THERMOFLEX II DOBLO DEVICE ELECTRICAL SYSTEM BLOCK DIAGRAM

TRANSFORMER

LINE B — 120Vac

DoBlo VACUUM

SENSE

CONTROL

340V-560V 50/60Hz, 16A, 3PHASE
340V-440V 50/60Hz, 16A, 3PHASE

DRUM VACUUM

See 10-4141C

CONTROL/STATUS

GENINE 0
PAGE 8

Tailstock Sense

Drum Hoist Sense/Control

ZStage Home/Away Sense

SCON

TABLE SENSOR

TABLE LOCK

FRONT DOOR LOCK

LIONEL 1
PAGE 9

FRONT DR BUTTON

FRONT DR LIGHT

SCON

User Interface
Buttons and LED Lights

WORKSTATION and RIP

200VAC, 50/60Hz, 12A, 1PHASE
OR
230VAC, 50/60Hz, 8A, 1PHASE
OR
120VAC, 50/60Hz, 12A, 1PHASE

Response Centre
Dailup

SCSI/TSP, WS(SERIAL), DIAG(SERIAL)

200-240VAC, 50/60Hz, 12A, 1PHASE

UDRC-LF
LIONEL0

SEE 73-3675

CONTROL/STATUS

TMCE
PAGE 7

Plate Length Sense

Temperature Sense

Plate Flyoff Sense

Drum Balance Sense

Carriage Home/Away Sense

CONTROL/STATUS/DATA

CONTROL/STATUS/POWER

CARRIAGE AMP

M2

6:1

CARRIAGE STEPPER MOTOR

Carriage Leadscrew

TFX
PAGE 8

M3

ZSTAGE STEPPER MOTOR

2:1

CONTACTORS

LINEB — 240VAC

Exposure Head Power Supply PS4(48V)

CONTACTOR

Exposure Head Power Supply PS3(5.5V)

ENCODER

Drum/Mandrel
400RPM

3:1

M1

CONTROL/STATUS

CONTACTOR

LINEB — 240VAC

DRUM AMP

CONTACTORS

BLDC (30Apk)

DRUM BRAKE
Electromagnetic

DRUM MOTOR

MAIN POWER SWITCH

200-240VAC, 50/60Hz, 24A, 1PHASE

CB2 15A
CB1 15A

LINE B

ES1

SCON

Pneumatics Control

CONTROL/STATUS

SAFETY SYSTEM

E-Stop
Door Switches
Hold-to-run Switches
Safety Relays

PAGE 4 and 6

PDB 0
PAGES 5 and 6

240VAC

System Power Supplies
PS1(24V), PS2(48V)

24V DC

24V DC

FAN4
CARRIAGE MOTOR FAN

FAN5
DRUM MOTOR FAN

FAN6
DRUM BRAKE FAN

LINE A — 240VAC

240VAC

240VAC

EXTERNAL CHILLER

FAN1
POWER BOX FAN

L1 A — CONTACTORS

Safety Terminal Connector

SLEEVE OPTION

M5

DRUM HOIST MOTOR

Corresponding 100 Labels:
none

All notes are on page 2.

Thermoflex II Safety Block Diagram
Page02_EP_Safety_Loop_BD.sch

PAGE 2
SAFETY SYSTEM BLOCK DIAGRAM

Thermoflex II TMCE Wiring
Page07_EP_MCE_Wiring.sch

PAGE 7
TURBOMCE WIRING

Thermoflex II Safety Circuit Diagram
Page03_EP_Safety_Loop_Circuit.sch

PAGE 3
SAFETY SYSTEM CIRCUIT DIAGRAM

Thermoflex II GENINE0 Wiring
Page08_EP_GENINE_Wiring.sch

PAGE 8
GENINE0 WIRING

Thermoflex II Safety Control Module Wiring
Page04_EP_SCM_Wiring.sch

PAGE 4
SAFETY CONTROL MODULE(SCM) WIRING

Thermoflex II LIONEL1 Wiring
Page09_EP_LIONEL1_Wiring.sch

PAGE 9
LIONEL1 WIRING

Thermoflex II Safety Loop Wiring
Page05_EP_PDB_Wiring.sch

PAGE 5
PDB0 WIRING (1/2)

Thermoflex II HEAD Wiring
Page10_EP_HEAD_Wiring.sch

PAGE 10
EXPOSURE HEAD WIRING

Thermoflex II PDB Wiring
Page06_EP_Safety_Loop_Wiring.sch

PAGE 6
PDB0 WIRING (2/2) SAFETY SYSTEM WIRING

Thermoflex II DRUM AMP & MOTOR Wiring
Page11_EP_DM-AMP_Wiring.sch

PAGE 11
DRUM AMP & MOTOR WIRING

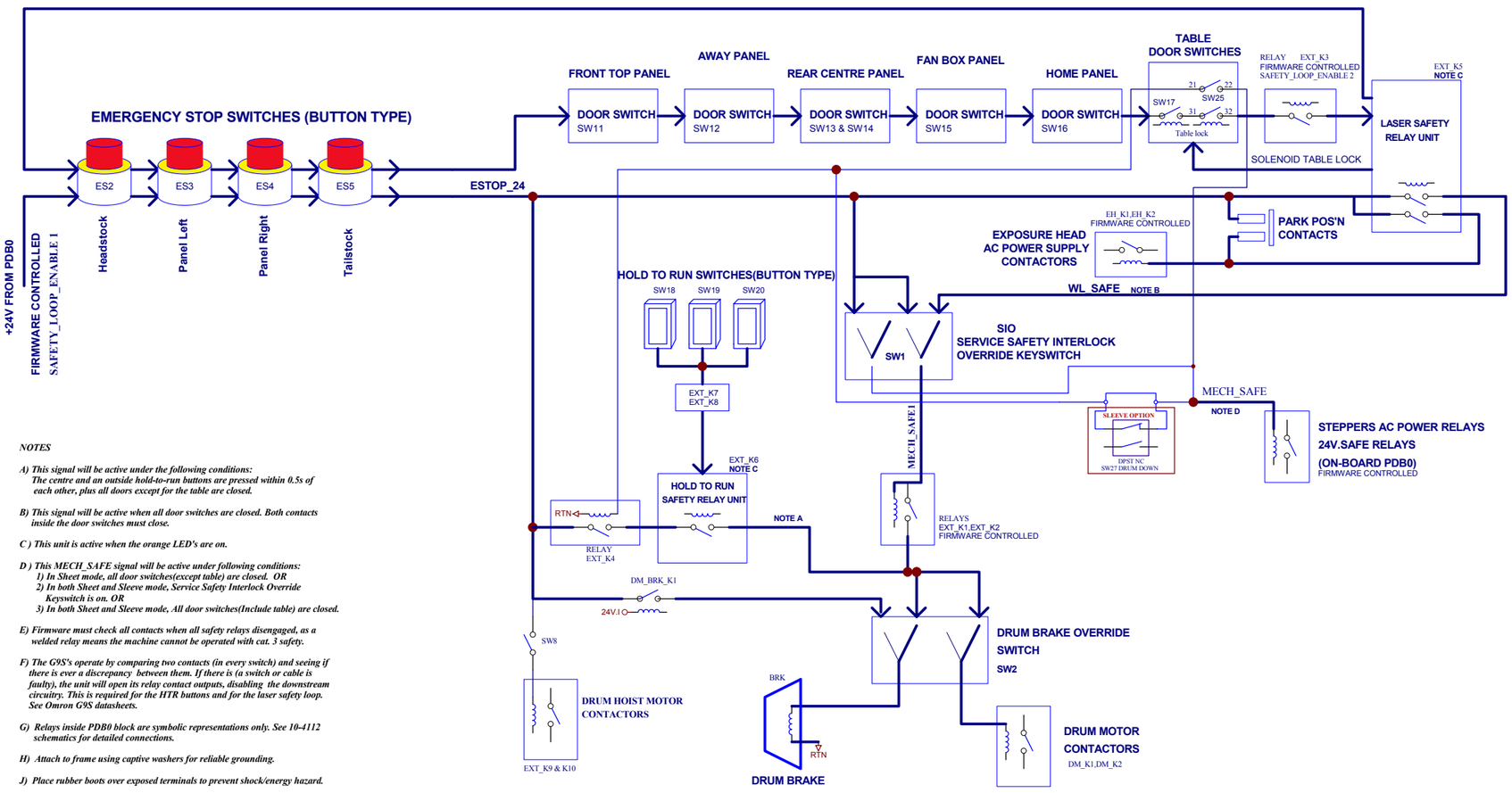
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THERMOFLEX II
DOBLO DEVICE
SYSTEM BLOCK DIAG.

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DESIGNED BY:	DOCUMENT NUMBER:	LAST ECO:
J. MALM	73-7318A	PRE-RELEASE
DRAWN BY:	LAST REVISED BY:	APPROVED BY:
J. MALM	M. ZHANG	B.DALL
DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
DEC 04 2001	MAR. 30, 2004	1 of 11

THERMOFLEX II DOBLO DEVICE SAFETY SYSTEM BLOCK DIAGRAM



NOTES

A) This signal will be active under the following conditions:
The centre and an outside hold-to-run buttons are pressed within 0.5s of each other, plus all doors except for the table are closed.

B) This signal will be active when all door switches are closed. Both contacts inside the door switches must close.

C) This unit is active when the orange LED's are on.

D) This MECH_SAFE signal will be active under following conditions:
1) In Sheet mode, all door switches(except table) are closed. OR
2) In both Sheet and Sleeve mode, Service Safety Interlock Override Keyswitch is on. OR
3) In both Sheet and Sleeve mode, All door switches(Include table) are closed.

E) Firmware must check all contacts when all safety relays disengaged, as a welded relay means the machine cannot be operated with cat. 3 safety.

F) The G9S's operate by comparing two contacts (in every switch) and seeing if there is ever a discrepancy between them. If there is (a switch or cable is faulty), the unit will open its relay contact outputs, disabling the downstream circuitry. This is required for the HTR buttons and for the laser safety loop. See Omron G9S datasheets.

G) Relays inside PDB0 block are symbolic representations only. See 10-4112 schematics for detailed connections.

H) Attach to frame using captive washers for reliable grounding.

J) Place rubber boots over exposed terminals to prevent shock/energy hazard.

K) Service Override Tool 15-3526

L) Both PS1 and PS2 are adjustable power supplies(Creo Part # 13-5094), make sure PS1 is set at 24V and PS2 is set at 48V, before put them into machine's Power Box and make connections.

M) TFX logic power is on the WL safety loop because of the focus laser.

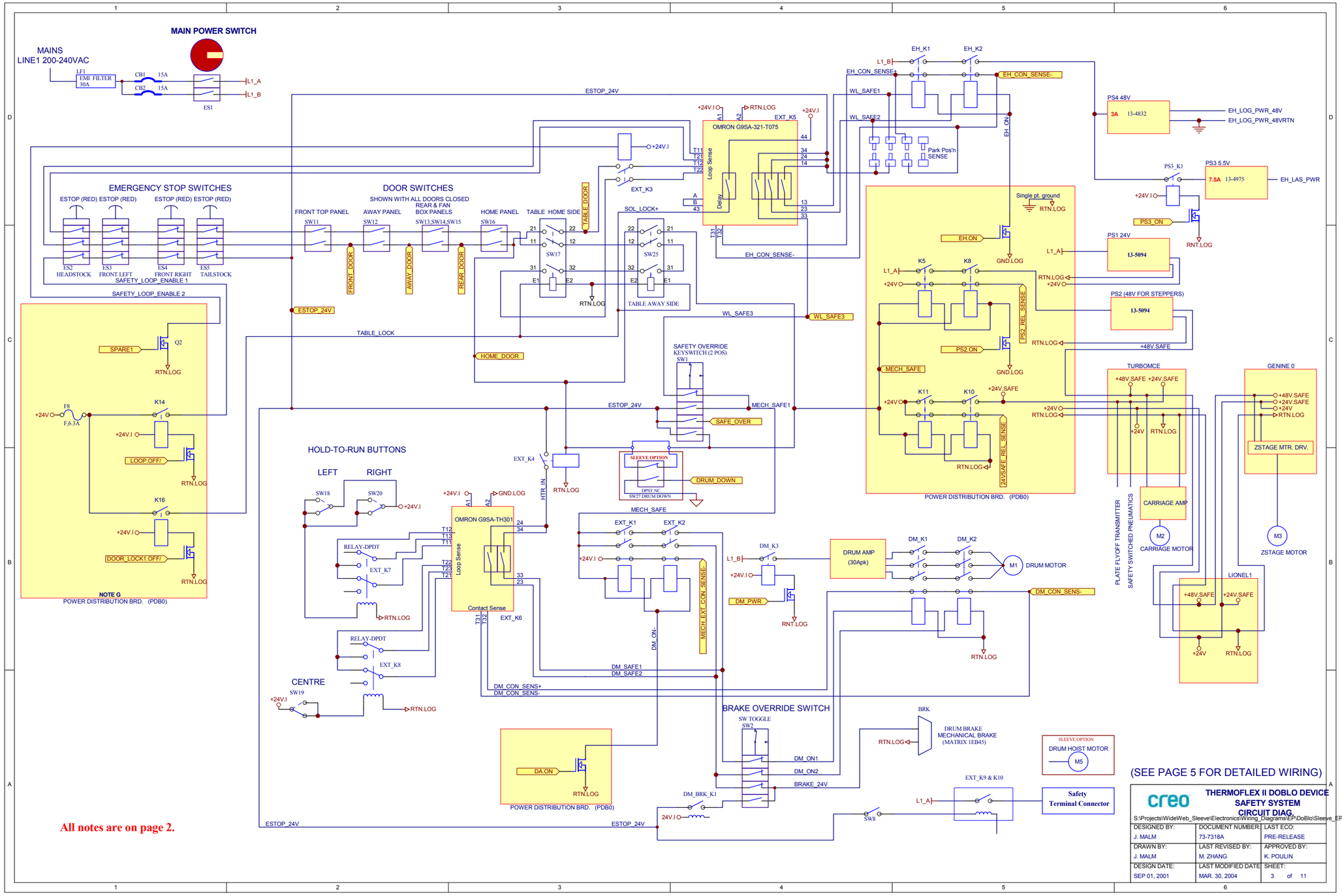
(SEE PAGE 5 FOR DETAILED WIRING)

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THERMOFLEX II DOBLO DEVICE SAFETY SYSTEM BLOCK DIAG.

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MAIN POWER SWITCH
MAINS
LINE1 200-240VAC
LF1
EMI FILTER
30A
CB1 15A
CB2 15A
ES1
L1_A
L1_B
ESTOP_24V
EMERGENCY STOP SWITCHES
ESTOP (RED) ESTOP (RED)
ESTOP (RED) ESTOP (RED)
ES2 HEADSTOCK
ES3 FRONT LEFT
ES4 FRONT RIGHT
ES5 TAILSTOCK
SAFETY_LOOP_ENABLE 1
SAFETY_LOOP_ENABLE 2
DOOR SWITCHES
SHOWN WITH ALL DOORS CLOSED
REAR & FAN BOX PANELS
FRONT TOP PANEL
AWAY PANEL
SW11
SW12
SW13,SW14,SW15
HOME PANEL
SW16
TABLE HOME SIDE
TABLE AWAY SIDE
SW17
SW25
TABLE_DOOR
FRONT_DOOR
AWAY_DOOR
REAR_DOOR
HOME_DOOR
SOL_LOCK+
TABLE_LOCK
RTN.LOG
+24V.I
EXT_K3
EXT_K5
OMRON G9SA-321-T075
Loop Sense
Delay
WL_SAFE1
WL_SAFE2
WL_SAFE3
EH_CON_SENSE-
EH_K1
EH_K2
EH_CON_SENSE
EH_ON
Park Pos'n SENSE
PS4 48V
3A 13-4832
EH_LOG_PWR_48V
EH_LOG_PWR_48VRTN
PS3_K1
PS3 5.5V
7.5A 13-4975
EH_LAS_PWR
PS3_ON
RNT.LOG
Single pt. ground
GND.LOG
EH.ON
PS1 24V
13-5094
L1_A
K5
K8
PS2 (48V FOR STEPPERS)
PS2.ON
PS2_REL_SENSE
+48V.SAFE
MECH_SAFE
K11
K10
+24V.SAFE
24V/SAFE_REL_SENSE
POWER DISTRIBUTION BRD. (PDB0)
TURBOMCE
GENINE 0
+48V.SAFE
+24V.SAFE
+24V
RTN.LOG
ZSTAGE MTR. DRV.
CARRIAGE AMP
M2
CARRIAGE MOTOR
M3
ZSTAGE MOTOR
PLATE FLY/OFF TRANSMITTER
SAFETY SWITCHED PNEUMATICS
LIONEL1
SAFETY OVERRIDE
KEYSWITCH (2 POS)
SW1
SAFE_OVER
MECH_SAFE1
HOLD-TO-RUN BUTTONS
LEFT
RIGHT
SW18
SW20
CENTRE
SW19
RELAY-DPDT
EXT_K7
EXT_K8
EXT_K6
OMRON G9SA-TH301
Contact Sense
HTR_IN
GND.LOG
EXT_K4
SLEEVE OPTION
DPST NC
SW27 DRUM DOWN
DRUM_DOWN
MECH_SAFE
EXT_K1
EXT_K2
DM_K3
DM_PWR
DRUM AMP
(30Apk)
DM_K1
DM_K2
M1
DRUM MOTOR
DM_CON_SENS-
MECH_EXT_CON_SENSE-
DM_ON-
DM_SAFE1
DM_SAFE2
DM_CON_SENS+
DM_CON_SENS-
BRAKE OVERRIDE SWITCH
SW TOGGLE
SW2
DM_ON1
DM_ON2
BRAKE_24V
BRK
DRUM BRAKE
MECHANICAL BRAKE
(MATRIX 1EB45)
DA.ON
DM_BRK_K1
24V.IO
SW5
EXT_K9 & K10
SLEEVE OPTION
DRUM HOIST MOTOR
M5
Safety Terminal Connector
SPARE1
Q2
F8
F,6.3A
K14
LOOP.OFF/
K16
DOOR_LOCK1.OFF/
NOTE G
POWER DISTRIBUTION BRD. (PDB0)
All notes are on page 2.
(SEE PAGE 5 FOR DETAILED WIRING)
THERMOFLEX II DOBLO DEVICE
SAFETY SYSTEM
CIRCUIT DIAG.
S:\Projects\WideWeb_Sleeve\Electronics\Wiring_Diagrams\EP\DoBlo\Sleeve_EP_Doblo_Wiring.ddb - Documents\Page03_EP_Safety_Loop_Circuit.sch
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APPROVED BY: K. POULIN
DESIGN DATE: SEP 01, 2001
LAST MODIFIED DATE: MAR. 30, 2004
SHEET: 3 of 11

POWER DISTRIBUTION BOARD 0 (PDB0)

10-4112H

SCON BOARD ADDRESS = 0X10

NOTE G

SELV

NON-SELV

COMPONENTS ARE MOUNTED INSIDE A BOX ON THE DEVICE

CONFIGURED FOR 200-208V
REFER TO THE FOLLOWING TABLE FOR 220V & 230-240V

TERMINAL BLOCK WIRING CONFIGURATION 382-00579A	LINE VOLTAGE		
WIRE COLOUR	200-208	220	230-240
BROWN (BRN)	2	1	1
BLUE (BLU)	6	6	6
RED (RED)	3-5	3-5	3-4

ATTACHED MAINS POWER CORD

16-4452
CSA/UL SJT, 12/3AWG 250V, 25A and VDE/HAR H05VV-F, 3X4.0mm, 250V, 32A

NA PLUG: 16-4560 L6-30P LOCKING, RATED 30A, 250V
EURO PLUG: 16-4024 IEC 309, RATED 32A, 250V

All notes are on page 2.

creo	THERMOFLEX II DOBLO DEVICE PDB 0 WIRING DIAG.		
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DESIGN DATE: SEP 01, 2001	LAST MODIFIED DATE: MAR. 30, 2004	SHEET: 5 of 11	

POWER DISTRIBUTION BOARD

10-4112H

BOARD ADDRESS = 0X10

NOTE G

SAFETY CONTROL MODULE

11-1120A

(SEE PAGE 4 FOR DETAILED WIRING)

HOLD TO RUN BUTTONS

172-00001

LEFT SW18 · CENTRE SW19 · RIGHT SW20

FRONT AWAY ES3 · HEADSTOCK ES2 · FRONT HOME ES4 · TAILSTOCK ES5

RED ESTOP 15-3474 172-00003

10-5267A FRONT TOP PANEL · AWAY PANEL

SW11 · SW12

10-5268A REAR PANEL 1 · REAR PANEL 2 · FAN BOX PANEL · HOME PANEL

SW13 · SW14 · SW15 · SW16

TABLE FLEXTRACK: 11-1123A

TABLE HOME SIDE SW SW17 — 172-00031

BRAKE OVERRIDE SWITCH

SW2 15-3536 — SW TOGGLE

PARK POSITION CONTACT BOARD

17-5249B

(16-4570 Socket)

(16-4583 Probe)

MECH HAZARD OVERRIDE LAMPS

LP1 LAMP 10-3721A x2 · LP2 LAMP

SERVICE INTERLOCK OVERRIDE

SW1 15-3334 KEYSWITCH(SIO) (2 POS)

SLEEVE OPTION

220-00472A

DPST NC SW27 DRUM DOWN

---

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THERMOFLEX II DOBLO

DEVICE SAFETY SYSTEM WIRING DIAG.

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SEP 01, 2001	MAR. 30, 2004	6 of 11

TURBOMCE BOARD

10-4766D

DRUM ENCODER

ENC1 34-3307 — 507-00019A — 220-00027A — HDB15M HDB15F

DGL1 10-4570A DONGLE

FERRITE 13-4807 (X2)

WS_COMM 16-3460
DIAG_COMM 16-3460
SCSI 16-3503

J39 WS_COMM DB9F
J37 DB9F DNGL_COMM
J20 HDB15F DRUM_ENC
J38 J42 DB9F WS_SCSI

FROM PDB J14 [4] SCON1
TO LIONEL1 J13 [9] SCON2

10-5195A
10-5194A

J8 MINIFIT 2X5 CAN SCON2
J7 MINIFIT 2X5 CAN SCON1

ENGINE TEMP THERMISTOR RT1 10-0967A — REC PLUG — M&L

10-5164A

J30 MINIFIT 2X6 TEMP

EH_DATA [10] TO EXPOSURE HEAD
EH_CNTL [10] TO EXPOSURE HEAD

10-5185A
10-5184A

J1 SMB EH_DATA
J32 HDB44.IDC EH_CNTL

10-5202A
DA_CTRL [5] TO DRUM AMP

J35 DB15F DRUM_AMP

Z_APRX 36-3141 — 220-00015A
Z_HS COLLISION 36-3141 — 220-00015A

DRUM BALANCER AWAY SIDE 10-4733A x4
EXT. RETR. WT. DET CARRIAGE AWAY

EH_PARK_POS_SENSE
FROM CONTACT BOARD [6]

MANIFOLD 50-2743A
SOLENOID 55-0771 X 4

FERRITE 13-3602

(or J44 for BRISQUE)

10-5172A

TABLE FLT ON — SOL1
TLSTK LOCK OFF — SOL2
MANDR AIR ON — SOL3
DBL AIRINJECT ON — SOL4

+24V RED 22 (1)
DBL_INJ BLK 22 (3)
+24V
TSTK_LCK- BRN 22 (4)
+24V GRN 22 (2)
RED 22
DBL AIRINJ HOT YEL 22 (6)
MDRL_AIR- BLU22(5)
BUZ BLK 22 (7)
WHT 22

220-00603A PARTIAL
[8] DBL_AirInjectDrive1

J16 2X5 HDR USR_IF

BUZZER 137-00001 Mounting brkt: 252-01511A — 24V RED 26 RTN BLK 26 — 220-00177A
24V.I — RED 22 (1) RED 22 (2)

J21 2X7 HDR REG

TO 10-5165A [7] 24V.I

PFO TRANSMITTER S1 36-3145 — +24V_SAFE BRN 22 RTN BLU 22 — 950nm
10-5169A
J3 MINIFIT 1X2 PFO_E

PFO DETECTOR S2 36-3118 — +24V BRN 22 FLYOFF BLK 22 RTN BLU 22
BLK 22
10-5168A
J19 1X8 HDR PFO-S

10-5213A (PARTIAL)
220-00079A (PARTIAL)
RED 24
WHT(RED PAIR) 24
ORG 24
WHT(ORG PAIR) 24
NC
MINI FIT — MINIFIT JR.
PD_LR BLK 24
+5V RED 24
LR QUE/ WHT24
RTN BLK 24
BLK 22
10-5214B [6]
SW27-11 [6]

J12 MTA 1X6 LTPS

BS_TEMP J 46 DB9M

J10 2X13 HDR SOL_DRV

J26 HDR 2X10IDC CA_CTRL

J13 MINIMATE3X3 CA_PWR

J5 DB25F DIN_SPR

J40 DB9F SPR_COMM

J24 MINIFIT 2X4 RLY_DRV
GRN 22
RELAY0+ RED 22
RELAY1+ RED 22
RELAY2+ WHT 22
RELAY0- BLK 22
RELAY1- BLK 22
RELAY2- GRN 22
10-5166A

MANIFOLDS 50-2743A
SOL5 L TABLE VAC ON
SOL6 R TABLE VAC ON
SOLENOID 55-0771 X 2

UDRC NOZZLE FLOW SENSOR PRESSURE SENSOR 0-100"WC diff.
13-5128

TO UDRC
DSEN18.C (CS_CD+) BRN 22
+24V RED 22
+24V BRN 22
RXD_WHT 22 (FS_RXD)
RELAY0+ (FS_RLY+) RED 22
DSEN19.C (FS_STAT1+) RED 22
NOZ_EXC+ RED 22
RTN_BLK 22
DSEN18.E (CS_CD-) BLU 22
CS_RLY1- GRN 22
CS_RLY2- WHT 22
TXD (FS_TXD) RED 22
RELAY0- (FS_RLY-) BLK 22
DSEN21.E (FS_STAT1-) BLK 22
NOZ_COM- BLK 22
DB15

J4 DB37F DIN_AS

10-5199A

220-00129A
(1) DSEN9 LED+ RED 24
(20) DSEN9 LED- BLK 24
(2) DSEN9 C WHT 24
(21) DSEN9 E GRN 24
(3) DSEN10 LED+ BLK/RED 24
(22) DSEN10 LED- BLK/BLU 24
(4) DSEN10 C BLK/WHT 24
(23) DSEN10 E BLK/GRN 24
(5) DSEN11 LED+ WHT/RED 24
(24) DSEN11 LED- WHT/BLK 24
(6) DSEN11 C WHT/BLU 24
(25) DSEN11 E WHT/ORG 24
(13) DSEN15 LED+ RED/ORG 24
(32) DSEN15 LED- RED/BLK 24
(14) DSEN15 C RED/WHT 24
(33) DSEN15 E RED/BLU 24
MINI-FIT 2X8

10-5203A MINI-FIT 2X8
RED 26
WHT(RED PAIR) 26
ORG 26
WHT(ORG PAIR) 26
YEL 26
WHT(YEL PAIR) 26
GRN 26
WHT(GRN PAIR) 26
BLU 26
WHT(BLU PAIR) 26
VIO 26
WHT(VIO PAIR) 26
GRY 26
WHT(GRY PAIR) 26

220-00130A
10-4733A x4
EXT. RETR. TSK LOK WT DET.
MINI-FIT 2X3

(11) DSEN14 LED+ RED 24
(30) DSEN14 LED- BLK 24
(12) DSEN14 C WHT 24
(31) DSEN14 E GRN 24
10-4733A
CARRIAGE HOME

J6 DB37M DIN_HS

DRUM BALANCER HOME SIDE

MANIFOLDS 50-2743A
SOLENOID 55-0771 X3
SOL8 HEAD AIRJET ON
SOL9 AY DRM BAL ON
SOL7 HM DRM BAL ON
SAFETY CONTROLLED MANIFOLDS

10-5183A
10-5165B
10-0967A RT2 THERMISTOR LEADSCREW TEMP (ON CARRIAGE)

24V.I RED 22
24V.I RED 22
24V.I [7]
FROM 10-5172A

WHT 22
GRN 22
RED 22 24V

10-5200A
10-5201A

CM_PWR
J1 M&L
J2 HDR 2X10IDC CA_CTRL
J3 UMNL 2X4 CM_DRIVE
CARRIAGE AMP 503C01525B

10-5160A
PHA+ RED 18
PHB- BLK (WHT PR) 18
PD+ GRN 18
PHA- BLK (RED PR) 18
PHB+ WHT 18
CHASSIS DRAIN
PD- BLK (GRN PR) 18
MINI-FIT

M2 CARRIAGE STEPPER MOTOR
184-00012B

10-5166A
HTR_SENS [6] TO SAFETY SYSTEM AND CABLE 10-5177A

220-00216A
DM_K3
PS3_K1 [10]
220-00217A
220-00403A [6]
DM_BRK_K1

EXTERNAL CHILLER CONTROL
TO 10-5165A [7]

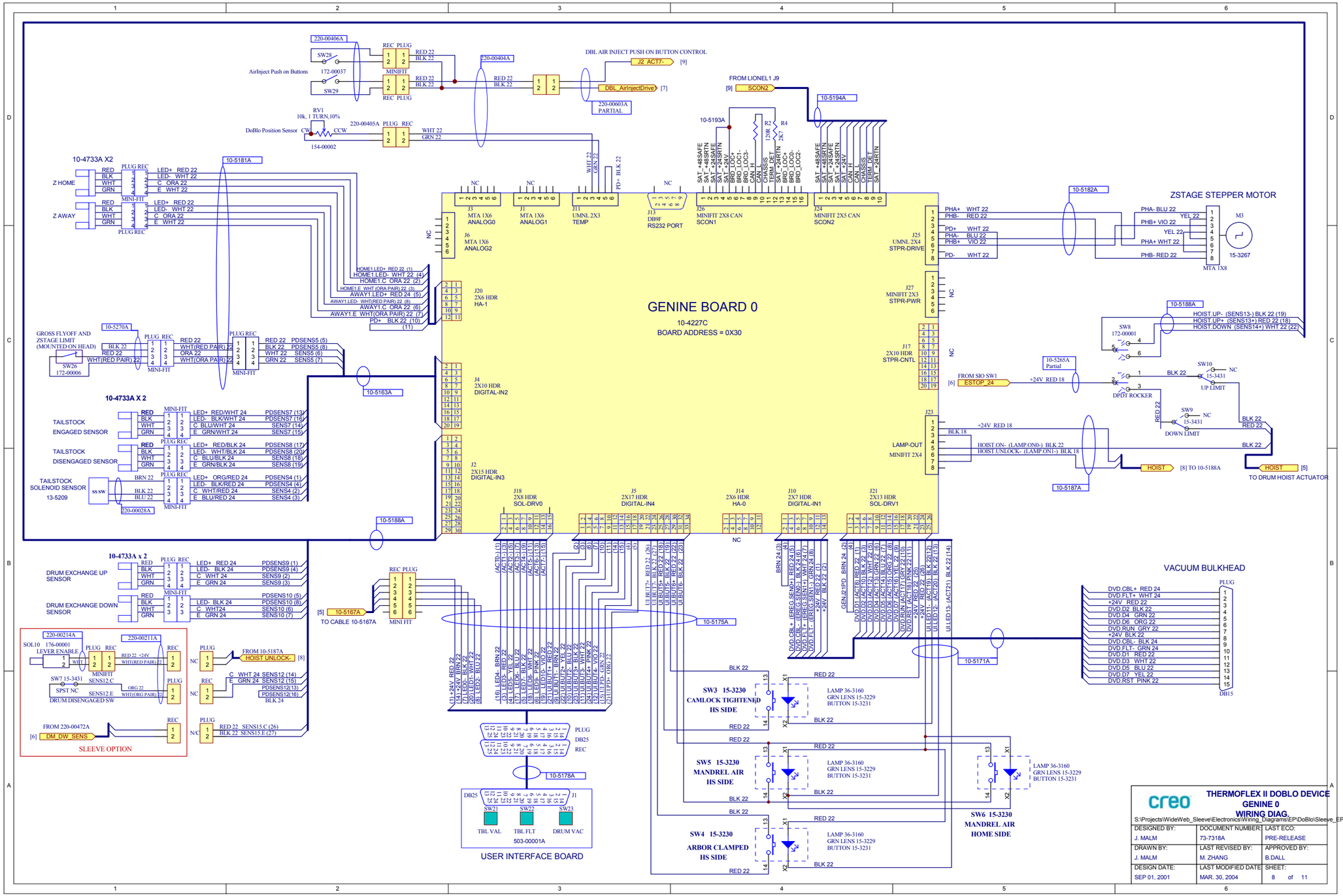
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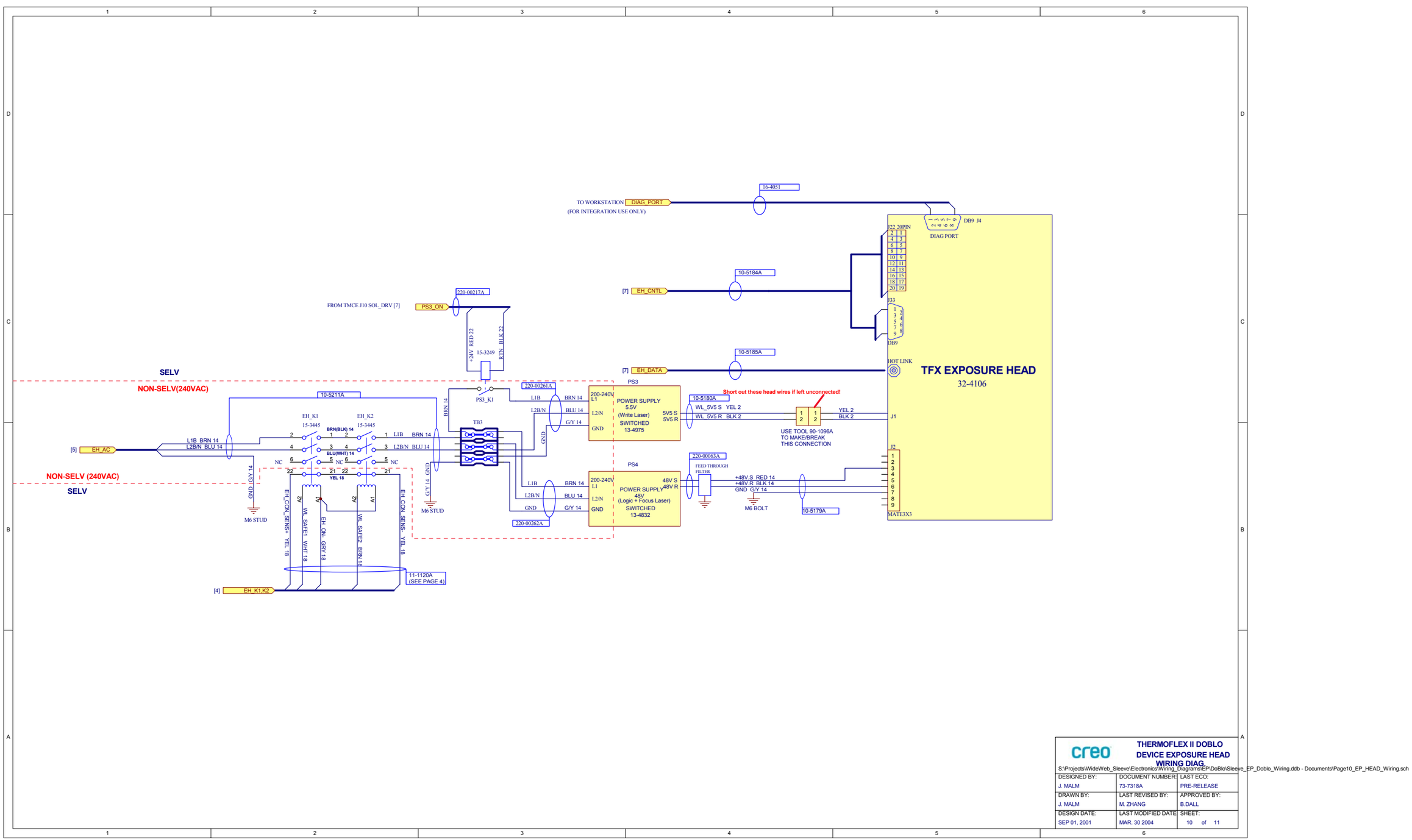
THERMOFLEX II DOBLO DEVICE TURBOMCE WIRING DIAG.

S:\Projects\WideWeb_Sleeve\Electronics\Wiring_Diagrams\EP\DoBlo\Sleeve_EP_Doblo_Wiring.ddb - Documents\Page07_EP_MCE_Wiring.sch

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J. MALM	M. ZHANG	B.DALL
DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
SEP 01, 2001	MAR. 26, 2004	7 of 11

36-3141 LOAD TABLE SENSOR — +5V RED 24 LR QUE/ WHT24 RTN BLK 24 — SENS OPT REFL MOD
10-5212A


GENINE BOARD 0
10-4227C
BOARD ADDRESS = 0X30
J3 MTA 1X6 ANALOG0
J1 MTA 1X6 ANALOG1
J11 UMNL 2X3 TEMP
J13 DB9F RS232 PORT
J26 MINIFIT 2X8 CAN SCON1
J24 MINIFIT 2X5 CAN SCON2
J6 MTA 1X6 ANALOG2
J20 2X6 HDR HA-1
J4 2X10 HDR DIGITAL-IN2
J2 2X15 HDR DIGITAL-IN3
J18 2X8 HDR SOL-DRV0
J5 2X17 HDR DIGITAL-IN4
J14 2X6 HDR HA-0
J10 2X7 HDR DIGITAL-IN1
J21 2X13 HDR SOL-DRV1
J25 UMNL 2X4 STPR-DRIVE
J27 MINIFIT 2X3 STPR-PWR
J17 2X10 HDR STPR-CNTL
J23 LAMP-OUT MINIFIT 2X4
10-4733A X2
Z HOME
Z AWAY
10-4733A X 2
TAILSTOCK ENGAGED SENSOR
TAILSTOCK DISENGAGED SENSOR
TAILSTOCK SOLENOID SENSOR 13-5209
10-4733A x 2
DRUM EXCHANGE UP SENSOR
DRUM EXCHANGE DOWN SENSOR
GROSS FLYOFF AND ZSTAGE LIMIT (MOUNTED ON HEAD)
SOL10 176-00001 LEVER ENABLE
SW7 15-3431 SPST NC DRUM DISENGAGED SW
SLEEVE OPTION
AirInject Push on Buttons
DoBlo Position Sensor
DBL AIR INJECT PUSH ON BUTTON CONTROL
FROM LIONEL1 J9
ZSTAGE STEPPER MOTOR
M3 15-3267
SW8 172-00001
SW10 15-3431 UP LIMIT
SW9 15-3431 DOWN LIMIT
DPDT ROCKER
HOIST UP- (SENS13-) BLK 22 (19)
HOIST UP+ (SENS13+) RED 22 (18)
HOIST.DOWN (SENS14+) WHT 22 (22)
HOIST ON- (LAMP.ON0-) BLK 22
HOIST.UNLOCK- (LAMP.ON1-) BLK 18
TO DRUM HOIST ACTUATOR
VACUUM BULKHEAD
SW3 15-3230 CAMLOCK TIGHTENED HS SIDE
SW5 15-3230 MANDREL AIR HS SIDE
SW4 15-3230 ARBOR CLAMPED HS SIDE
SW6 15-3230 MANDREL AIR HOME SIDE
LAMP 36-3160 GRN LENS 15-3229 BUTTON 15-3231
USER INTERFACE BOARD
503-00001A
TBL VAL
TBL FLT
DRUM VAC
creo
THERMOFLEX II DOBLO DEVICE
GENINE 0
WIRING DIAG.
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DESIGNED BY: J. MALM
DOCUMENT NUMBER: 73-7318A
LAST ECO: PRE-RELEASE
DRAWN BY: J. MALM
LAST REVISED BY: M. ZHANG
APPROVED BY: B.DALL
DESIGN DATE: SEP 01, 2001
LAST MODIFIED DATE: MAR. 30, 2004
SHEET: 8 of 11

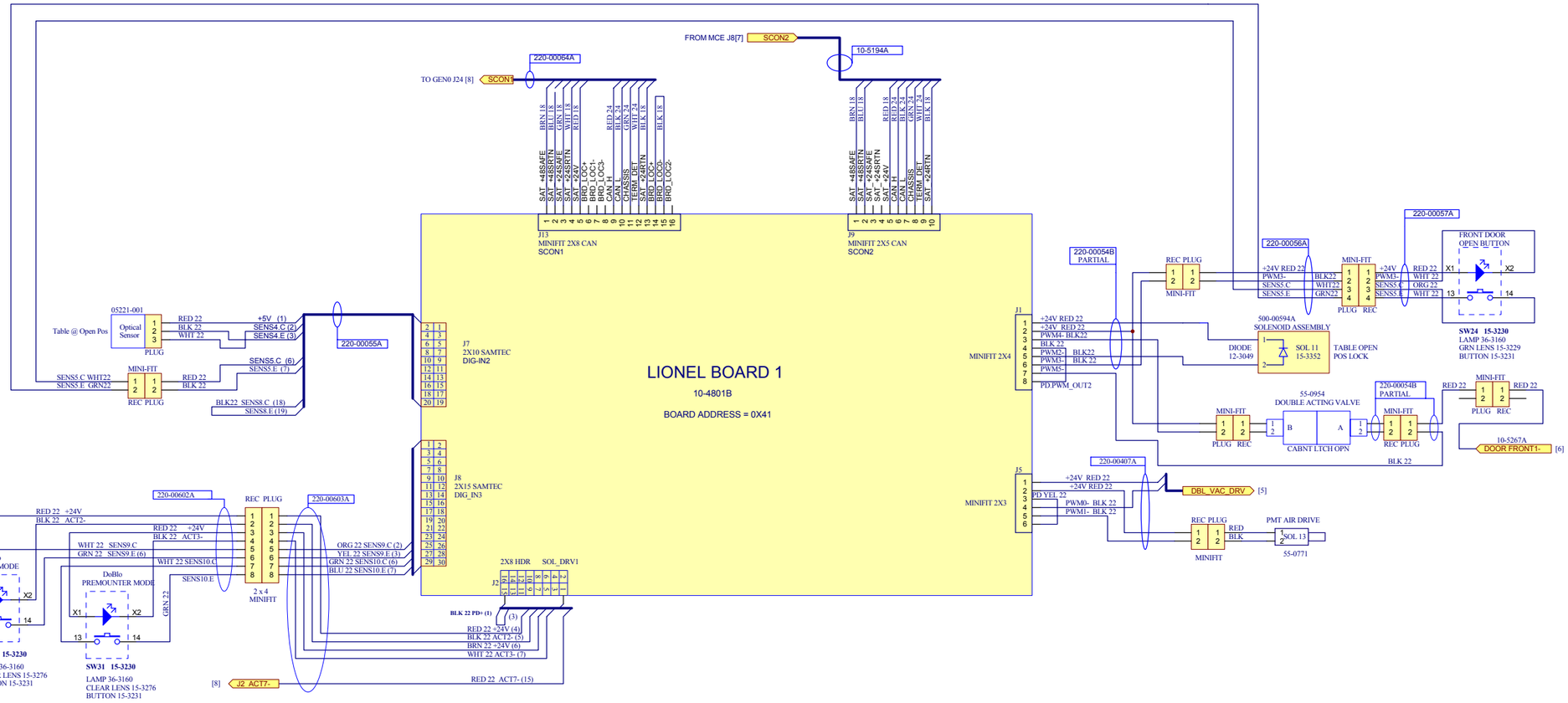


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THERMOFLEX II DOBLO
DEVICE EXPOSURE HEAD
WIRING DIAG

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J. MALM	73-7318A	PRE-RELEASE
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J. MALM	M. ZHANG	B.DALL
DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
SEP 01, 2001	MAR. 30 2004	10 of 11



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THERMOFLEX II DOBLO DEVICE LIONEL1 WIRING DIAG.

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DRAWN BY:	LAST REVISED BY:	APPROVED BY:
M.ZHANG	M. ZHANG	B.DALL
DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
DEC.17, 2002	MAR. 30, 2004	9 of 11

SAFETY CONTROL MODULE
11-1120A

J1 REC — 2 x 4 MINIFIT — TO CABLE 10-5272A [6]
1 RED 18 ESTOP 24
2 BLK 18 DOOR HOME1-
3 BLK 18
4 YEL 18
5 YEL 18
6 BLK 18
7 RED 18 TABLE LOCK+
8 BLK 18 RTN

J2 REC — MINIFIT — TO CABLE 10-5166A [7]
1 HTR DET+ RED 18
2 HTR DET- BLK 18

J3 REC — 1 x 3 M&L — TO CABLE 10-5173A [6]
1 +24V RED 18
2 HTR CTR BLK 18
3 HTR SIDE WHT 18

J4 REC — 2 x 3 MINIFIT — TO CABLE 10-5162A [6]
1 DM_ON2 BLK 18
2 DM_ON1 WHT 18
3 RTN BLK 18
4 DM SAFE1 WHT 18
5 DM SAFE2 BRN 18
6 ESTOP 24 RED 18

J5 REC — 1 x 6 M&L — TO CABLE 220-00025A [6]
1 ESTOP_24 RED 18
2 ESTOP_24 RED 18
3 EH_CON_SENS- ORG 18
4 WL_SAFE1 WHT 18
5 WL_SAFE2 BRN 18
6 EH_CON_SENS+ YEL 18

J6 REC — 2 X 8 MINI-FIT — TO CABLE 10-5165A [6]
1 WL_SAFE3
2 RTN
3 MECH_SAFE1
4 RTN
5 +24V
6 +24V
7 +24V
8 ESTOP_24
9 EH_ON- GRY 18
10 RTN BLK 18
11 DM_ON- GRY 18
12 RTN BLK 18
13 MECH_EXT_CON_SENS- YEL 18
14 DM_CON_SENS- YEL 18
15 EH_CON_SENS- YEL 18
16 TABLE_LOCK+ RED 18

EXT_K3 15-3359 — EXT_K4 15-3359 — EXT_K5 RELAY_G9KA-1121-T075 15-3539 — EXT_K6 G9KA-TH301 15-3540
EXT_K7 15-3248 — EXT_K8 15-3248 — EXT_K1 15-5162 — EXT_K2 15-5162

10-5167A PARTIAL
(5) FROM PDB(0) J37
+24V RED 22
SPR1 BLK 22
RNT BLK 22
TABLE_LOCK+ RED 18
YEL 18
BRN 18
BLK 18
RED 18
RTN BLK 18
RED 18
BLK 18
YEL 18
VIO 18
GRY 18
ORG 18
BLK 22
WHT 18
MECH_SAFE BRN 18
DM_ON- GRY 18
RTN BLK 18
MECH_EXT_CON_SENS- YEL 18
DM_CON_SENS- YEL 18
ESTOP_24 RED 18
EH_ON- GRY 18
EH_CON_SENS- YEL 18
EH_CON_SENS+ YEL 18
WL_SAFE1 WHT 18
WL_SAFE2 BRN 18
DM_CON_SENS-
DM_CON_SENS+
DM_ON1 WHT 18
DM_ON2 BRN 18
RTN BLK 18

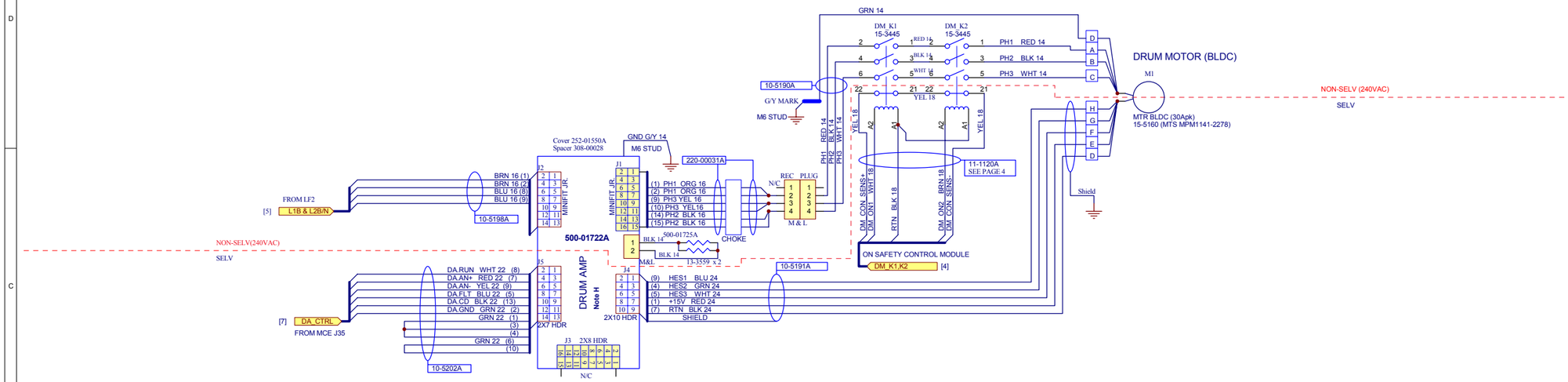
SELV
NON-SELV(240VAC)
10-5190A
PH1 RED 14
PH2 BLK 14
PH3 WHT 14
FROM 10-5190A [5]
DM_K1 15-3445 — DM_K2 15-3445
DRUM MOTOR(BLDC)
NON-SELV(240VAC)
SELV

SELV
NON-SELV(240VAC)
EH_K1 15-3445 — EH_K2 15-3445
BRN(BLK) 14
BLU(WHT) 14
BRN 14
LIB BRN 14
BLU(WHT) 14
FROM 10-5211A [10]
NON-SELV(240VAC)
SELV

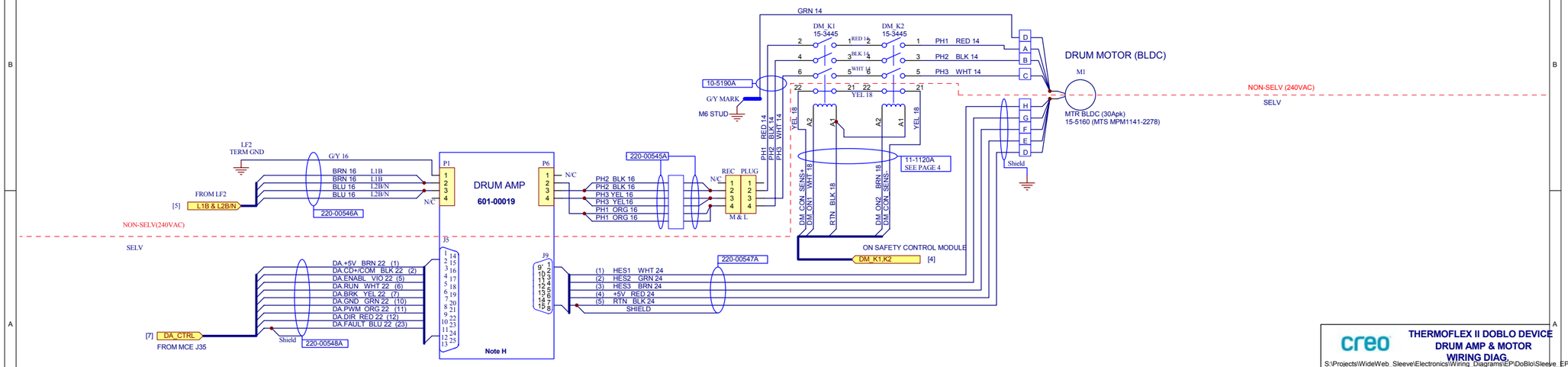
EH_CON_SENS- YEL 18
EH_CON_SENS+ YEL 18
WL_SAFE1 WHT 18
WL_SAFE2 BRN 18
EH_ON- GRY 18

creo	THERMOFLEX II DOBLO DEVICE SAF CTRL MODULE WIRING DIAG.	
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DESIGNED BY: J. MALM	DOCUMENT NUMBER: 73-7318A	LAST ECO: PRE-RELEASE
DRAWN BY: J. MALM	LAST REVISED BY: M. ZHANG	APPROVED BY: K. POULIN
DESIGN DATE: SEP 01, 2001	LAST MODIFIED DATE: MAR. 30, 2004	SHEET: 4 of 11

CREO DRUM DRIVER WIRING



AUTOMOTION DRUM AMP WIRING



creo

THERMOFLEX II DOBLO DEVICE
DRUM AMP & MOTOR
WIRING DIAG.

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M.ZHANG	M. ZHANG	B. DALL
DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
FEB.10, 2004	APR. 2, 2004	11 of 11