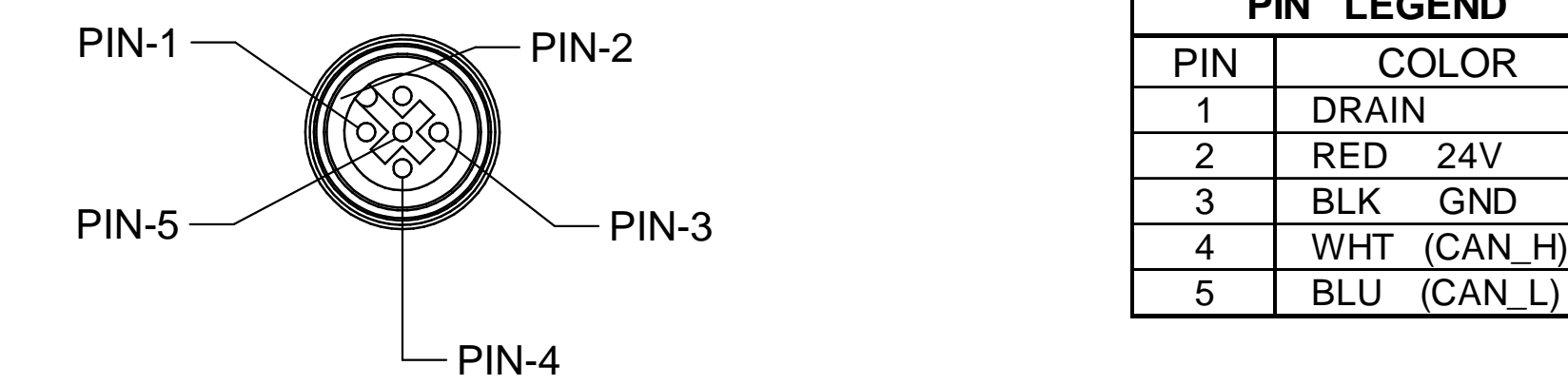


CABLE 3 PIN - DIN (YELLOW) (426-5233)

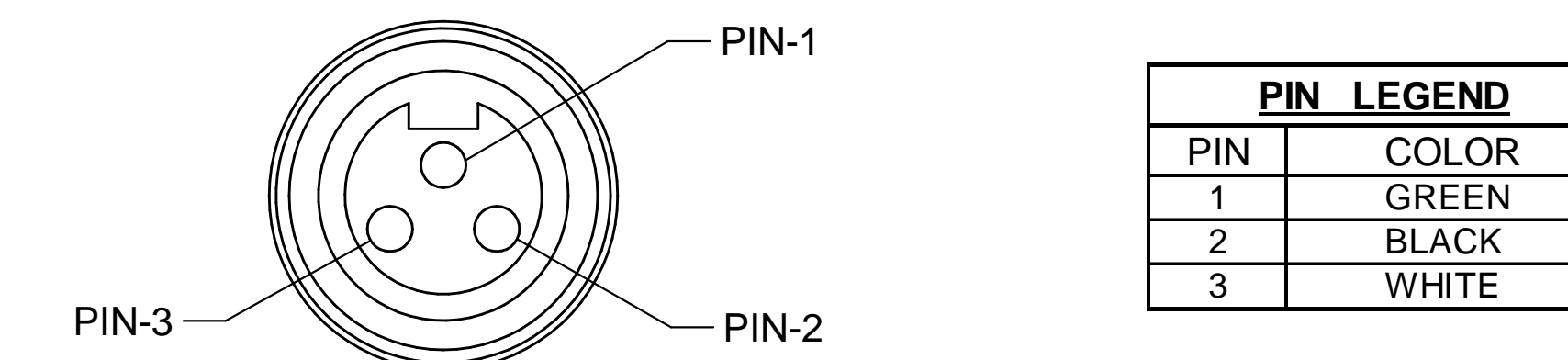


CONNECTOR COLOR CODES

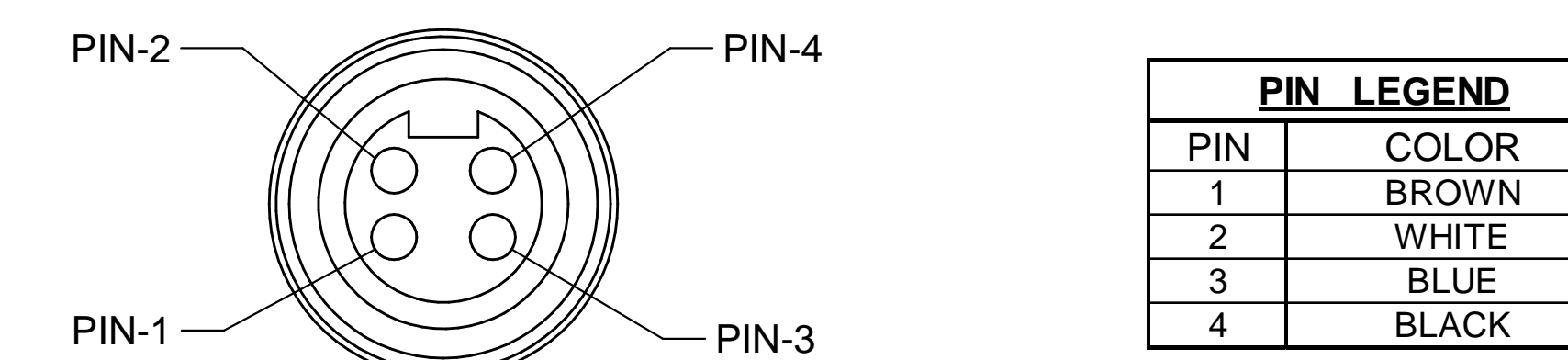
5 PIN FEMALE CAN RECEPTACLE



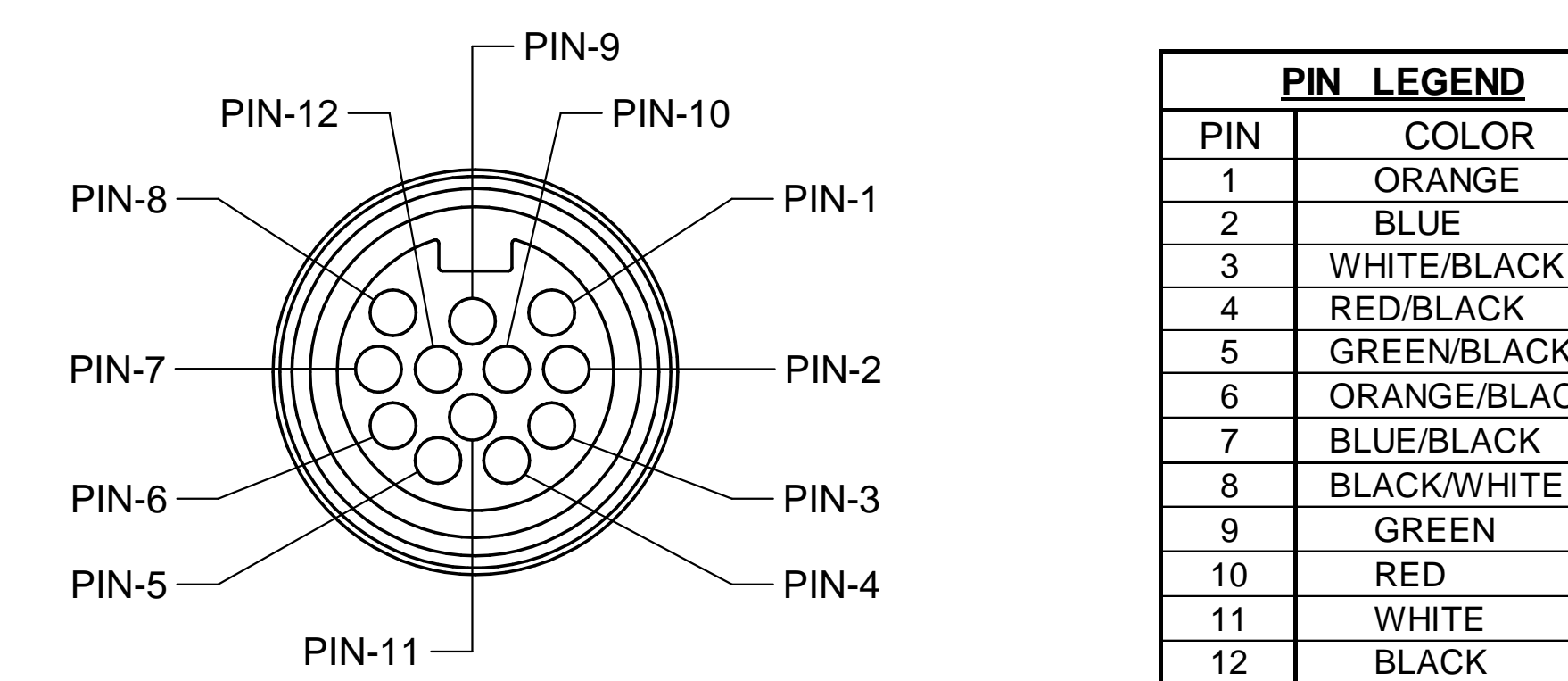
3 PIN FEMALE RECEPTACLE



4 PIN FEMALE RECEPTACLE



12 PIN FEMALE RECEPTACLE



FOR ADDITIONAL CABLES:

ALL MODELS	ASSY CAB WITH ELECTRICS	427-4464
L950	GP HARNESS FRONT FRAME	426-2778
	GP HARNESS REAR FRAME	427-4456
L1150	GP HARNESS FRONT FRAME	426-2778
	GP HARNESS REAR FRAME	427-4456
L1350	GP HARNESS FRONT FRAME	426-6313
	GP HARNESS REAR FRAME	427-4457
L1850	GP HARNESS FRONT FRAME	426-6332
	GP HARNESS REAR FRAME	427-4458
L2350	GP HARNESS FRONT FRAME	426-6363
	GP HARNESS REAR FRAME	427-4459

REVISIONS						
ZONE	REV	DESCRIPTION	ECN	DATE	CHK	APP
	00	RELEASE	NL12-1909	8-29	FL	BS
	01	NO CHANGE THIS SHEET	NL12-1915	9-27	FL	BS
	02	NO CHANGE THIS SHEET	NL12-1921	12-18	FL	BS

BREAKOUT BOXES I/O

FFR1

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
FFR1-J1	FFR1-07	AUTO LUBE SWITCHES	FFR1-J2	FFR1-01	UNUSED
FFR1-J3	FFR1-09	MAINTENANCE LIGHT LEFT FRONT	FFR1-J4	FFR1-02	FRONT SERVICE BRAKES XDCR
FFR1-J5	FFR1-03	AUTO LUBE SOL	FFR1-J6	FFR1-04	FRONT PARK BRAKES XDCR
FFR1-J7	FFR1-05	UNUSED	FFR1-J8	FFR1-06	FRONT PARK BRAKES SOL

FFR2

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
FFR2-J1	FFR2-07	LIFT ARM POSITION XDCR	FFR2-J2	FFR2-01	MAINTENANCE LIGHT RIGHT FRONT
FFR2-J3	FFR2-09	BELLCRANK TO LIFT ARM XDCR	FFR2-J4	FFR2-02	UNUSED
FFR2-J5	FFR2-03	CLAMSHELL CYL EXT XDCR (OPT)	FFR2-J6	FFR2-04	UNUSED
FFR2-J7	FFR2-05	FRONT DRIVER LUBE FLOW SWITCHES	FFR2-J8	FFR2-06	UNUSED

PCP1

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
PCP1-J1	PCP1-07	BUCKET ROLLBACK PILOT SOL	PCP1-J2	PCP1-01	HOIST LOWER PILOT SOL
PCP1-J3	PCP1-09	BUCKET DUMP PILOT SOL	PCP1-J4	PCP1-02	HOIST RAISE PILOT SOL
PCP1-J5	PCP1-03	UNUSED	PCP1-J6	PCP1-04	BUCKET CYL ROD XDCR
PCP1-J7	PCP1-05	UNUSED	PCP1-J8	PCP1-06	UNUSED

PCP2

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
PCP2-J1	PCP2-07	GREATEST PILOT CMD XDCR	PCP2-J2	PCP2-01	CLAMSHELL OPEN PILOT SOL (OPT)
PCP2-J3	PCP2-09	HOIST CYL BASE XDCR	PCP2-J4	PCP2-02	PILOT SUPPLY XDCR
PCP2-J5	PCP2-03	CLAMSHELL CLOSE PILOT SOL (OPT)	PCP2-J6	PCP2-04	DUMP PRESS REDUCING SOL
PCP2-J7	PCP2-05	HOIST CYL ROD XDCR	PCP2-J8	PCP2-06	FLOAT SOL

RFF1

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RFF1-J1	RFF1-07	KLENZ RESERVOIR AIR XDCR	RFF1-J2	RFF1-01	HYD TANK DUMP SOL
RFF1-J3	RFF1-09	UNUSED	RFF1-J4	RFF1-02	UNUSED
RFF1-J5	RFF1-03	HYD RESERVOIR OIL TEMP XDCR	RFF1-J6	RFF1-04	STEER POSITION XDCR
RFF1-J7	RFF1-05	HYD RESERVOIR LEVEL SWITCH	RFF1-J8	RFF1-06	AUX FAN ENABLE SOL (OPT)

RFF2

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RFF2-J1	24V ONLY	AIR DRYER HEATER	RFF2-J2	RFF2-01	RADIATOR FAN CONTROL SOL
RFF2-J3	RFF2-09	UNUSED	RFF2-J4	RFF2-02	MAINTENANCE LIGHT MIDDLE RIGHT
RFF2-J5	RFF2-03	* AUX STEER SUPPLY PRESS SWITCH (OPT)	RFF2-J6	RFF2-04	STEER LEFT OUTPUT
RFF2-J7	RFF2-05	* AUX STEER ENABLE (OPT)	RFF2-J8	RFF2-06	STEER RIGHT OUTPUT

RFF3

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RFF3-J1	RFF3-07	HOIST/BUCKET PUMP C XDCR	RFF3-J2	RFF3-01	ACCESSORY PUMP XDCR
RFF3-J3	RFF3-09	HOIST/BUCKET PUMP B XDCR	RFF3-J4	RFF3-02	STEER PUMP A XDCR
RFF3-J5	RFF3-03	HOIST/BUCKET PUMP A XDCR	RFF3-J6	RFF3-04	STEER PUMP B XDCR
RFF3-J7	RFF3-05	FAST HOIST PUMP XDCR	RFF3-J8	RFF3-06	HYD OIL COOLER BYPASS SOL

RFF4

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RFF4-J1	RFF4-07	SYSTEM AIR PRESS XDCR	RFF4-J2	RFF4-01	HPD GEARBOX TEMP XDCR
RFF4-J3	RFF4-09	RADIATOR FAN PUMP PRESS XDCR	RFF4-J4	RFF4-02	HPD GEARBOX PRESS XDCR
RFF4-J5	RFF4-03	BLOWER PUMP PRESS XDCR	RFF4-J6	RFF4-04	HYD RESERVOIR AIR PRESS XDCR
RFF4-J7	RFF4-05	BLOWER SPEED SENSOR	RFF4-J8	RFF4-06	UNUSED

RFF5

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RFF5-J1	RFF5-07	FRONT WASHER PUMP	RFF5-J2	RFF5-01	AMBIENT AIR TEMPERATURE XDCR
RFF5-J3	RFF5-09	REAR WASHER PUMP	RFF5-J4	RFF5-02	UNUSED
RFF5-J5	RFF5-03	UNUSED	RFF5-J6	RFF5-04	UNUSED
RFF5-J7	RFF5-05	BLOWER SPEED CONTROL SOL	RFF5-J8	RFF5-06	FIRE SYSTEM STATUS

RAX1

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RAX1-J1	RAX1-07	REAR DRIVER LUBE FLOW SWITCHES	RAX1-J2	RAX1-01	UNUSED
RAX1-J3	RAX1-09	REAR PARK BRAKES SOL	RAX1-J4	RAX1-02	UNUSED
RAX1-J5	RAX1-03	REAR PARK BRAKES XDCR	RAX1-J6	RAX1-04	UNUSED
RAX1-J7	RAX1-05	REAR SERVICE BRAKES XDCR	RAX1-J8	RAX1-06	UNUSED

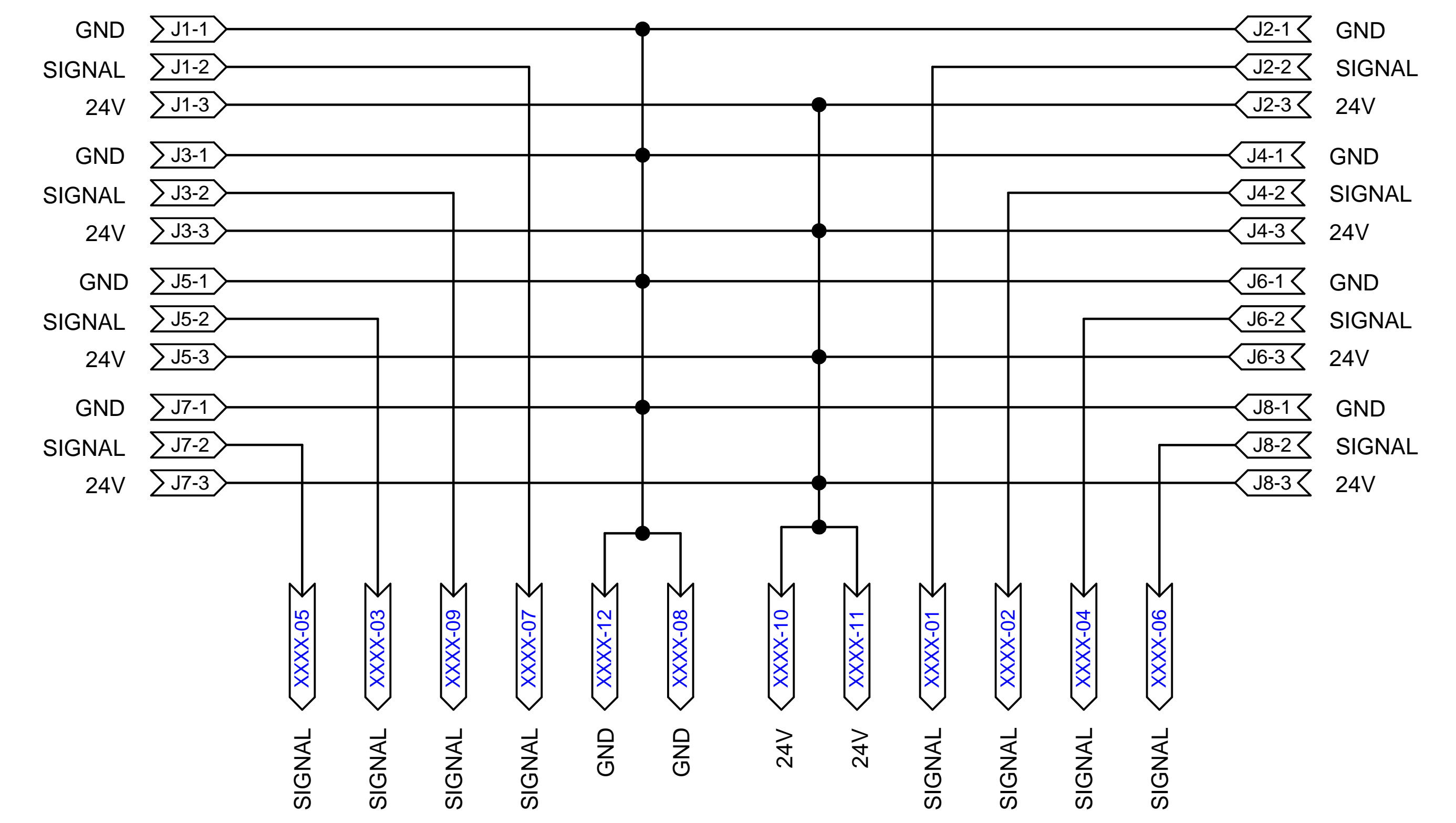
RFM1

HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION	HARNESS CODE	SIGNAL PIN CODE	DEVICE DESCRIPTION
RFM1-J1	RFM1-07	RADIATOR FAN SPEED SENSOR	RFM1-J2	RFM1-01	ENGINE SAFETY FILTER RESTRICTION
RFM1-J3	RFM1-09	MAINTENANCE LIGHT MIDDLE LEFT	RFM1-J4	RFM1-02	UNUSED
RFM1-J5	RFM1-03	UNUSED	RFM1-J6	RFM1-04	FUEL LEVEL XDCR
RFM1-J7	RFM1-05	AUTO LUBE GREASE XDCR	RFM1-J8	RFM1-06	DRIVE COOL RESERVOIR LEVEL SWITCH

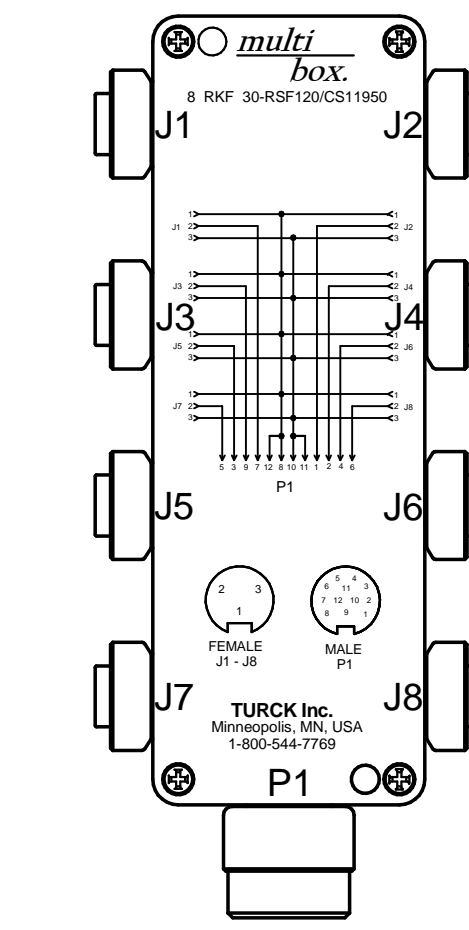
EST1

HARNESS CODE	DEVICE DESCRIPTION	HARNESS CODE	DEVICE DESCRIPTION
EST1-J1	RIGHT REAR E-STOP SWITCH	EST1-J2	LEFT REAR E-STOP SWITCH
EST1-J3	HV CABINET E-STOP SWITCH CAB	EST1-J4	HYD RESERVOIR E-STOP SWITCH
EST1-J5	E-STOP SWITCH		

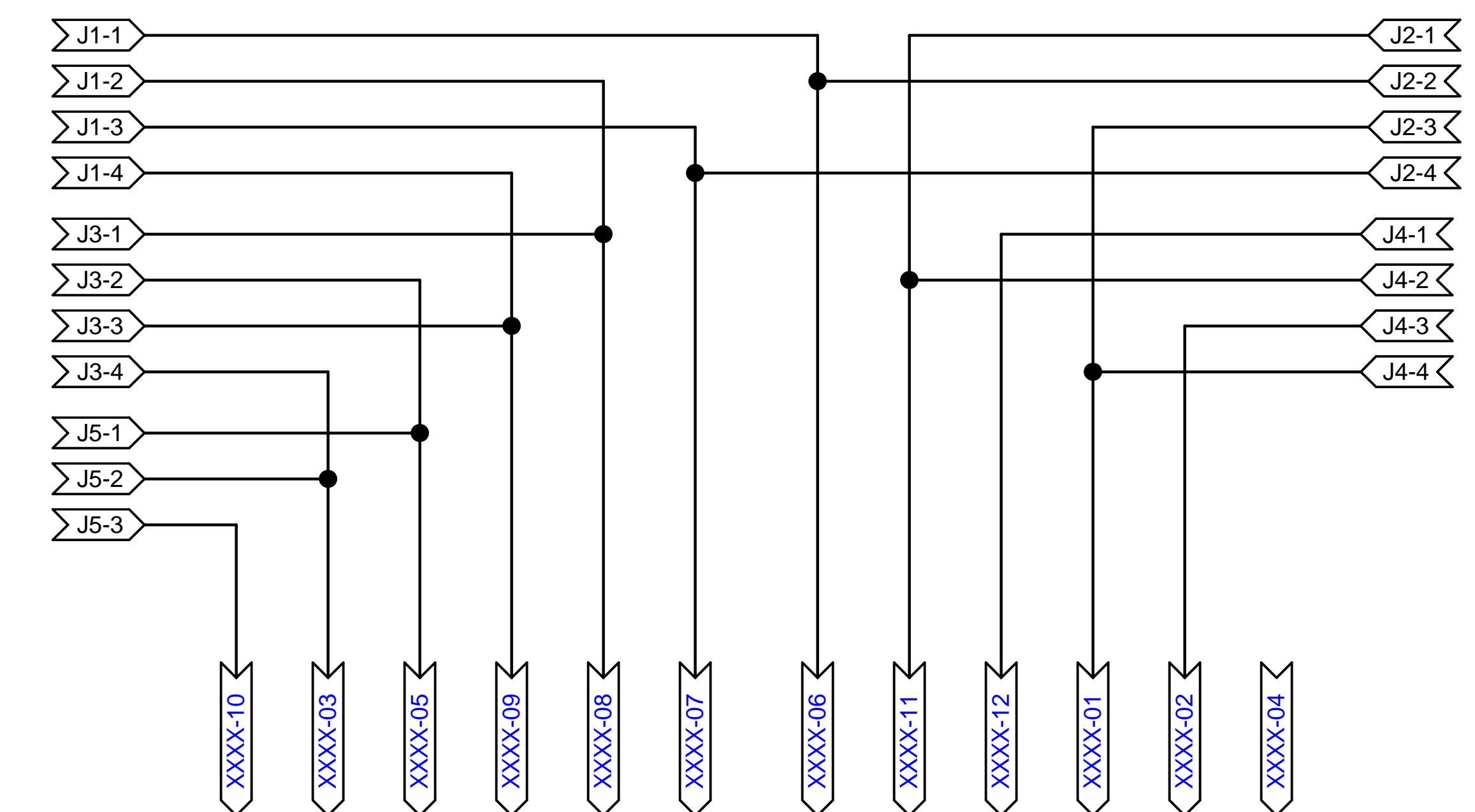
BREAKOUT BOX (426-5235)



XXXX: HARNESS NAME / WIRE CODE



BREAKOUT BOX (427-4507) (E-STOP ONLY)



XXXX: HARNESS NAME / WIRE CODE

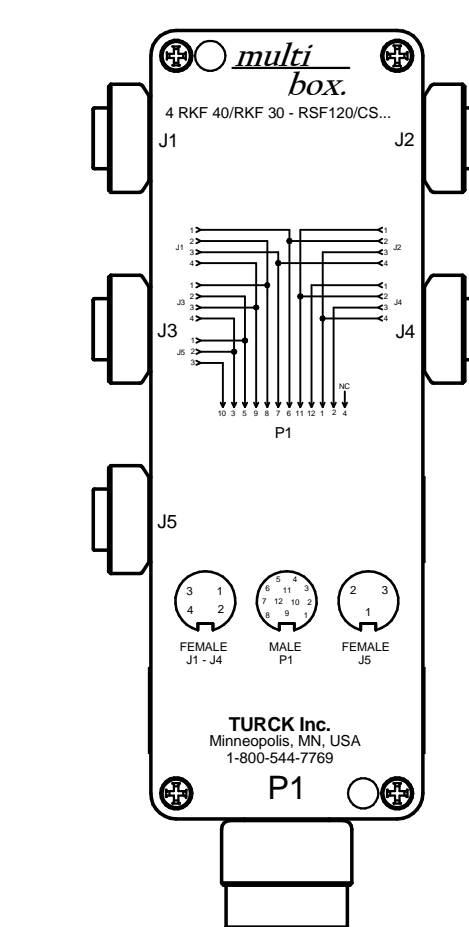


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NOTES:

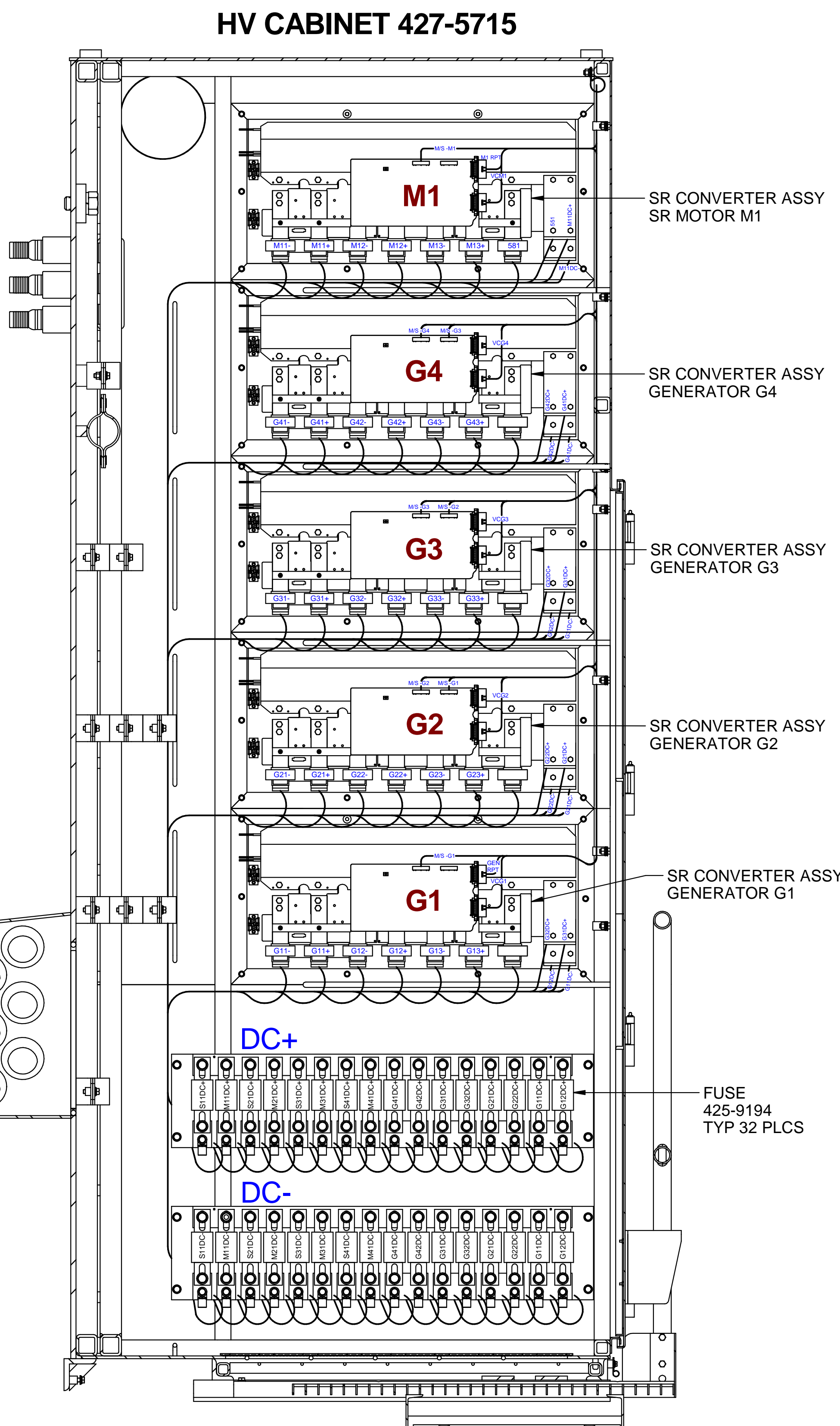
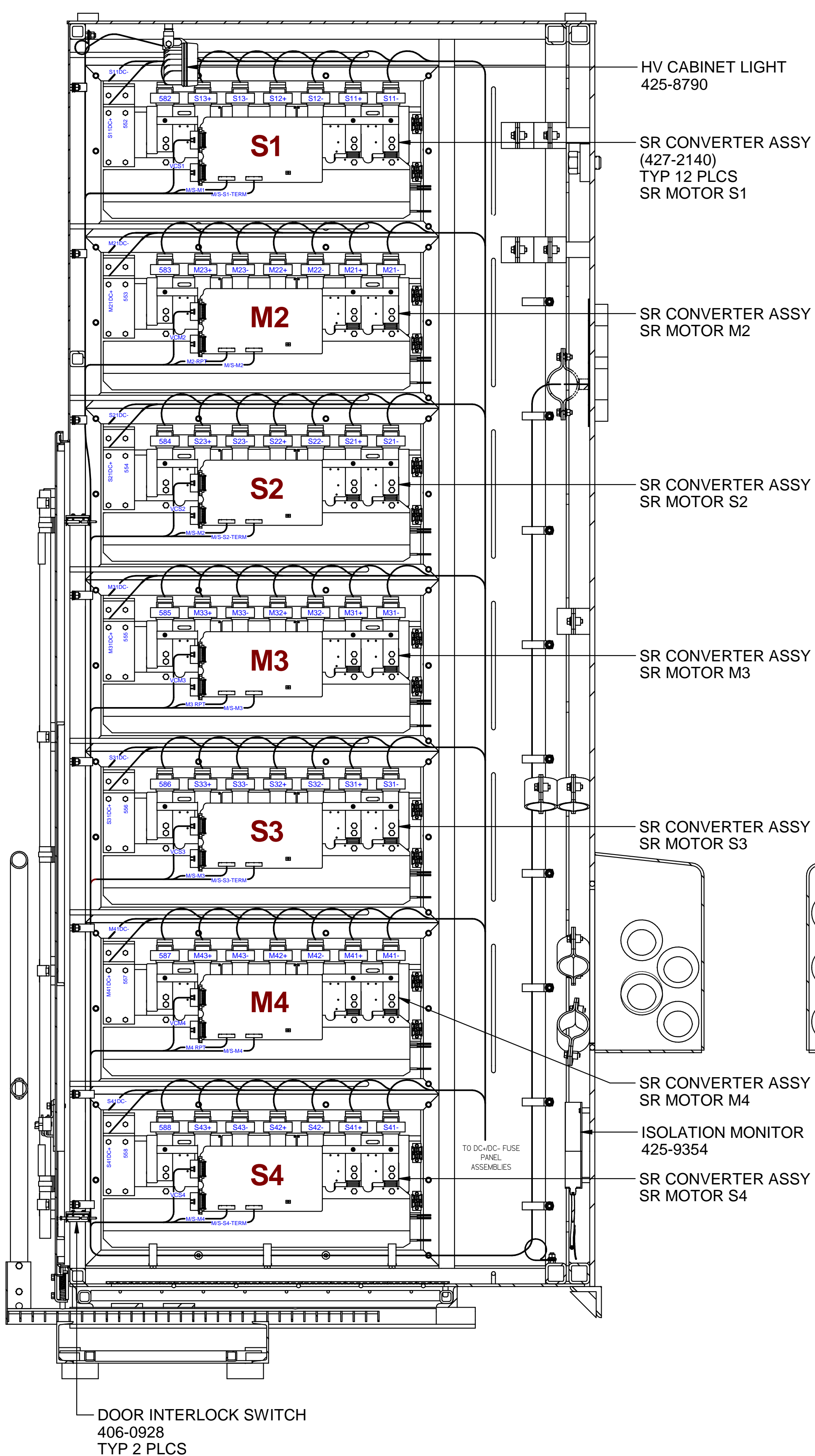
- 1) **COLOR CODE**
 BLUE: WIRE CODE
 RED: CONNECTION PIN
 ORANGE: RPT / RTD HARNESS
 GREEN: M/S CONNECTION & TERMINATION
 MAGENTA: POWER / CONTROL HARNESS

- 2) **CROSS REFERENCE**
 (01239)
 SHEET NO. | LINE NO.
 | COLUMN

- 3) **POWER FLOWS LEFT TO RIGHT**

- 4) **MACHINE STATE:**
 - ALL LIGHTS OFF
 - FUSES NOT BLOWN
 - HV CABINET DOOR CLOSED

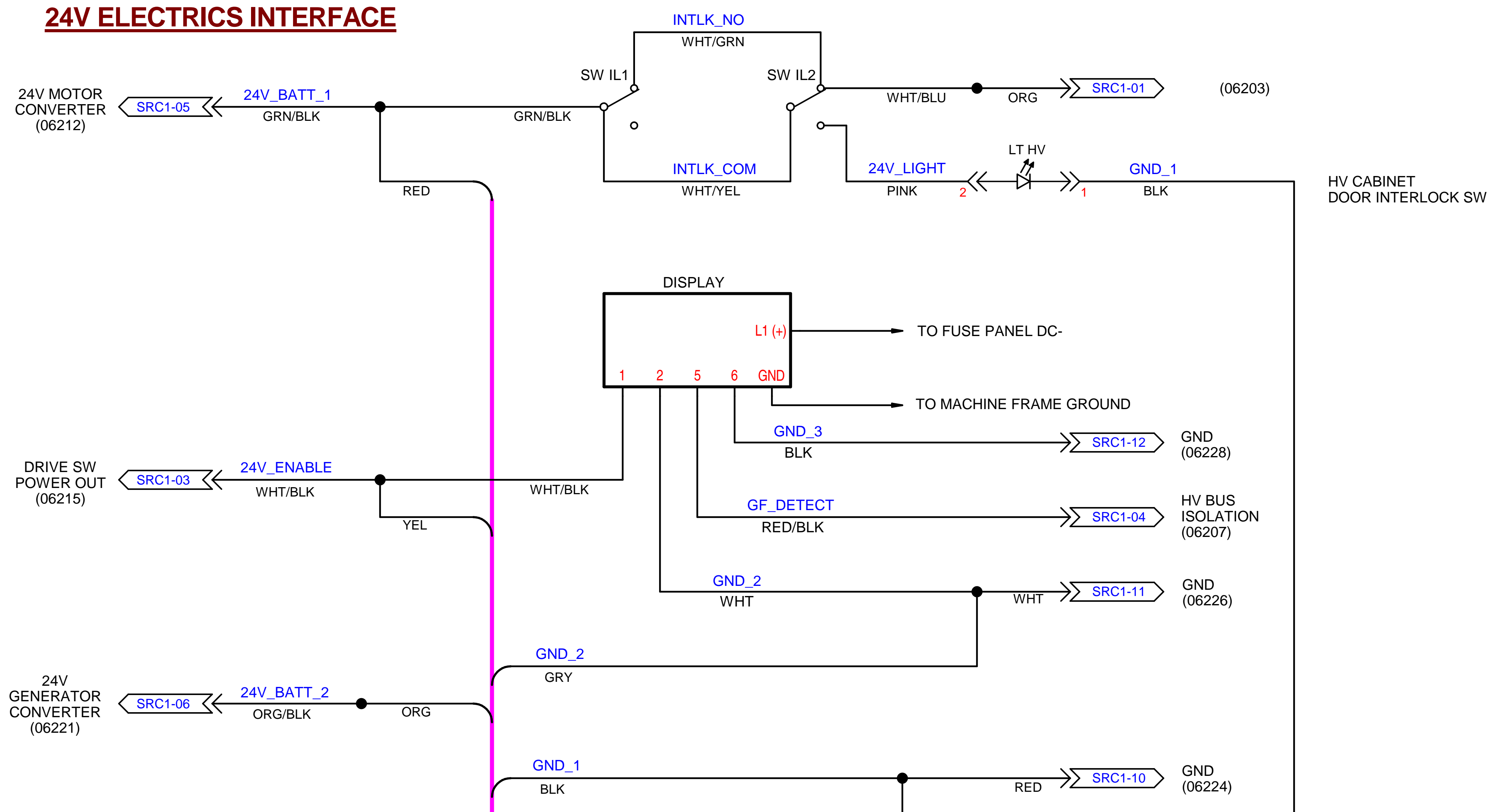
CONVERTER / FUSE PANELS LOCATION



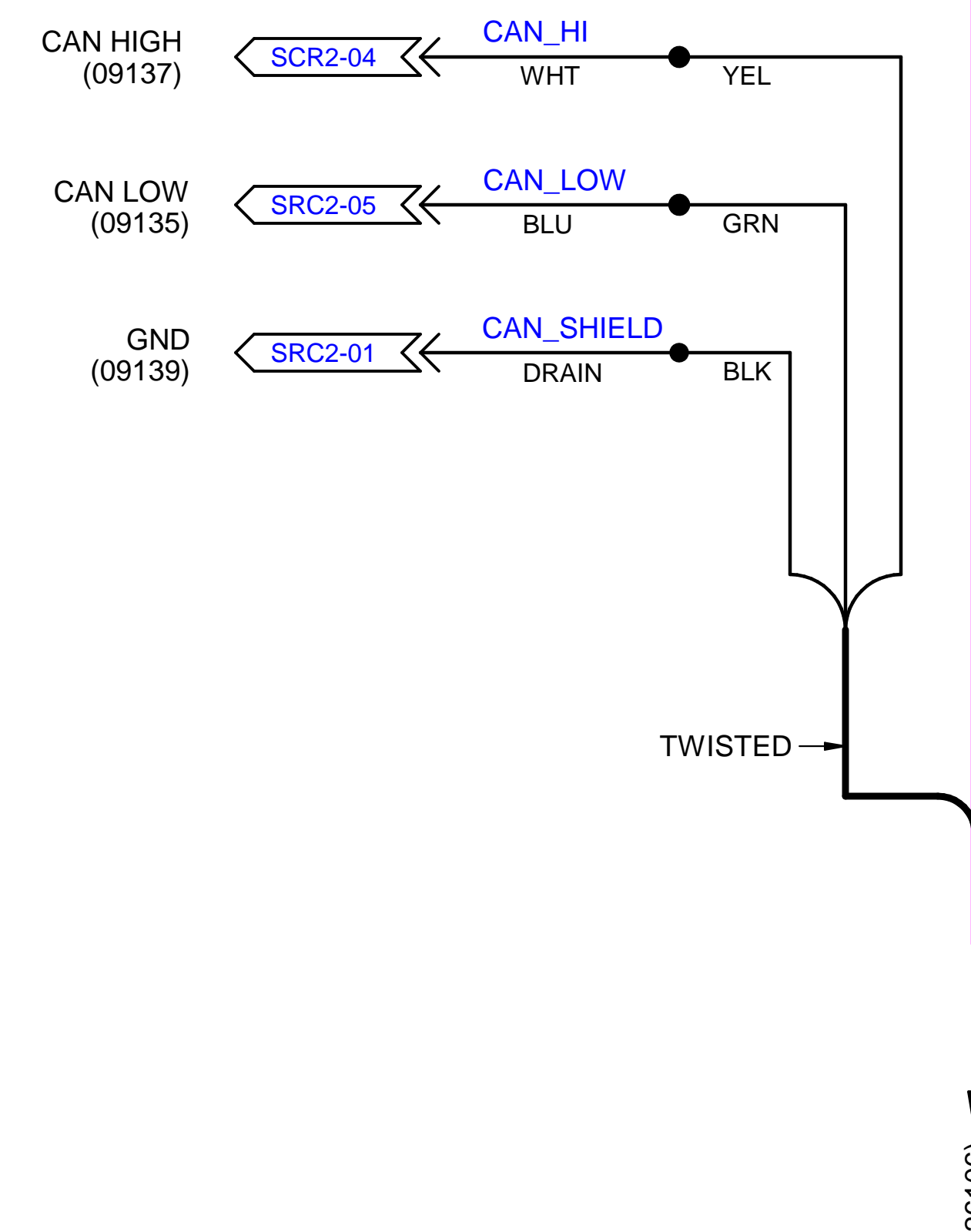
HV CABINET RIGHT WALL

HV CABINET LEFT WALL

24V ELECTRICS INTERFACE



CAN INTERFACE



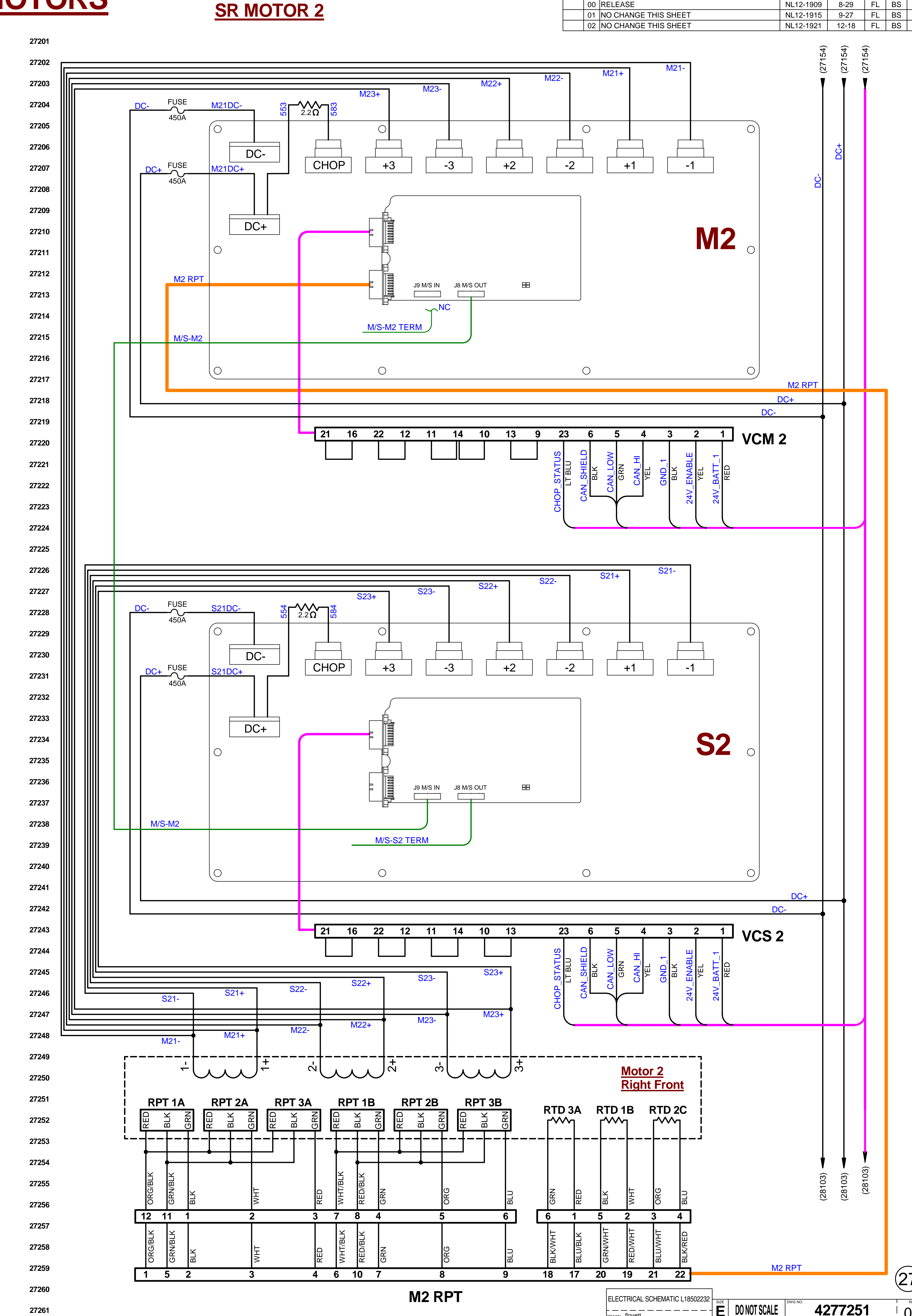
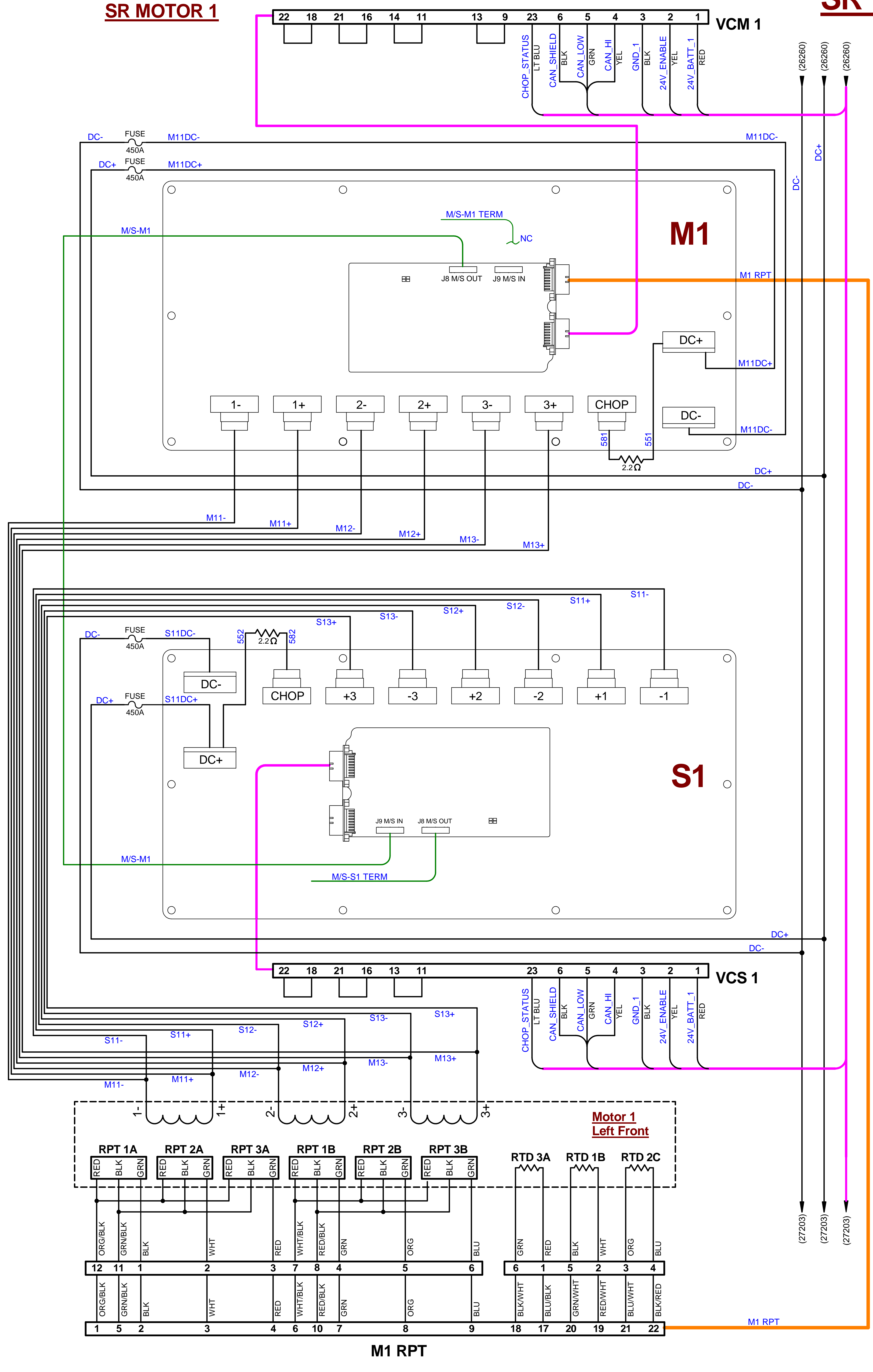
G2 L1850 HV CABINET SCHEMATIC

ZONE		REV	DESCRIPTION	EON	DATE	CHG	CHK	APP
00	RELEASE			NL12-1909	8-29	FL	BS	BS
01	NO CHANGE THIS SHEET			NL12-1915	9-27	FL	BS	BS
02	NO CHANGE THIS SHEET			NL12-1921	12-18	FL	BS	BS

SR MOTORS

SR MOTOR 1

SR MOTOR 2



REV		DESCRIPTION	ECN	DATE	CHK	APP
00	RELEASE		NL12-1909	8-29	FL	BS
01	NO CHANGE THIS SHEET		NL12-1915	9-27	FL	BS
02	NO CHANGE THIS SHEET		NL12-1921	12-18	FL	BS

SR MOTORS (CONT.)

SR MOTOR 3

SR MOTOR 4

