Base Machine 73-3657A-B-SD02.SCH

MCU Safety Interface Board 73-3657A-B-SD03.sch

SS Bin Safety Loop 73-3657A-B-SD04.SCH

Safe Voltages - MCU or SCU 73-3657A-B-SD05.SCH
J14
J13

Safe Voltages - TSV 73-3657A-B-SD06.SCH

Safe Voltages - Conveyor 73-3657A-B-SD07.SCH

AL ESTOP LOOP

10-4943A SHORTING JUMPER USED WHEN MCU/SCU IS DISCONNECTED

MCU EMERGENCY STOP SWITCH (NOT USED IN SCU)

10-4892A (NOT USED IN SCU)

UMBILICAL CABLE 10-4918A

10-4891A

GUARD RAIL LEFT EMERGENCY STOP SWITCH

SW2 ON BASE TSV
TSV REAR EMERGENCY STOP SWITCH

GUARD RAIL RIGHT EMERGENCY STOP SWITCH

BASE TSV FRONT EMERGENCY STOP SWITCH (NOT USED IN AUTOLOADER)

10-4896A

10-4921A

10-4897A

10-4898A

10-4920A

10-4942A

10-4096A

J8-1 RELAY DELAY
J8-3 CONTROL BOARD [2]

BASE TSV ESTOP LOOP

J4-1 RELAY DELAY
J4-2 CONTROL BOARD [2]

A

B

AUTOLOADER COMPONENTS INSIDE BASE TSV

10-4936A (CONNECTS TO 10-4898A IN AUTOLOADERS ONLY OR TO 10-4942A IN BASE TSV)

LEFT-TO-RIGHT MACHINE CONNECTIONS ARE DEPICTED.
FOR RIGHT-TO-LEFT MACHINE, CABLE 10-4891A CONNECTS TO POINT B INSTEAD OF POINT A.

10-4736B (MCU ONLY)
10-4925A (SCU ONLY)

MINIFIT 1X3 J42

UMNL 16PIN J37

MLX 1X2 J34

MLX 1X2 J35

MINIFIT 2X4 J41

MINIFIT 2X4 J31

AUTOLOADER

BASE TSV

AUTOLOADER COMPONENTS INSIDE BASE TSV

J10-7
J10-8
TO GENINE 0
J18-11
J18-12 +24VSAFE

10-4343B

10-4468B

10-4467

+24VSAFE

NOTE: GUARD RAIL SAFETY LOCK WILL UNLOCK WHEN +24VSAFE IS ABSENT

GUARD RAIL GATE

SAFETY LOCK

E2

E1

SWITCHES CLOSED WHEN GATE CLOSED

FIRMWARE SENSE

32

31

OMRON D4DL-2DFG-B 15-3423

22

21

12

11

AC SWITCH PANEL

MCU: ASSY 11-0901 NA & JAPAN, 11-0900 EUROPE
SCU: ASSY 11-0829 NA & JAPAN, 11-0840 EUROPE

NORTH AMERICA/ JAPAN
PLUG: 16-3997 L6-20P(Locking Twist Type, rated 250Vac, 20A)

EUROPE
PLUG: 16-4006 IEC309, rated 16A 250V

ROTARY DISCONNECTS
MAIN (RED) 15-3399
AUTOLOADER (BLACK) 15-3427
AL-SW1
AL-SW2
AL-CB1 15A 15-3085

FL1 EMI FILTER 16A 13-5027

L1
L2/N
GND

BRN 12 OR BLK 12
BLU 12 OR WHT 12
G/Y 12

INPUT RATED:
200-240 V AC
50/60 HZ, 16 A

ALL GROUND WIRES G/Y WIRE OR GRN WIRE WITH G/Y MARKER

MCU/SCU GND M6 STUD CHASSIS

TO VLF-TS REC AC POWER
NA & JAPAN: 16-3797 L6-20R
EUR: 16-4033 IEC-309 16A

MATE 1X2 J43

MATE 2X3 J26

J27 AMPINNERGY

PS1 POWER SUPPLY 24V 13-4750
AC IN 200-240V
RTN
24V

10-4361A
BRN 18 L1
BLU 18 L2/N
G/Y 18 GND

RED 16 24V
BLK 16 24V RTN

KEY

J5 MATE 1X4

Chassis 1
JP 10-4680A
2 GND

J10 MOLEX 1X3

PS2 POWER SUPPLY 48V 13-4832
AC IN 200-240V
RTN
48V

10-4360A
BRN 14 L1
BLU 14 L2/N
G/Y 14 GND

J4 MATE 1X4

10-4362A
48V BRN 16
BLK 16 BRN 16
48V RTN BLK 16

J6 MOLEX 2X3

KEY
TO PS3 (SSR) [4]

J3 MATE 1X4

F6 AC SAFE SPARE

F3

J32 MINIFIT 2X3

J15

J24 MATE 3X3

J9 MATE 1X5

J2 MATE1X5

L1 L2/N KEY GND
10-4741A

BRN 14 BLU 14 G/Y 14

Chassis Ground
8 mounting screws & lockwashers

BRN 18 BLU 18 G/Y 18
10-4364

10-4688A G/Y 18

B1 PLENUM BLOWER 15-3155

CONNECTOR AT BLOWER END IS FITTED WITH BACKSHELL CONNECTOR

TO MCU SAFETY INTERFACE BOARD J2 [3]
10-4735A

MCU MOTOR DRIVE INVERTER 15-3422

W V U
L3 L2 L1
BLU 18 BLK 18 RED 18

G/Y 14 10-4746A

CONTACTOR,DIL EM-01-G 15-3445 MCU-K1
CONTACTOR,DIL EM-01-G 15-3445 MCU-K2

1 L1 2 T1 RED 18
3 L2 4 T2 BLK 18
5 L3 6 T3 BLU 18

MCU-M1 MTR AC 3PHASE 15-3421
L1
L2
L3
GND
MCU-M1 MOTOR

21 NC 22

A1 + K1 A2 -

10-4745A
J5-1 TO MCU SAFETY
J5-2 INTERFACE BOARD [3]

10-4752A
TO CABLE 10-4351C AND GNE1 [5]

NOTE: MCU COMPONENTS ARE NOT USED IN SCU:
MOTOR MCU-M1
CONTACTORS MCU-K1, MCU-K2
MCU MOTOR DRIVE INVERTER

POWER DISTRIBUTION BOARD (PDB)

10-4112F

SELV CIRCUITRY

NON-SELV CIRCUITRY
200-240 VAC

J39 MINIFIT 2X4
DOOR LOOP 2

10-4462

J30 MINIFIT 2X4
DOOR LOOP 4

J1 MINIFIT 2X2

J11 MINIFIT 2X2

J14 MINIFIT 2X5
+48VSAFE +48VRTN +24VSAFE +24VRTN
10-4356
SCON Bus J24
TO GENINE1 [5] AND GENINE 2 [6]

J13 MINIFIT 2X5
+48VSAFE +48VRTN +24VSAFE +24VRTN
10-4700B OR 10-4366B
SCON Bus J24
TO GENINE0 [6] AND GENINE 4 [7]

J40 MINIFIT 2X4

BLK 22 DOOR LOOP 1

SW- RED 24
SW+ BLK 24

CONVEYOR I/F PANEL 15-3355
CONVEYOR I/F PANEL 15-3355

10-4468, 10-4467

DROP LEAF 15-3355
DROP LEAF 15-3355

10-4700B OR 10-4366B, 10-4918A, 10-4874A, 10-4346C, 10-4348B, 10-4900A, 10-4914A, 10-4873A, 10-4461, 10-4375 OR 10-4764

AL SAFETY LOOP [5, 6, 7]

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B	E440	2002 JAN 23	T NIVOLIANITIS	T NIVOLIANITIS

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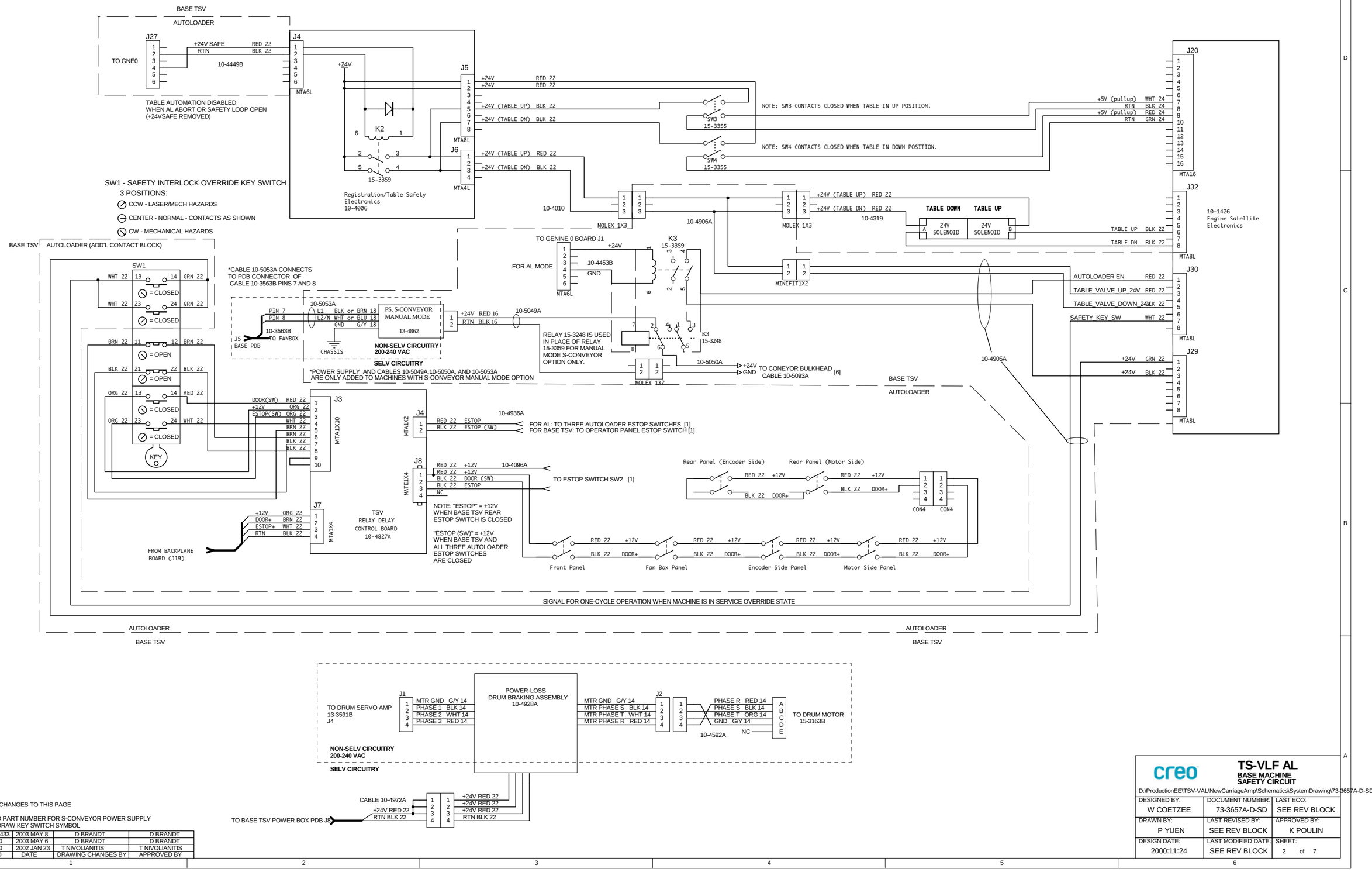
TS-VLF AL

SAFETY CIRCUIT

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NOTE: ALL CIRCUITRY ON THIS PAGE, EXCEPT WHERE SHOWN (DASHED LINES), IS BASE TSV CIRCUITRY (WHICH IS PRESENT IN ALL AUTOLOADERS), AND IS SHOWN HERE FOR INFORMATIONAL PURPOSES.



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C ADD PART NUMBER FOR S-CONVEYOR POWER SUPPLY
REDRAW KEY SWITCH SYMBOL

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TS-VLF AL
BASE MACHINE
SAFETY CIRCUIT

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COMPONENTS ON THIS PAGE ARE NOT PRESENT IN SCU

10-4736B JOG BUTTON PANEL

MCU-SW1
SERVICE OVERRIDE
3 POSITION
LEVER SWITCH

CENTRE
POS 1

LEFT - SEMI-AUTO MODE
POS 3

RIGHT - MANUAL JOG MODE
POS 2

(GRN/RED
CONTACT
BLK)

MCU-SW2
PUSHBUTTON
HOLD FOR SEMI-AUTO

MCU-SW3
PUSHBUTTON
JOG UP

MCU-SW4
PUSHBUTTON
JOG DOWN

J4	
1	+24VSAFE
2	
3	JOG MODE
4	ACT2+(MOTOR RUN)
5	SEMI/AUTO RUN
6	JOGGED RUN
7	JOG DOWN
8	SERV PNL SW OVR
9	GND

SELV CIRCUITRY | NON SELV CIRCUITRY

J2		
1	N/O CONTACT	TERM 1
2	NO CONTACT	TERM 3
3	FREQ1	TERM 4
4	FREQ2	TERM 5
5	15VDC	TERM 11
6	REVERSE	TERM 12
7	FORWARD	TERM 13
8	DC COMMON	TERM 6
9	CONT REL	TERM 14
10		
11		
12		

TO MCU MOTOR DRIVE [1]

10-4735A

MCU REAR SERVICE PANEL SAFETY LOOP

10-4725 — 15-3263 — J8 (1, 2)

MCU OPERATOR SIDE DOOR SAFETY LOOP

10-4724 — 15-3263 — J9 (1, 2)

MCU PLATE DOOR SAFETY LOOP
PLATE DR L | PICKER DR | PLATE DR R

10-4770
AND 10-4744

15-3355 x 3 — J6 (1, 2)

MCU SAFETY LOOP

MCU CHARIOT SAFETY LOOP

10-4726B — J7 (1, 2)

	CASSETTE	POSITION 2	POSITION 1
	15-3457	15-3450	15-3450
	DOWN = LATCHED	DOWN = LOAD	CLOSED IN PARKED OR LOAD POSITIONS
	UP = UNLATCHED	UP = PARKED	

NOTE: "LOAD" IS FULLY EXTENDED (OUT) CHARIOT POSITION
"PARKED" IS NORMAL OPERATING CHARIOT POSITION
"LATCHED" MEANS CASSETTE IS LATCHED ONTO CHARIOT

MCU ROOF SAFETY LOOP
FRONT RIGHT X 2 | REAR RIGHT X 2

10-4822A — J10 (1, 2)

FRONT LEFT X 2 | FRONT RIGHT X 2

15-3355 x 8

MCU SAFETY INTERFACE BOARD 10-4697B

(NOT USED IN SCU)

J3	
1	+24VSAFE
2	
3	
4	
5	
6	
7	
8	
9	
10	

TO GENINE 1
I/O SIGNALS

10-4703A

UPPER/LOWER LIM SW'S

UPPER LIM SWITCH
NC CONTACTS

LOWER LIM SWITCH
NC CONTACTS

J1	
1	
2	
3	
4	

10-4723

J5	
1	
2	TO MCU-K1, MCU-K2 [1]
3	
4	10-4745A
5	
6	

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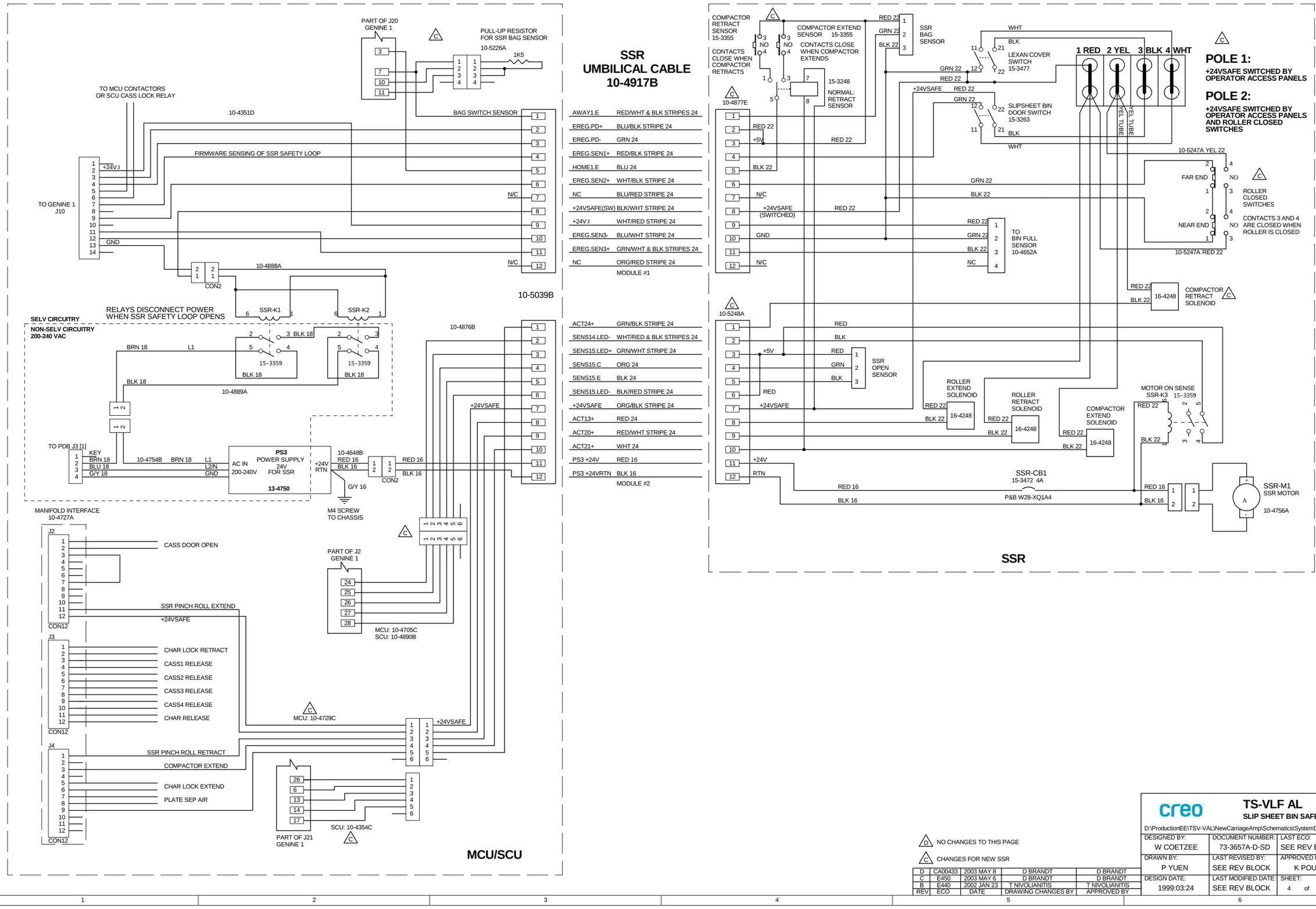
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MCU SAFETY INTERFACE BOARD

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C CHANGES FOR NEW SSR

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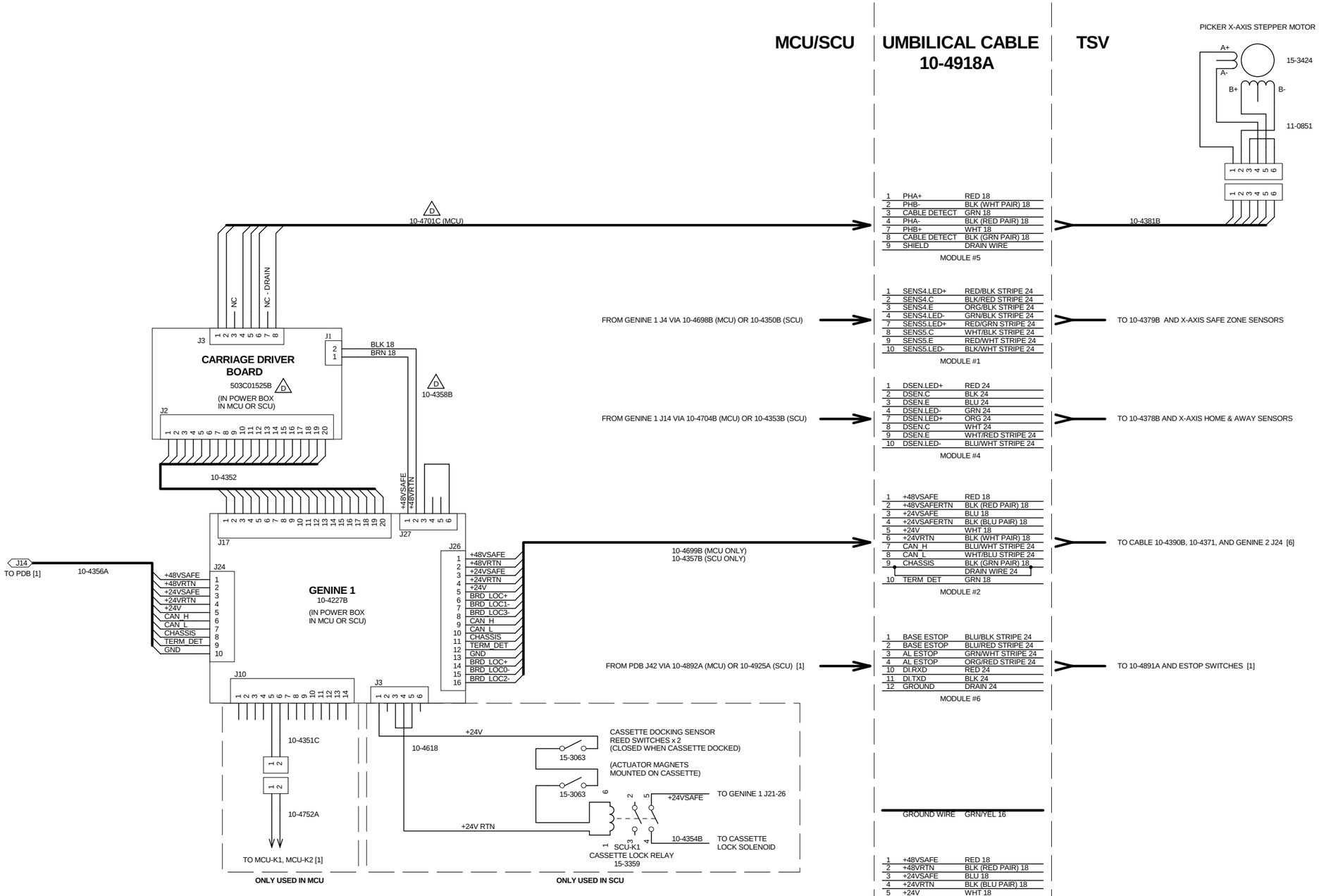
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TS-VLF AL

SLIP SHEET BIN SAFETY

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D NEW CARRIAGE DRIVER BOARD 503C01525B

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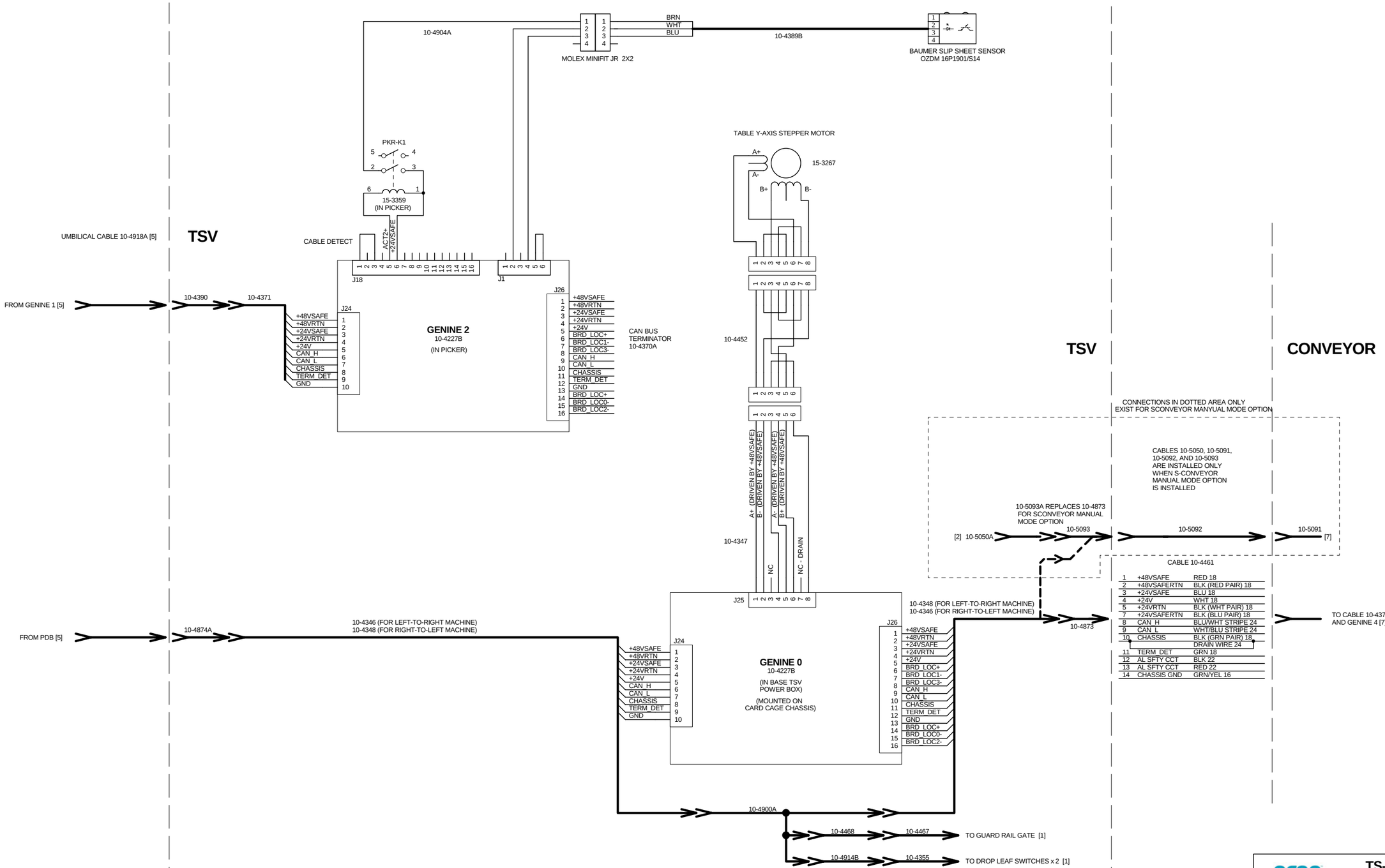
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SAFE VOLTAGES - MCU/SCU

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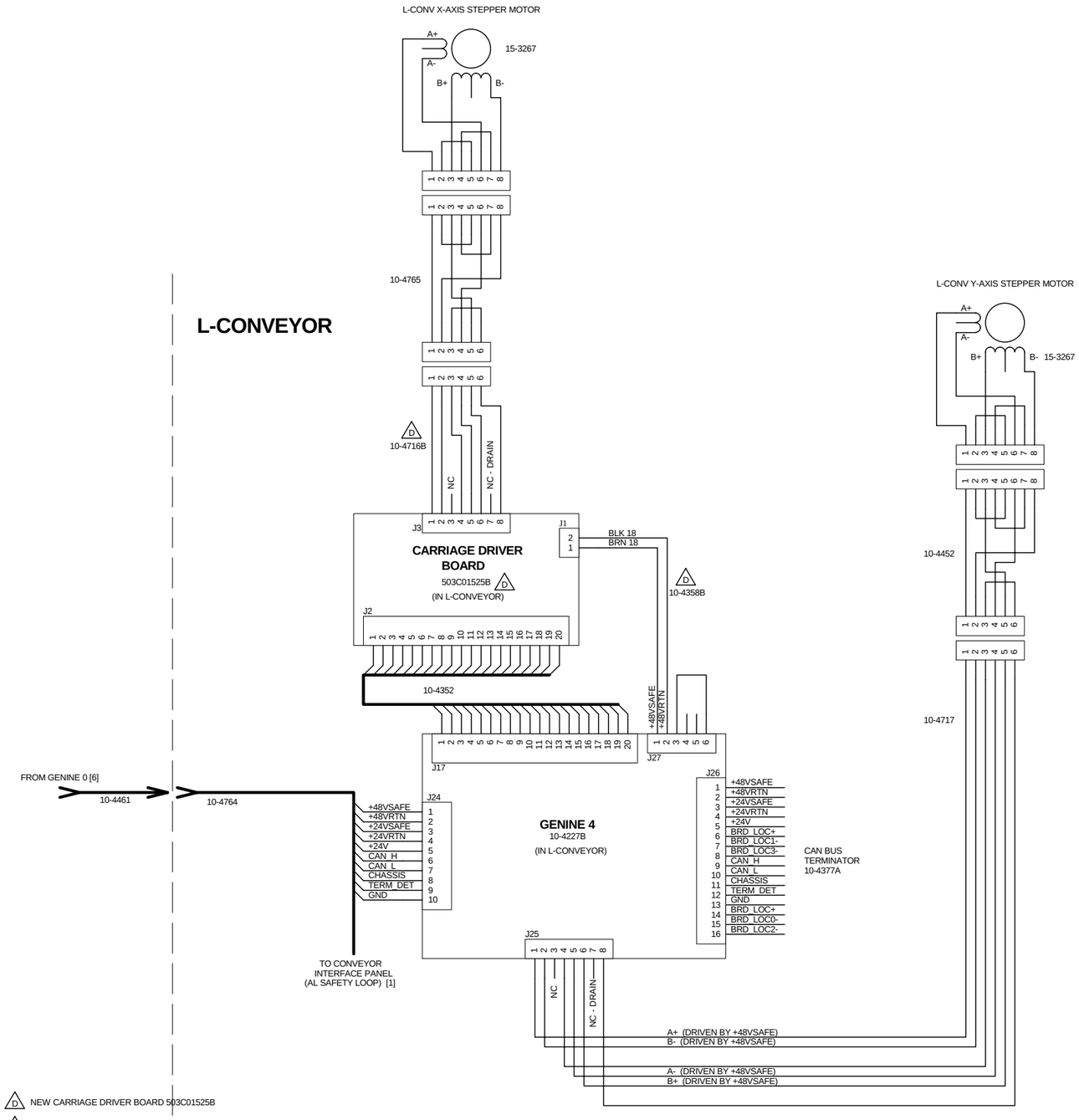
SAFE VOLTAGES - TSV

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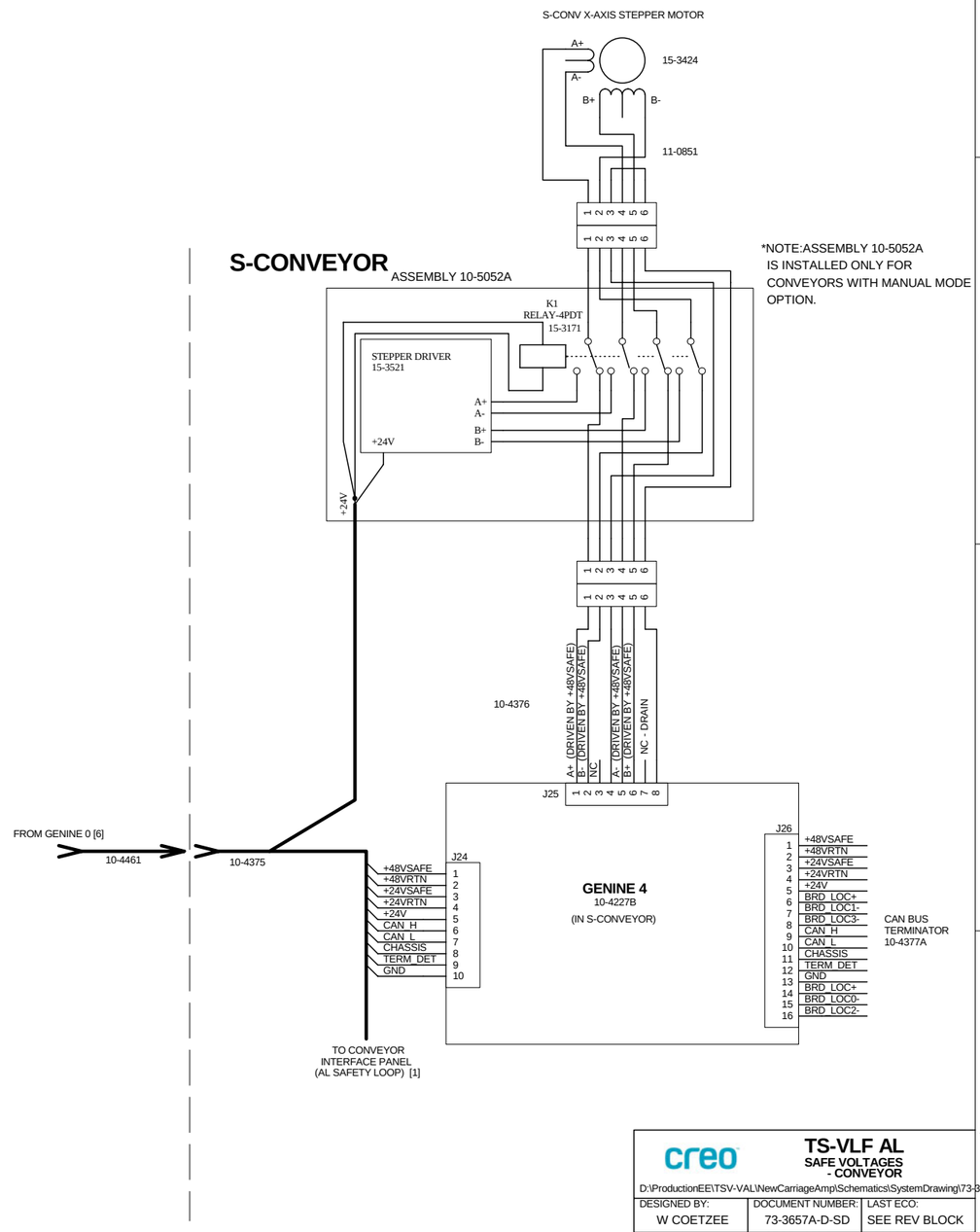
L-CONVEYOR OPTION ONLY

L-CONVEYOR



S-CONVEYOR OPTION ONLY

S-CONVEYOR



*NOTE:ASSEMBLY 10-5052A IS INSTALLED ONLY FOR CONVEYORS WITH MANUAL MODE OPTION.

D NEW CARRIAGE DRIVER BOARD 503C01525B

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SAFE VOLTAGES - CONVEYOR

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