

TU 150E

15-9-97

A4 MASTERS

415v DM8

Standard PC - not DSP
on backplate

FØ inverters

Brunei

(~~rest of drawings as~~
~~latest set~~)

IF IN DOUBT ASK

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE

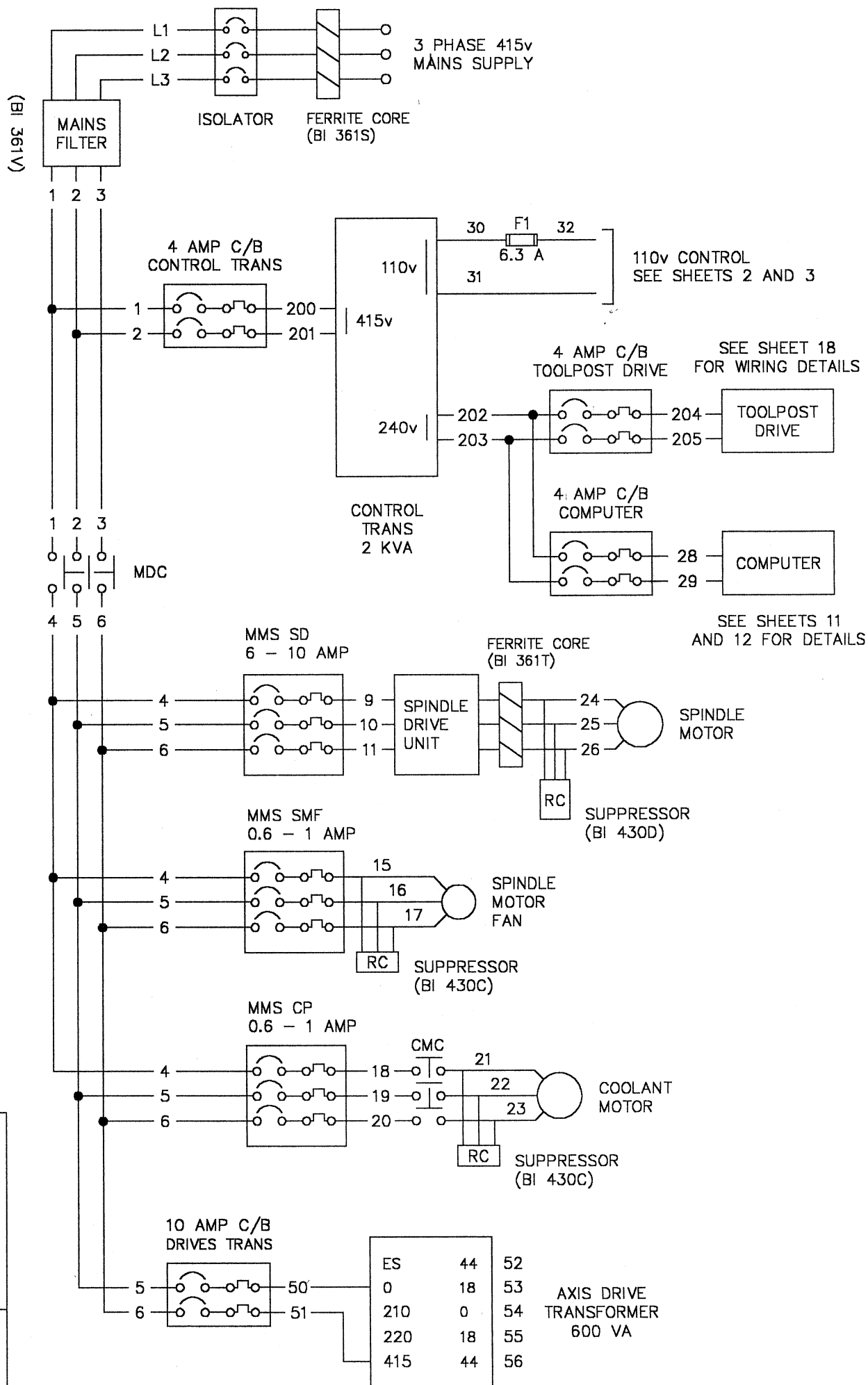
DRN BY A McHENRY

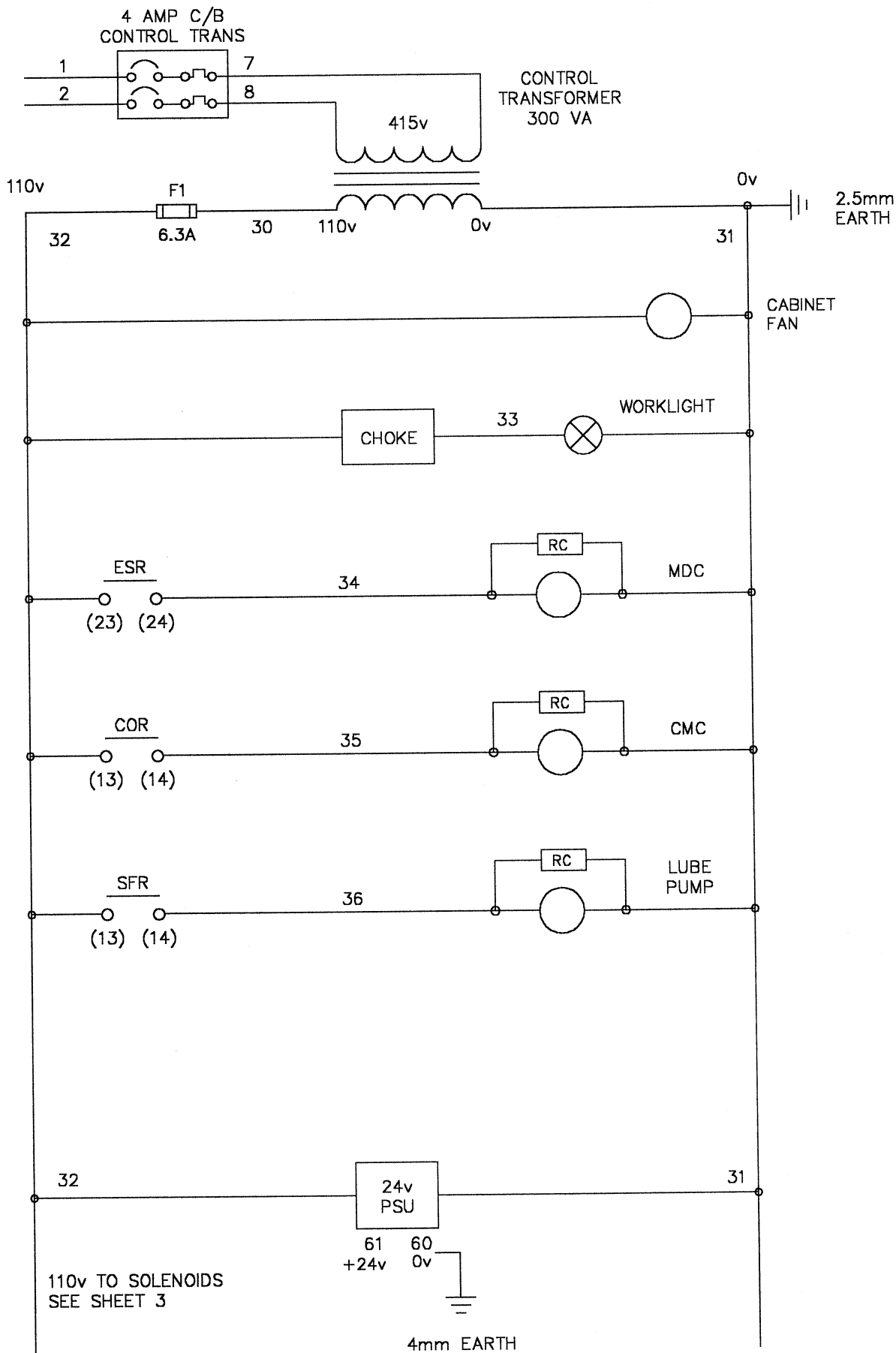
DATE 15-9-97

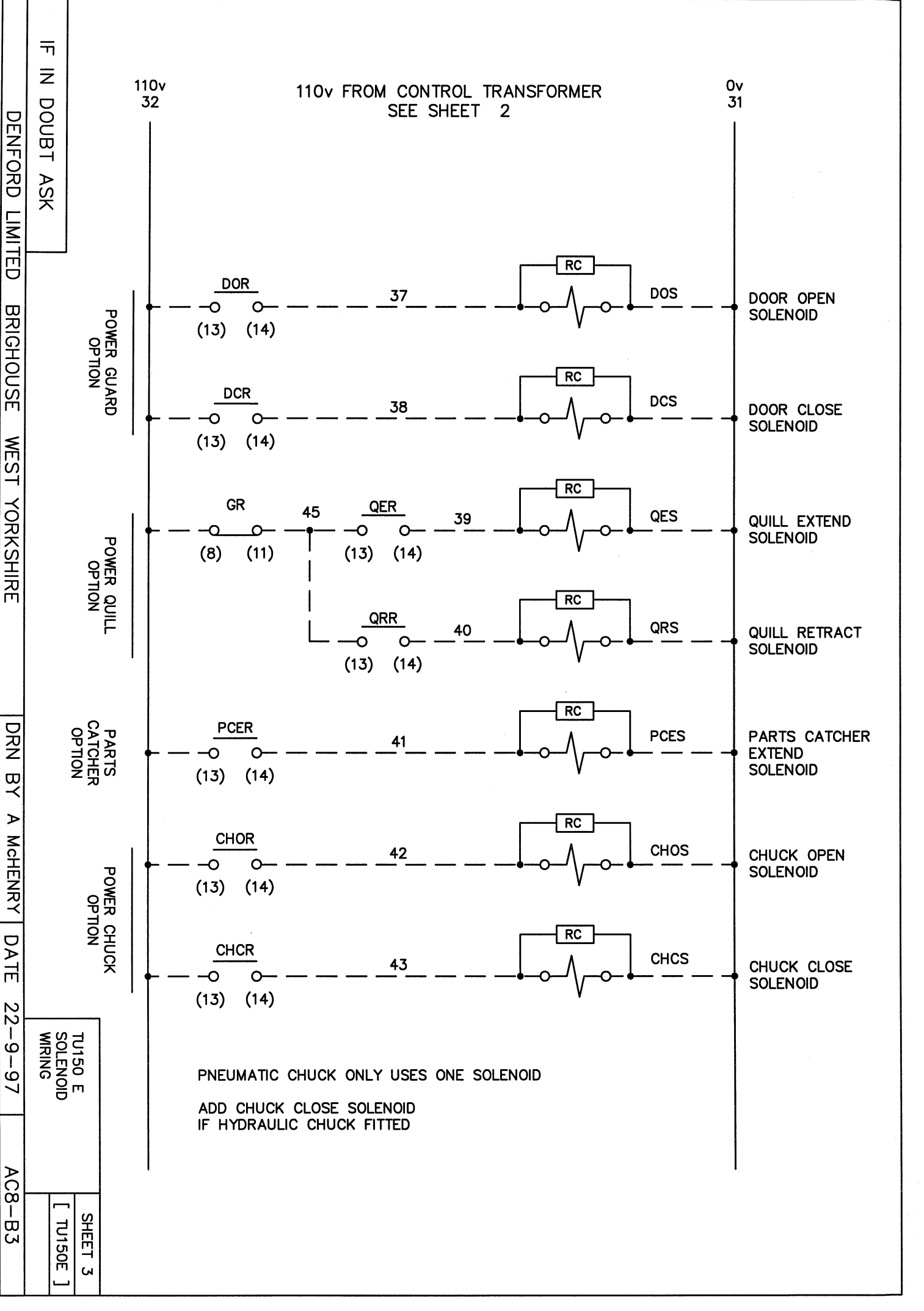
AC8-B1

TU150 E
POWER SCHEMATIC
DM 8 TOOLPOST

SHEET 1
[TU150E]







TU150 E
SOLENOID
WIRING

SHEET 3
[TU150E]

IF IN DOUBT ASK

DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

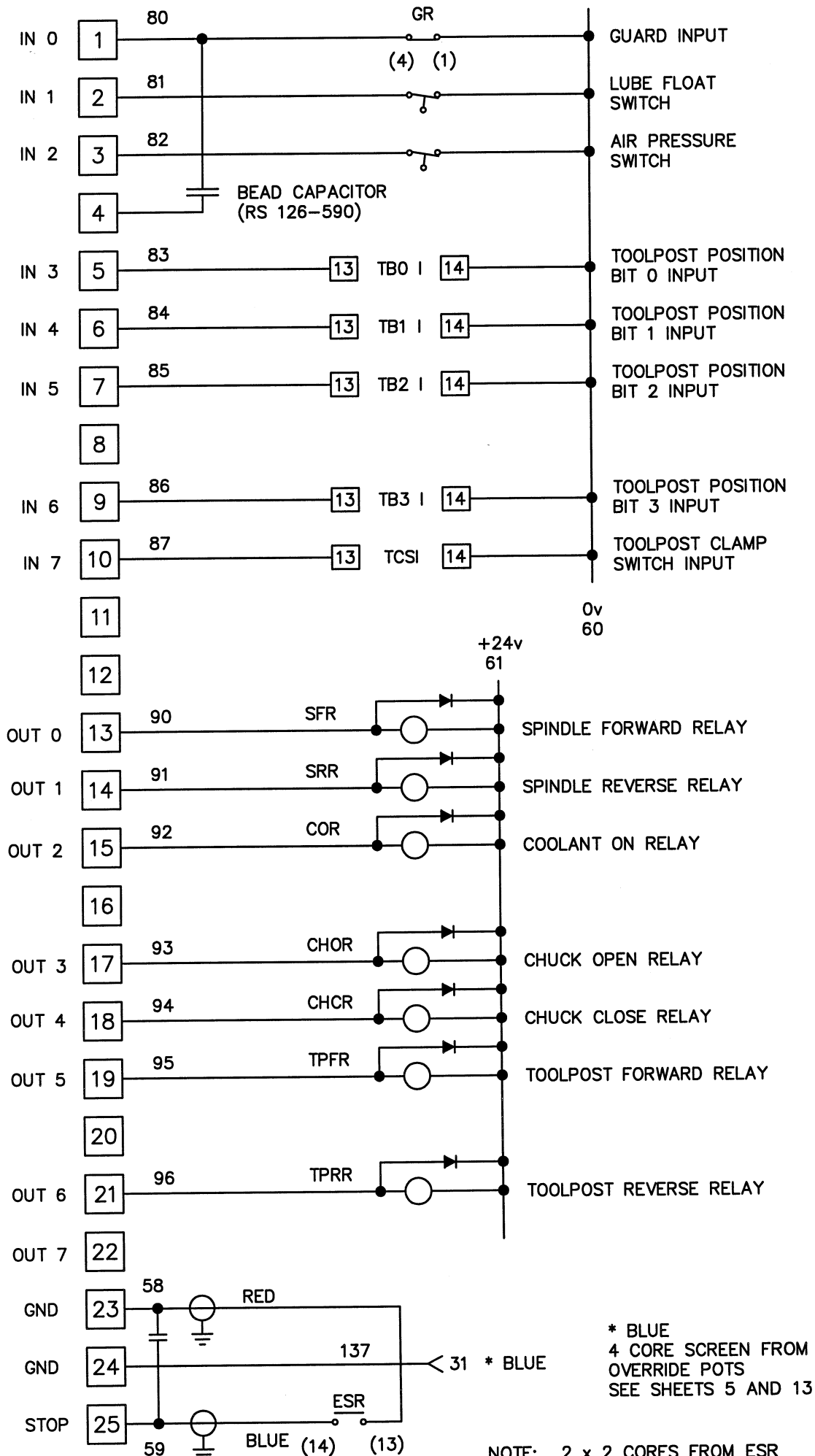
DATE 22-9-97

AC8-B4

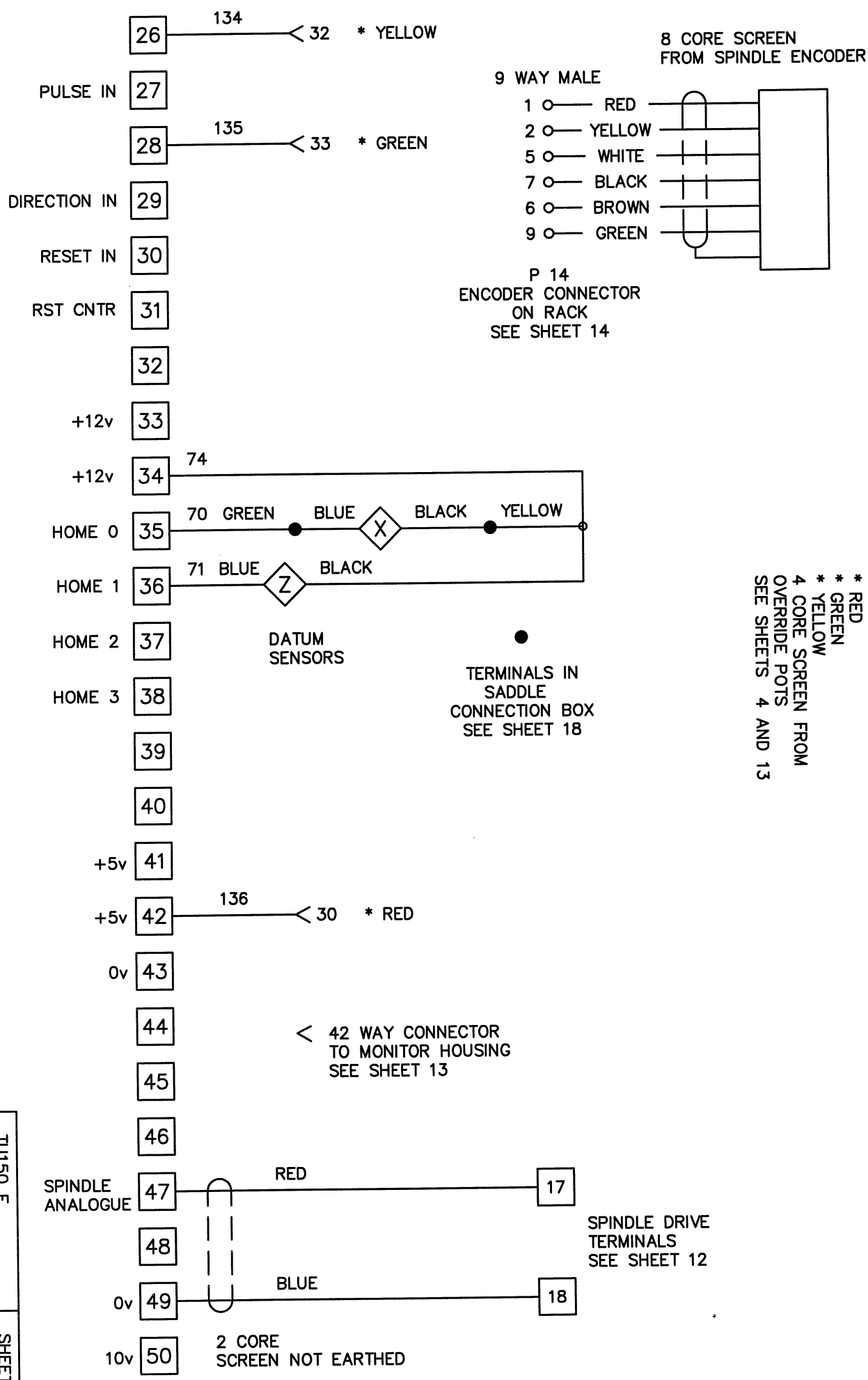
50 WAY INTERFACE UNIT STANDARD I/O

TU150 E
STANDARD I/O
1 - 25
DM 8 TOOLPOST

SHEET 4
[TU150E]

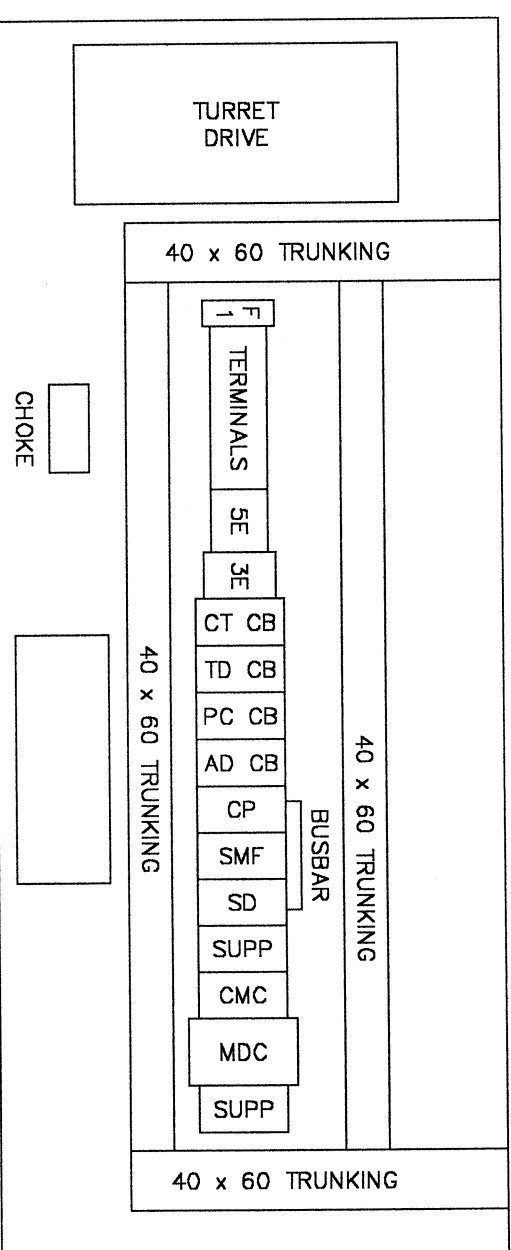
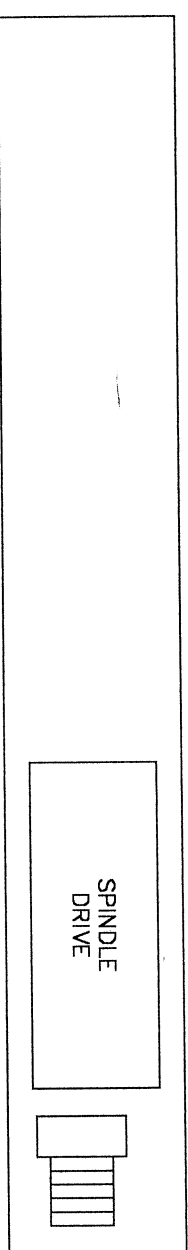
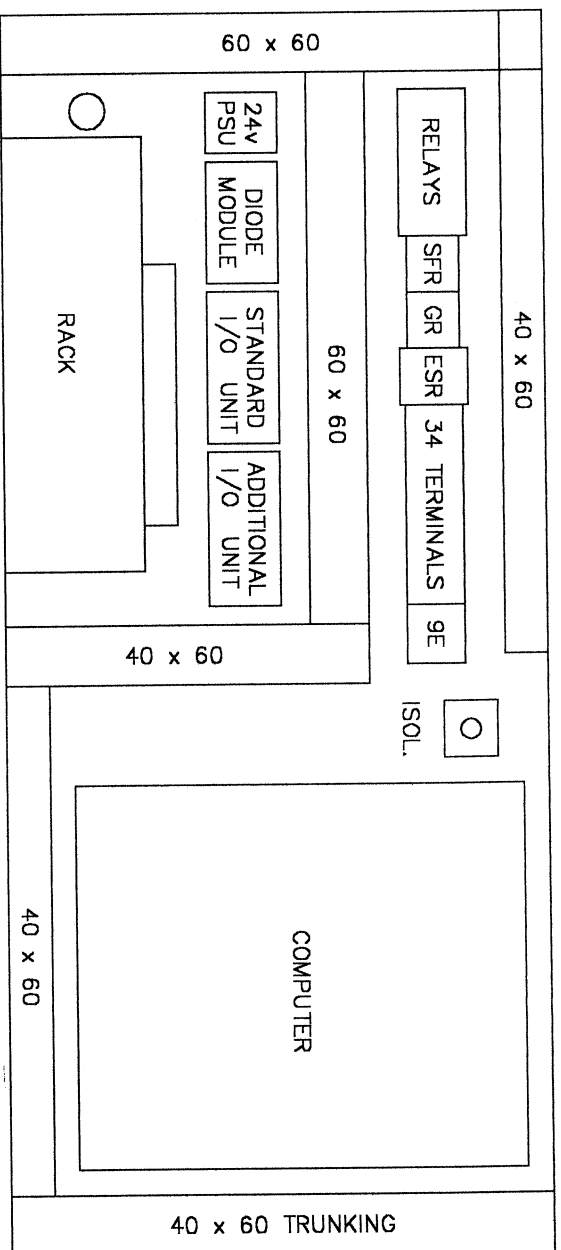


42 WAY CONNECTOR
TO MONITOR HOUSING
SEE SHEET 13



* RED
 * GREEN
 * YELLOW
 4 CORE SCREEN FROM
 OVERRIDE POTS
 SEE SHEETS 4 AND 13

IF IN DOUBT ASK



STANDARD I/O
SHEETS 4 AND 5

DOOR PANEL WIRING
SHEET 7

RELAY AND
TERMINAL DETAILS
SHEET 8

ADDITIONAL I/O
SHEET 9

COMPUTER CABLES
SHEETS 11 AND 12

SPINDLE DRIVE DETAILS
SHEET 13

RACK DETAILS
SHEET 15

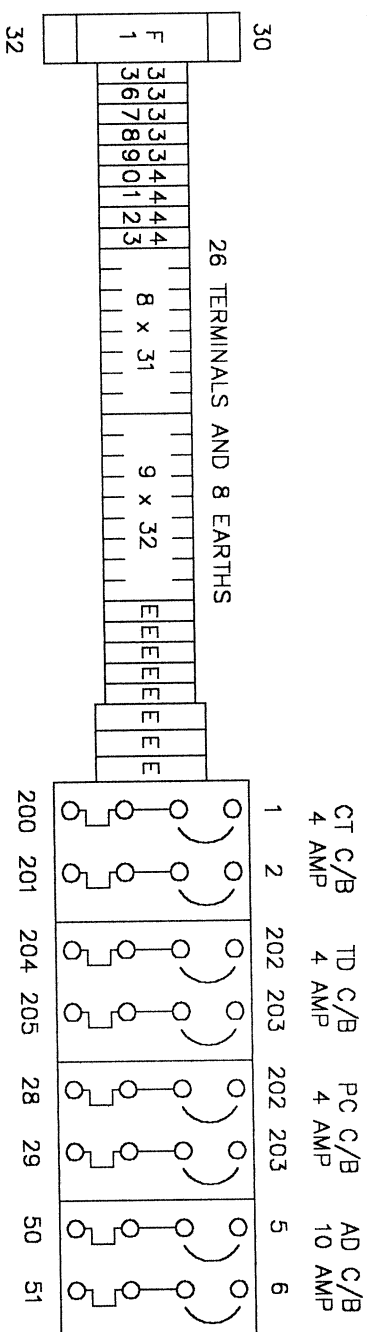
TRANSFORMER DETAILS
SHEET 16

TOOLPOST DRIVE DETAILS
SHEET 18

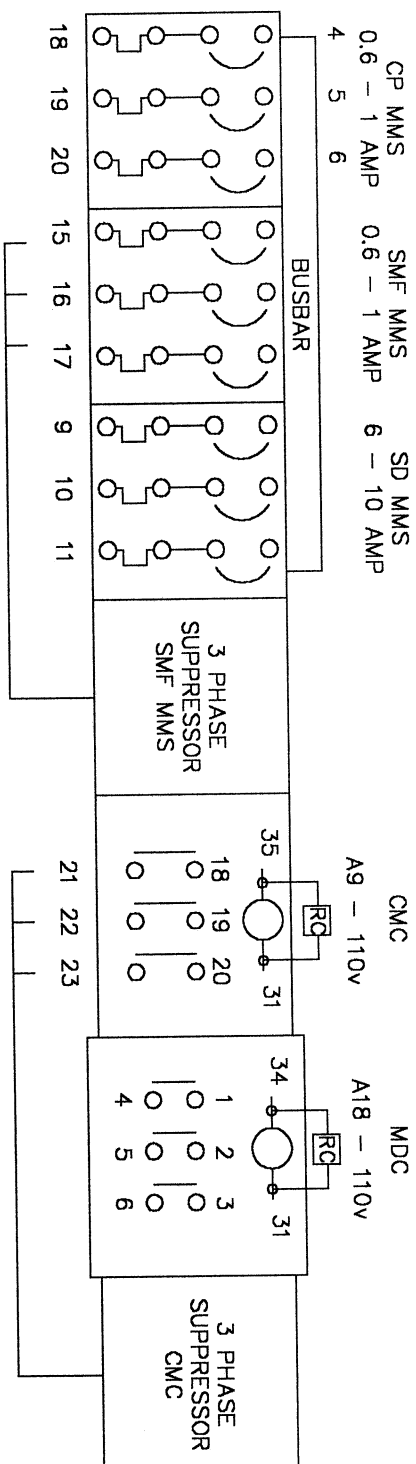
SUPP = 3 PHASE
SUPPRESSORS
FOR CMC AND SMF MMS

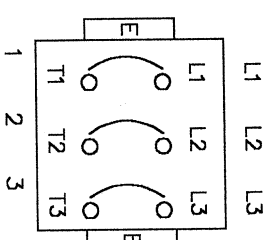
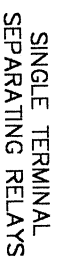
TU150 E PANEL LAYOUT DM 8 TURRET	SHEET 6 [TU150E]
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IF IN DOUBT ASK



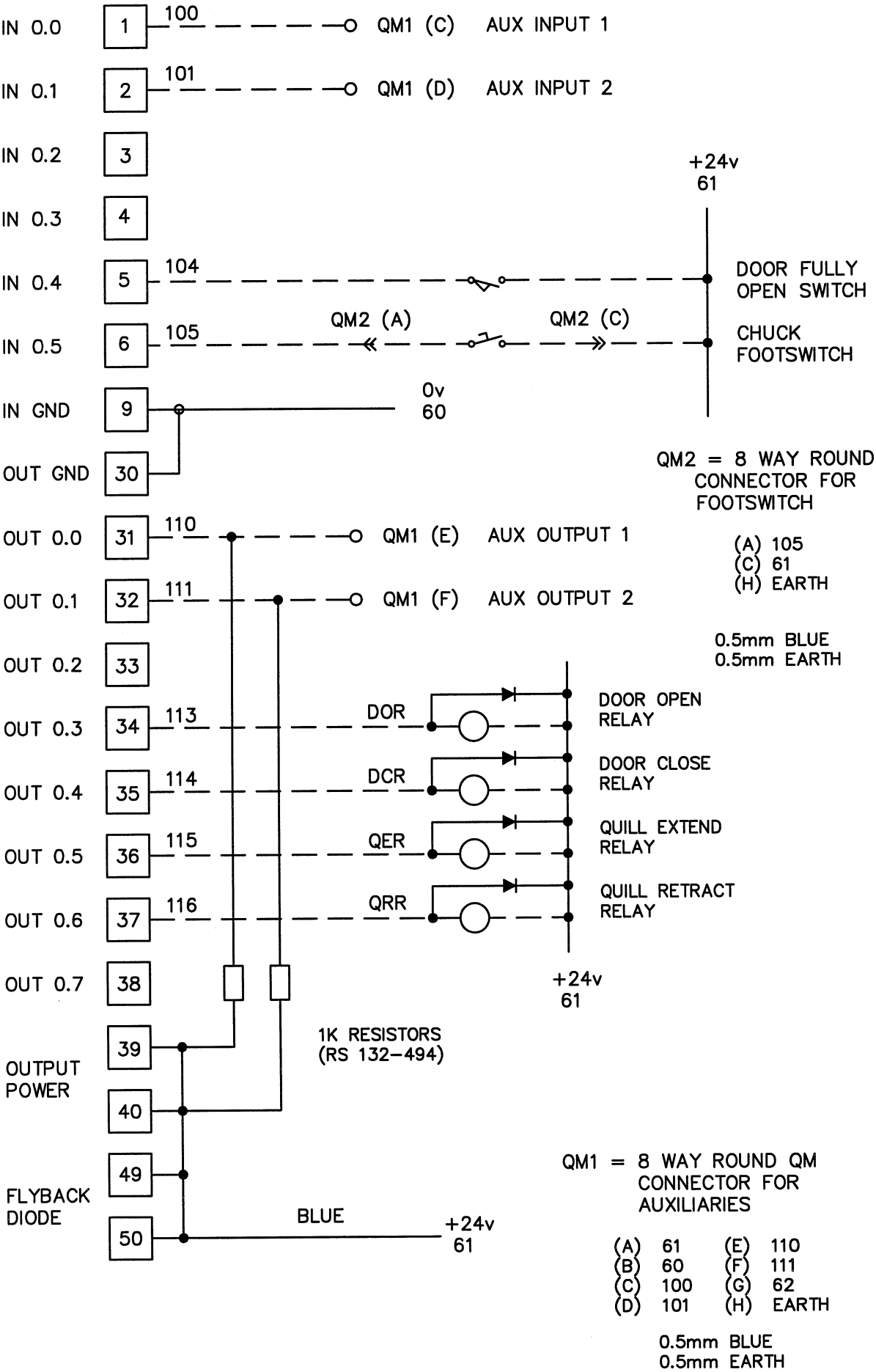
F1 6.3A
110V CONTROL





IF IN DOUBT ASK

50 WAY ADDITIONAL I/O
CONNECTOR FOR OPTIONS

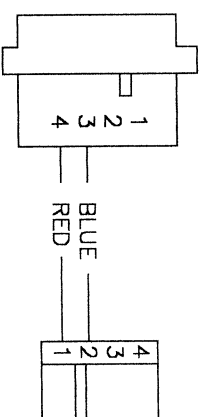


TU150 E
ADDITIONAL I/O
CONNECTOR
FOR OPTIONS

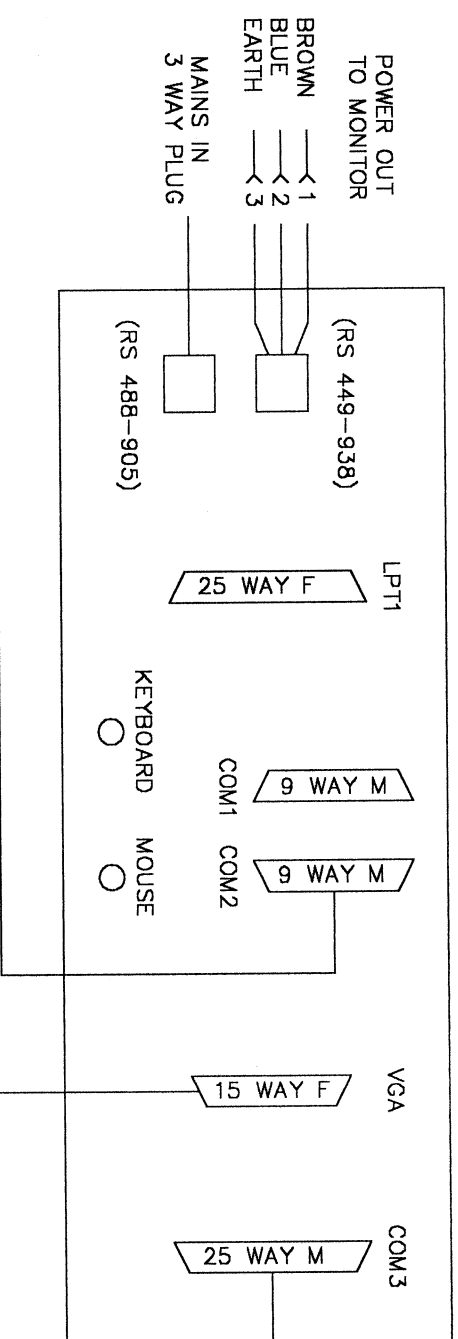


SEE SHEET 12
FOR REST OF CONNECTIONS

COMPUTER SOCKET (BI 01812M) DISC DRIVE PLUG (BI 01812L)

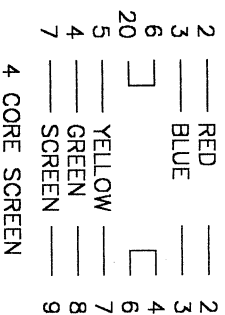


2 CORE SCREEN



COMPUTER 25 WAY D TYPE FEMALE PINS (RS 470-904) RACK SERIAL LINK 9 WAY D TYPE FEMALE PINS (RS 472-843)

COM 3



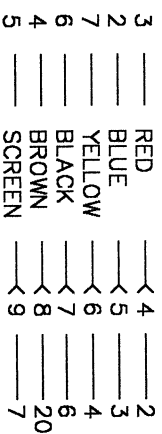
4 CORE SCREEN

MONITOR

COMPUTER HIGH DENSITY 15 WAY D TYPE MALE PINS (RS 481-459) MONITOR HIGH DENSITY 15 WAY D TYPE FEMALE PINS (RS 481-465)

COM 2

COMPUTER KEYPAD 25 WAY D TYPE MALE PINS (RS 470-910) 9 WAY D TYPE FEMALE PINS (RS 472-843)



8 CORE SCREEN

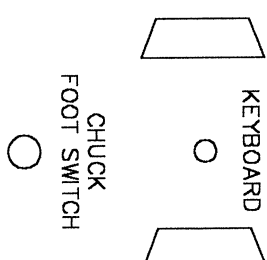
< 42 WAY CONNECTOR FOR MONITOR HOUSING SEE SHEET 14

SCREEN TO SHELL 12 CORE SCREEN

< 42 WAY CONNECTOR FOR MONITOR HOUSING SEE SHEET 14

COMPUTER CONNECTIONS
RIGHT SIDE OF CABINET
(VIEW FROM BACK)

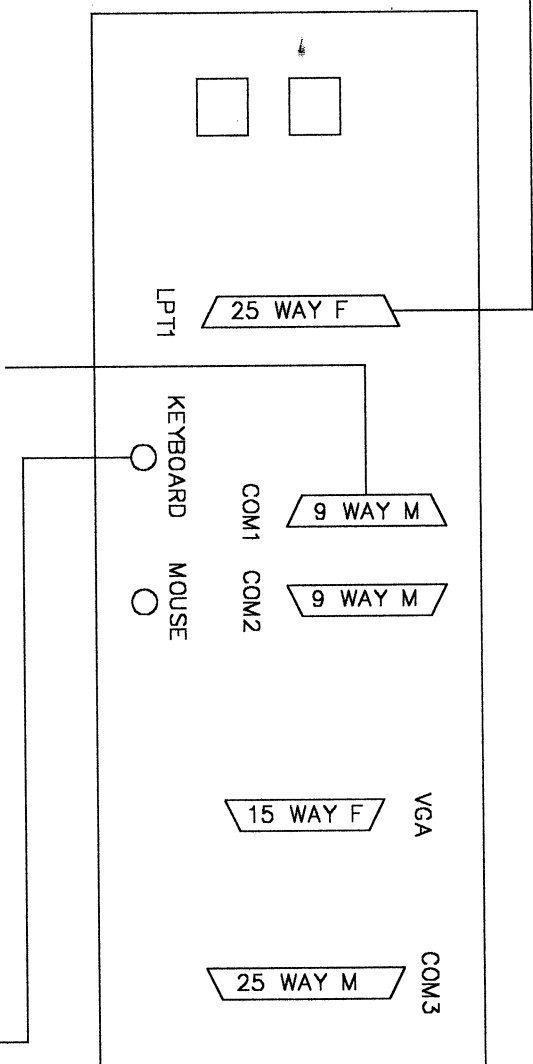
RS 232 PRINTER



COMPUTER
25 WAY D TYPE
MALE PINS

CABINET
25 WAY D TYPE
FEMALE PINS

1	— RED	1	—
2	— BLUE	2	—
3	— GREEN	3	—
4	— YELLOW	4	—
5	— WHITE	5	—
6	— BLACK	6	—
7	— BROWN	7	—
8	— VIOLET	8	—
9	— ORANGE	9	—
10	— PINK	10	—
11	— TURQUOISE	11	—
12	— GREY	12	—
13	— RED/BLUE	13	—
14	— GREEN/RED	14	—
15	— YELLOW/RED	15	—
16	— WHITE/RED	16	—
17	— RED/BLACK	17	—
18	— RED/BROWN	18	—
19	— YELLOW/BLUE	19	—
20	— WHITE/BLUE	20	—
21	— BLUE/BLACK	21	—
22	— ORANGE/BLUE	22	—
23	— YELLOW/GREEN	23	—
24	— WHITE/GREEN	24	—
25	— SCREEN	25	—



COMPUTER

COM 1

CABINET

9 WAY D TYPE
FEMALE PINS
(RS 472-843)

25 WAY D TYPE
MALE PINS
(RS 470-910)

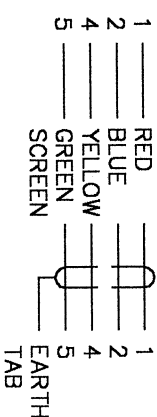
1	— RED	8	—
2	— WHITE	3	—
3	— BLUE	2	—
4	— GREEN	20	—
5	— SCREEN	7	—
6	— MAUVE	6	—
7	— BROWN	4	—
8	— BLACK	5	—
9	— YELLOW	22	—

8 CORE SCREEN

KEYBOARD CONNECTOR

COMPUTER END
5 WAY DIN PLUG
(RS 477-876)

CABINET END
5 WAY DIN SOCKET
(RS 478-273)



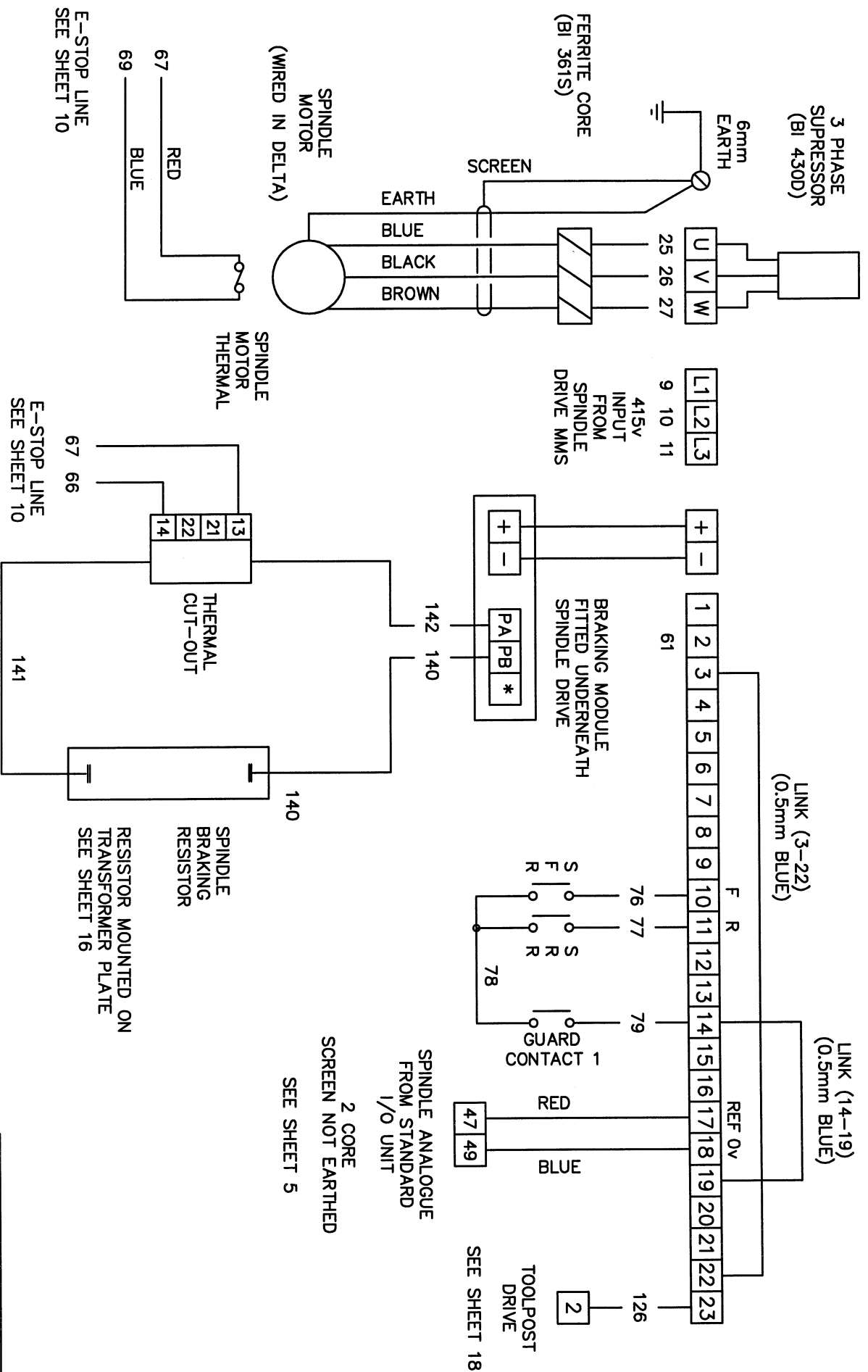
SEE SHEET 11
FOR REST OF CONNECTIONS

TU150 E
COMPUTER
CONNECTIONS

SHEET 12

[TU150E]

IF IN DOUBT ASK



* 8 CORE SCREEN 4 CORE AND 2 CORES
TO PUSHBUTTONS TO MAIN PANEL

PIN	COLOUR	WIRE	
1	BROWN	32	MONITOR POWER
2	BLUE	31	
3	EARTH	E	
4	RED	(2)	KEYPAD
5	BLUE	(3)	
6	YELLOW	(4)	
7	BLACK	(6)	
8	BROWN	(20)	
9	SCREEN	(7)	
10	BLACK	(1)	
11	BROWN	(2)	
12	RED	(3)	
13	ORANGE	(5)	MONITOR SIGNALS
14	YELLOW	(6)	
15	GREEN	(7)	
16	BLUE	(8)	
17	VOLET	(10)	
18	GREY	(11)	
19	WHITE	(13)	
20	PINK	(14)	
21	SCREEN		

PIN	COLOUR	WIRE	
22	BLACK*	RED	121
23	BROWN*	BLUE	122
24	RED*	RED	123
25	YELLOW*	BLUE	124
26	GREEN*	RED	127
27	BLUE*	BLUE	128
28	VOLET*	YELLOW	62
29	WHITE*	GREEN	65
30	RED		136
31	BLUE		137
32	YELLOW		134
33	GREEN		135

E-STOP
CONTACT 1

2 CORE
SCREEN

E-STOP
CONTACT 2

2 CORE
SCREEN

E-STOP
CONTACT 3

4 CORE
SCREEN

AXIS
OVERRIDE

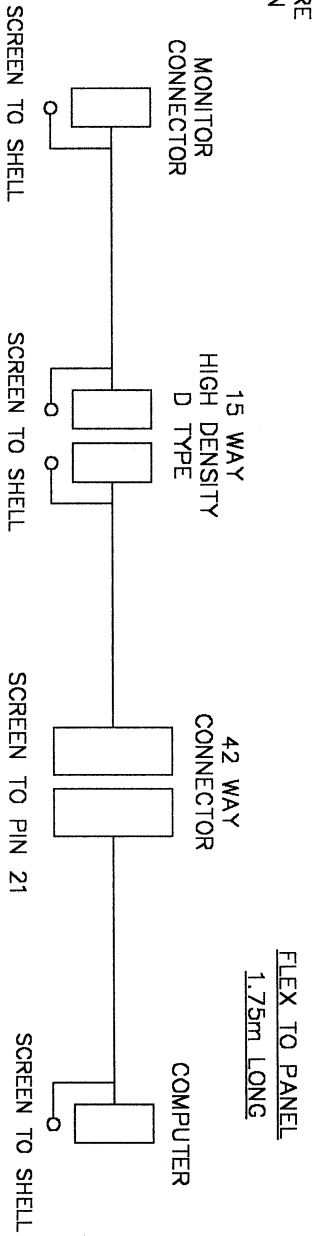
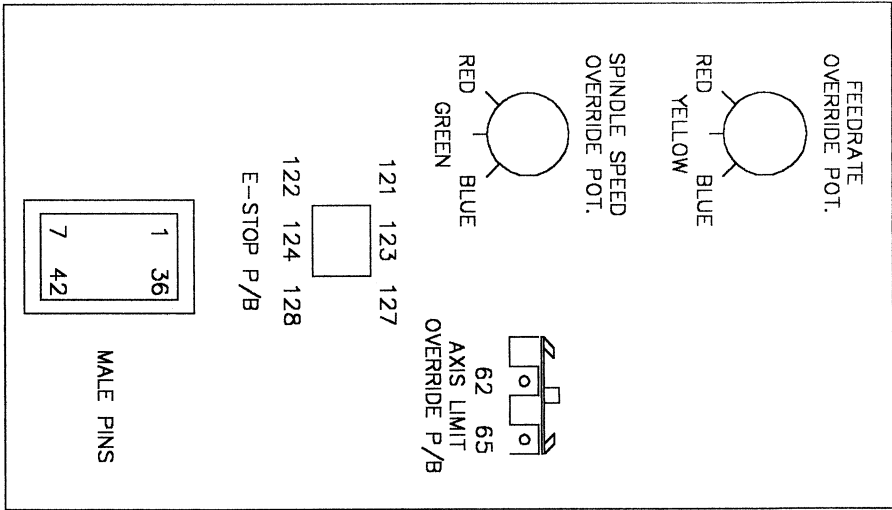
4 CORE
SCREEN

SPINDLE AND
FEEDRATE
OVERRIDE
POTS

4 CORE
SCREEN

PINS 34 - 42
ARE NOT USED

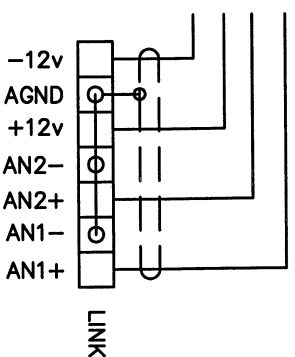
4mm EARTH



IF IN DOUBT ASK

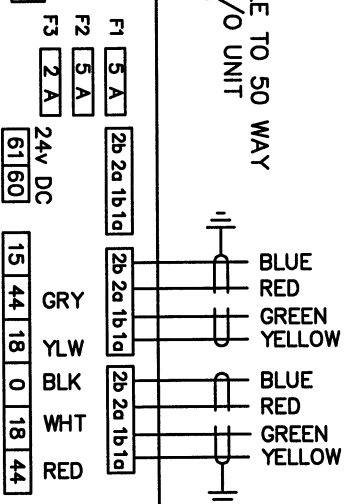
SPINDLE	33	Y	135	GREEN
FEEDRATE	32	Y	134	YELLOW
+12v	30	Y	136	RED
-12v	31	Y	137	BLUE

4 CORE FROM
MONITOR HOUSING
SEE SHEET 14

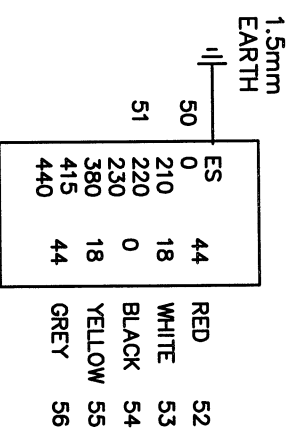


**P13 CONNECTOR FOR
OVERRIDE POTS**

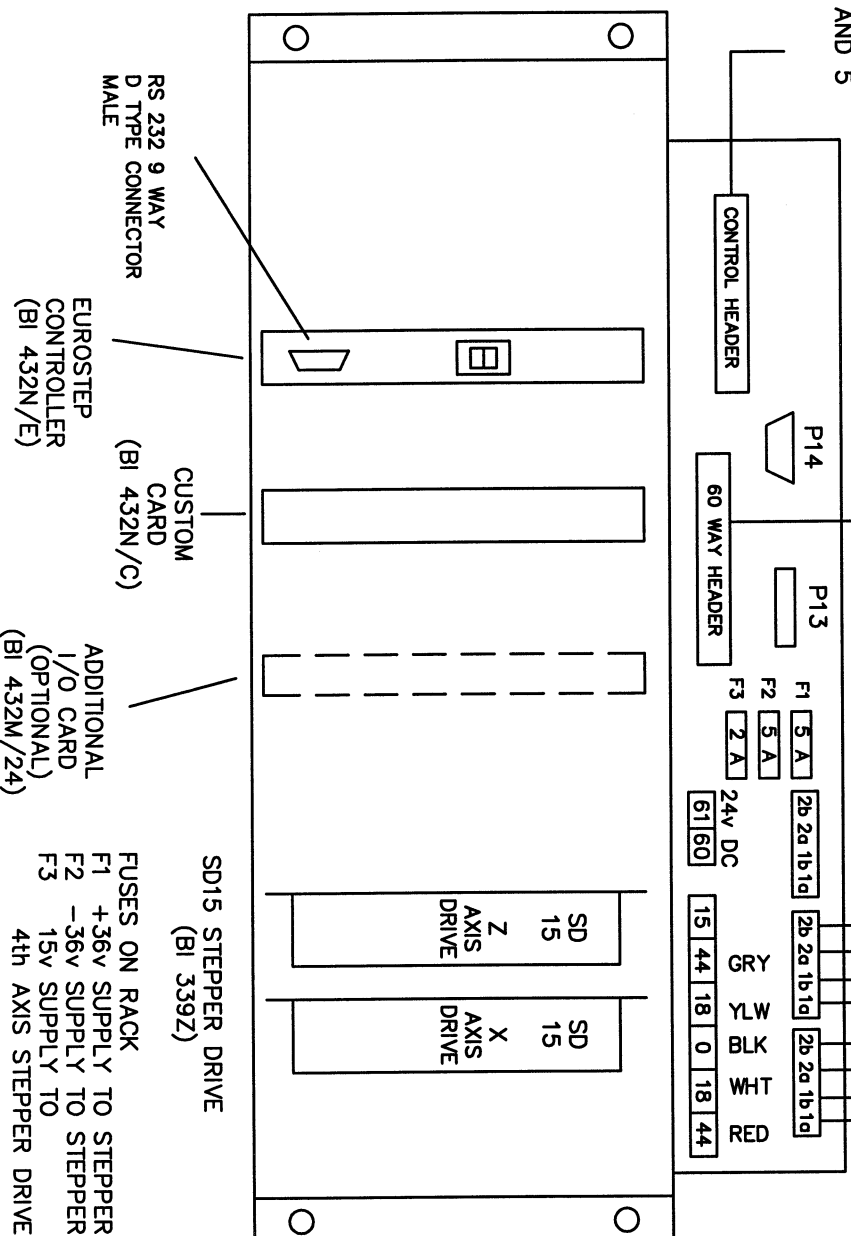
**RIBBON CABLE TO 50 WAY
ADDITIONAL I/O UNIT
SEE SHEET 9**



AXIS DRIVE TRANSFORMER



RIBBON CABLE TO 50 WAY
STANDARD I/O UNIT
SEE SHEETS 4 AND 5



DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE

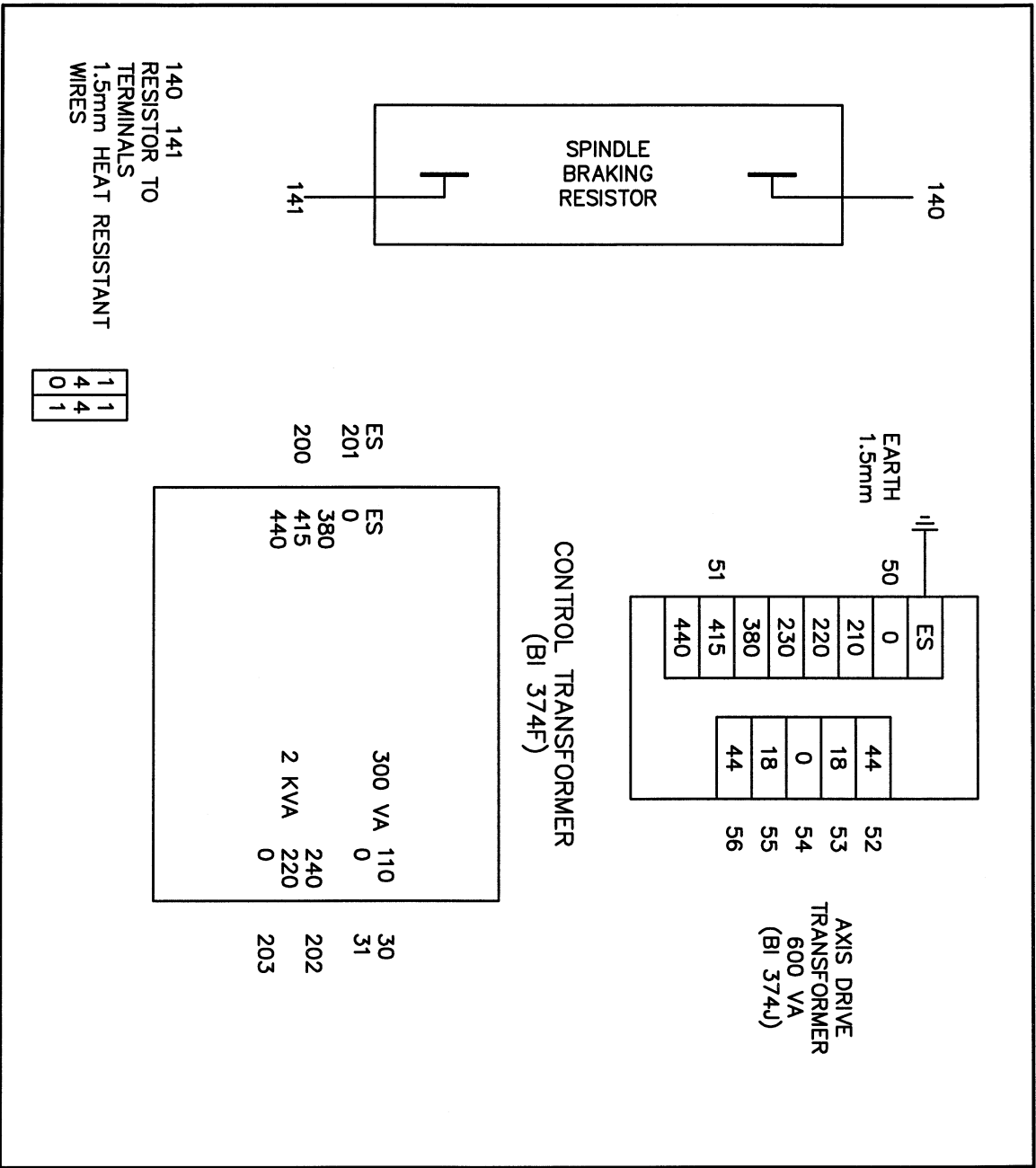
DRN BY A MCHENRY

DATE 4-12-97

AC8-B15

TU150 E RACK DETAILS

SHEET 15
[TU150E]



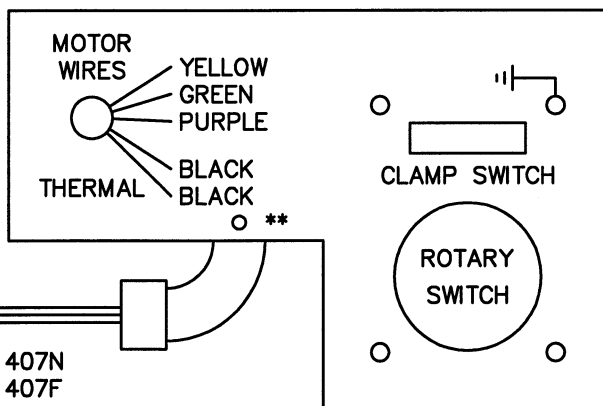
WIRES FROM
TRANSFORMER PLATE TO
24 WAY POWER CONNECTOR

1 200
2 201
3 202
4 203
5 30
6 31
7 EARTH
8
9
10 140
11 141
12 50
13 51
14
15 52
16 53
17 54
18 55
19 56
20 EARTH
21
22
23
24

IF IN DOUBT ASK

CABLES 1.5m LONG
STRIP INSULATION BACK 10mm
AND TIN CORES

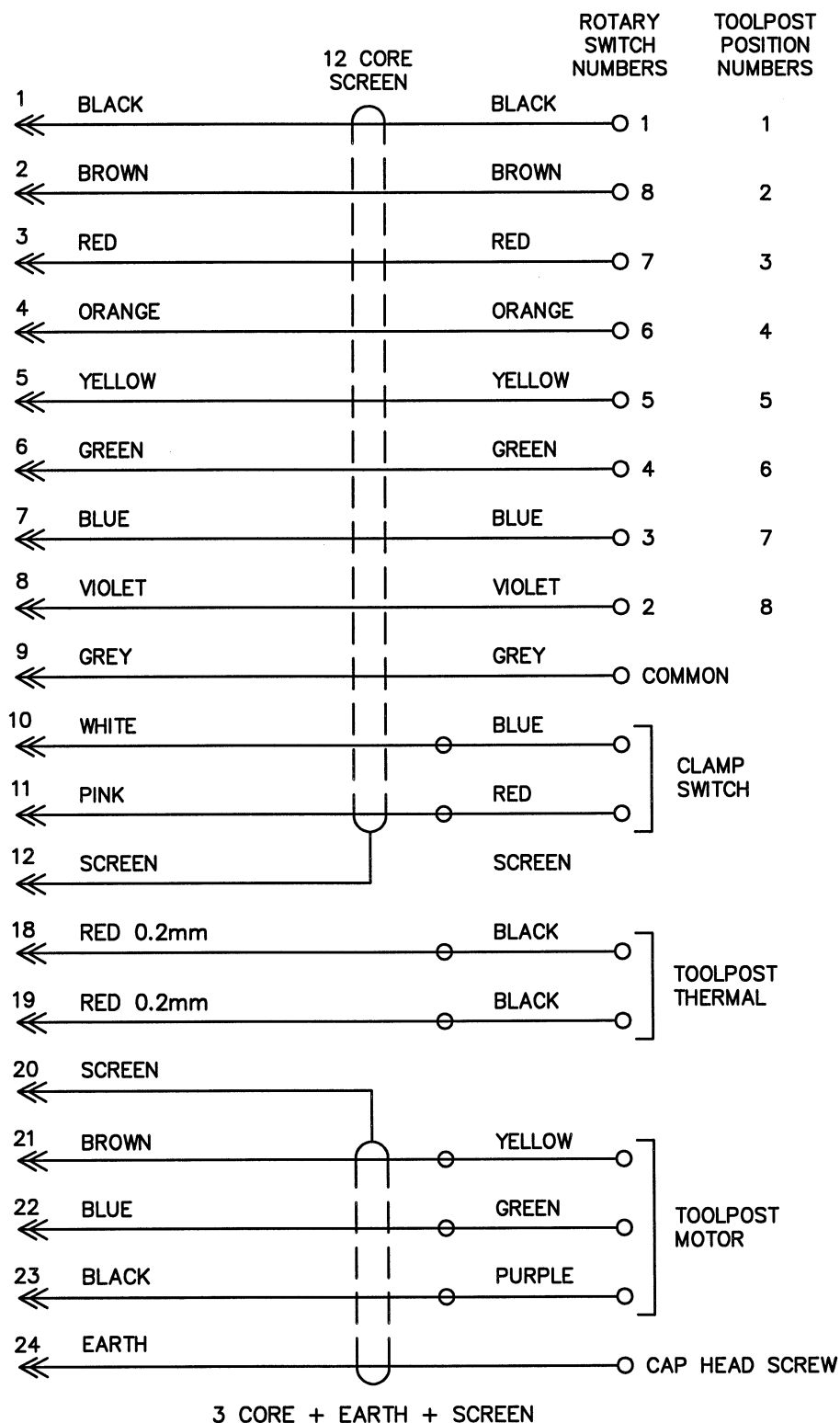
SPL 20 ADAPTAFLEX
680mm



1 GLAND BI 407N
1 ELBOW BI 407F

24 WAY QM
CONNECTOR

SEE SHEET 18
FOR TOOLPOST
CONTROL
DETAILS



DENFORD LIMITED BRIGHOUSE WEST YORKSHIRE

DRN BY A McHENRY

DATE 22-9-97

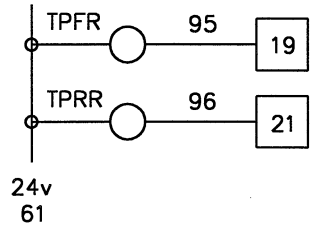
AC8-B17

TU150 E
DENFORD DM8
TOOLPOST
WIRING DETAILS

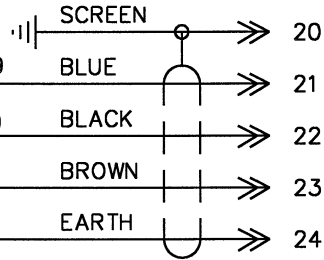
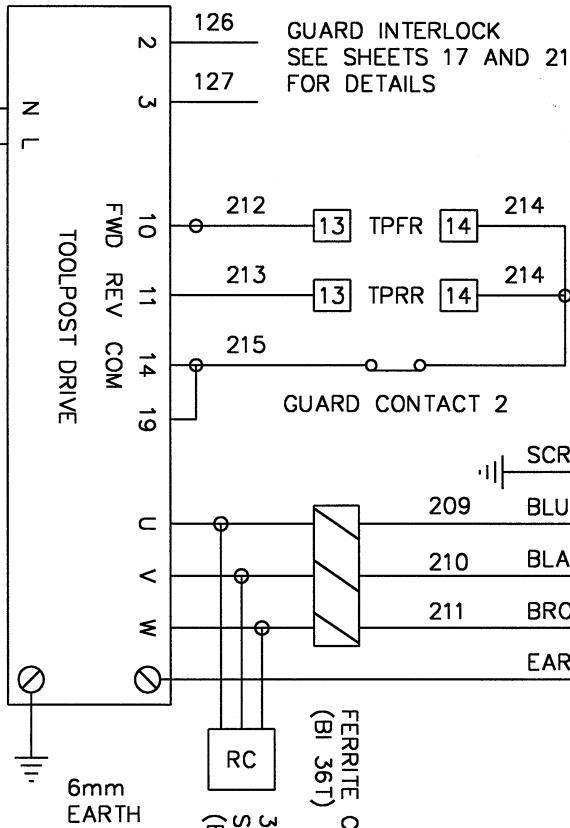
SHEET 17
[TU150E]

TERMINALS ON
STANDARD I/O UNIT
SEE SHEET 4

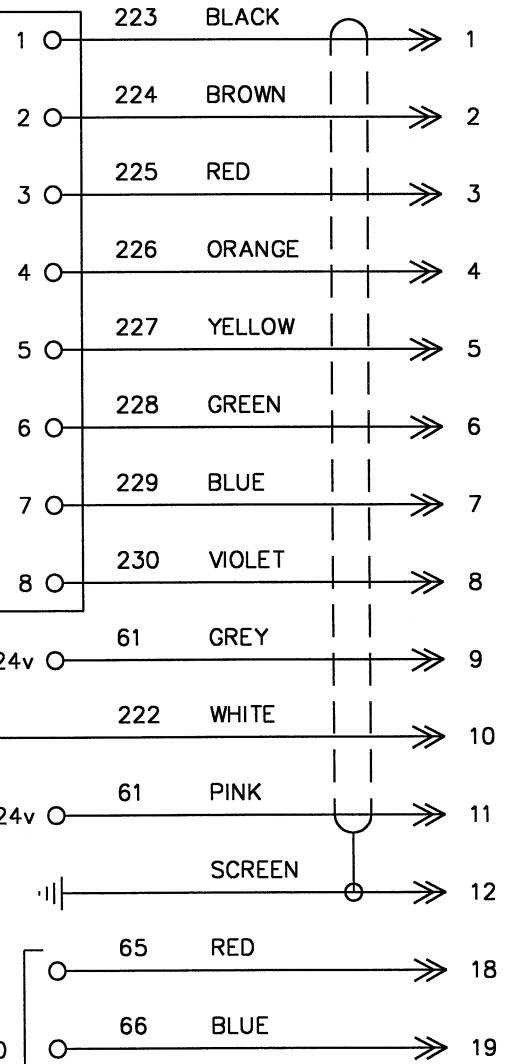
QMS 24 WAY
CONNECTOR
FOR TOOLPOST



GUARD INTERLOCK
SEE SHEETS 17 AND 21
FOR DETAILS



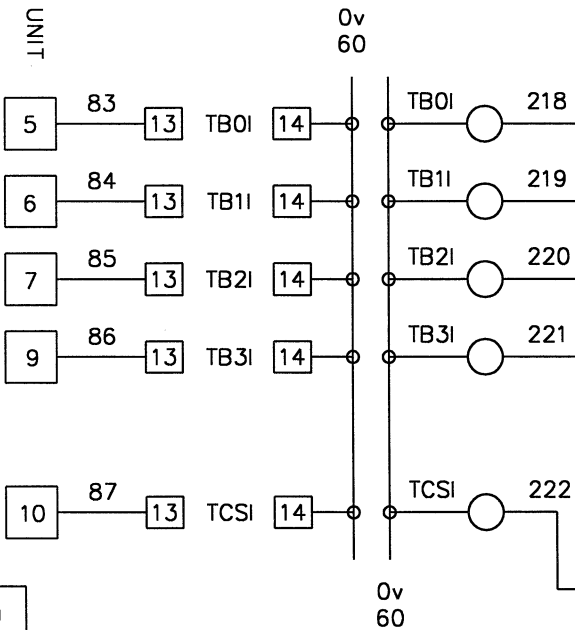
DIODE MODULE



E-STOP
CIRCUIT
SEE
SHEET 10

IF IN DOUBT ASK

TERMINALS ON
STANDARD I/O UNIT
SEE SHEET 4



TU150 E
DM8 TOOLPOST
CONTROL DETAILS

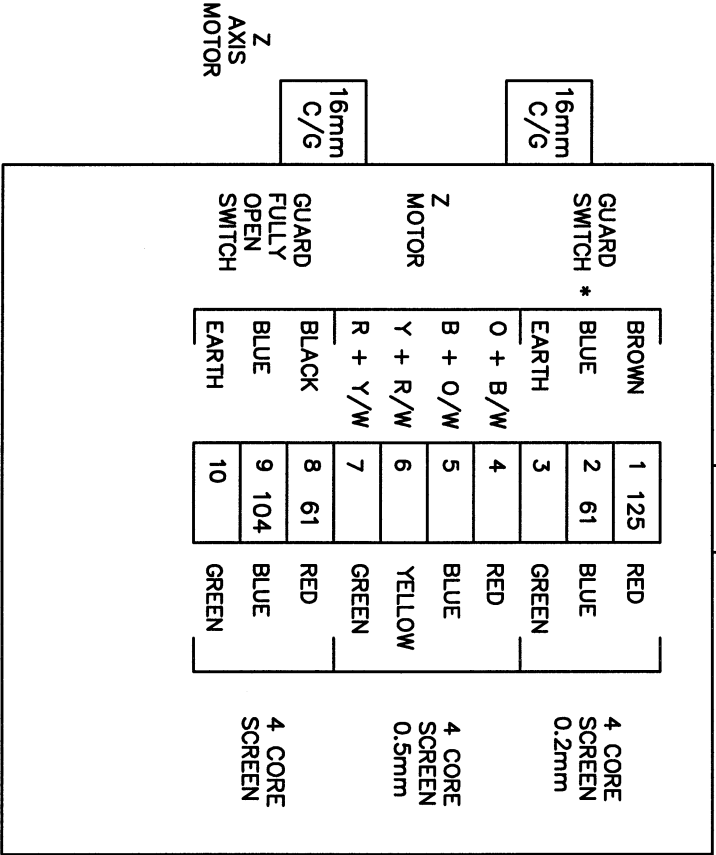
SHEET 18

[TU150E]

HEADSTOCK CONNECTION BOX

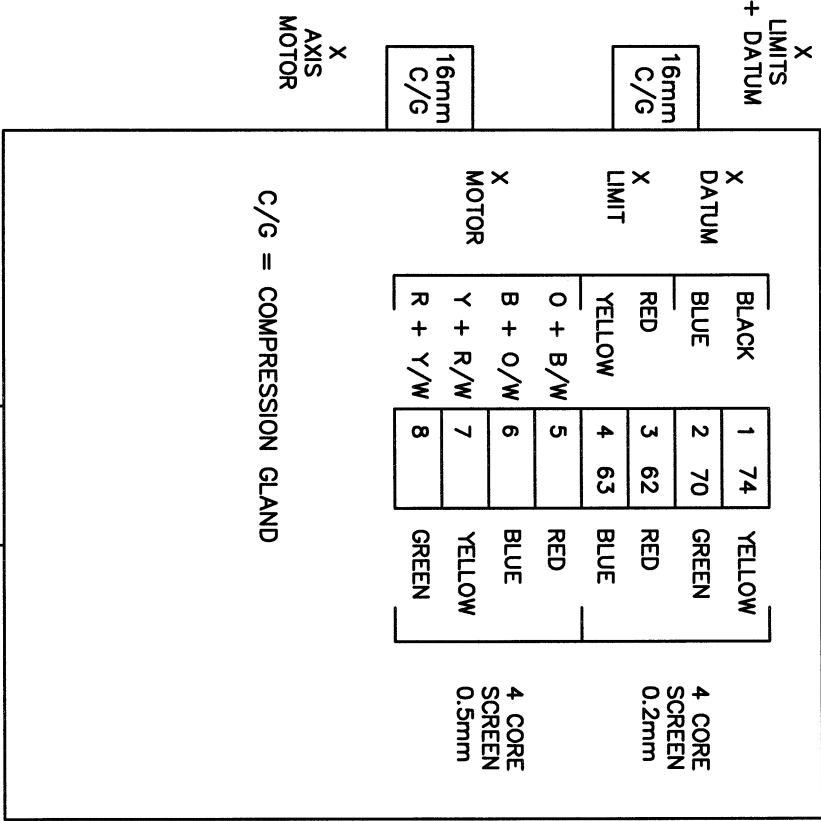
25mm
C/G

WIRING TO
PANEL



SADDLE CONNECTION BOX

X
LIMITS
+ DATUM



C/G = COMPRESSION GLAND

WIRING TO PANEL

- O + B/W ORANGE + BLACK/WHITE
- B + O/W BLACK + ORANGE/WHITE
- Y + R/W YELLOW + RED/WHITE
- R + Y/W RED + YELLOW/WHITE

NOTE *

IF GUARD INTERLOCK IS FITTED
THE GUARD SWITCH WIRING IS NOT USED

SEE SHEET 21 FOR DETAILS

IF IN DOUBT ASK

VIEW FROM BACK
OF CASTING
X
LIMIT
X
D
ATUM
SENSOR



* NOTE *
IF GUARD INTERLOCK FITTED
WIRE GUARD SWITCH AS SHEET 21

SADDLE CONNECTION BOX

X D ATUM	BLACK BLUE	1 2	74 70	YELLOW GREEN
X LIMIT	RED YELLOW	3 4	62 63	RED BLUE
X MOTOR	O + B/W B + O/W Y + R/W R + Y/W	5 6 7 8		RED BLUE YELLOW GREEN

4 CORE
SCREEN
0.2mm

4 CORE
SCREEN
0.5mm

HEADSTOCK CONNECTION BOX

GUARD SWITCH *	BROWN BLUE EARTH	1 2 3	125 61	RED BLUE GREEN
Z MOTOR	O + B/W B + O/W Y + R/W R + Y/W	4 5 6 7		RED BLUE YELLOW GREEN
GUARD FULLY OPEN SWITCH	BLACK BLUE	8 9	61 104	RED BLUE

4 CORE
SCREEN
0.2mm

4 CORE
SCREEN
0.5mm

2 CORE
SCREEN

Z+	63	RED
LIMIT	64	BLUE
Z		BLUE 71
DATUM		BLACK 74
SENSOR		

COOLANT PUMP

BLUE	21
BLACK	22
BROWN	23
EARTH	E
1mm FLEX	

(415v SUPPLY) WIRE IN STAR
(220v SUPPLY) WIRE IN DELTA

WORKLIGHT

BLACK	31
BLACK	33
EARTH	E
0.5mm SINGLES	

LUBE PUMP

BLACK	31
BLACK	36
EARTH	E
1mm FLEX	

LUBE FLOAT SWITCH

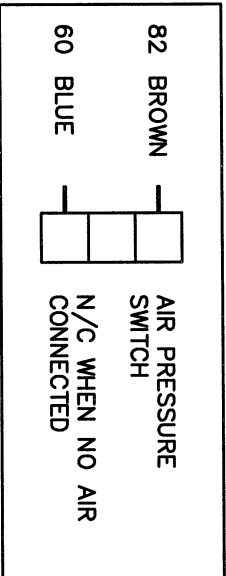
RED	81
BLUE	60
2 CORE SCREEN	

Z -	64	RED
LIMIT	65	BLUE
		2 CORE SCREEN 0.2mm

SPINDLE MOTOR (WIRE IN DELTA)
1mm BLACK 4 CORE SCREEN

SPINDLE MOTOR FAN
1mm 4 CORE FLEX
(415v SUPPLY) WIRE IN STAR
(220v SUPPLY) WIRE IN DELTA

SPINDLE MOTOR THERMAL
2 CORE SCREEN



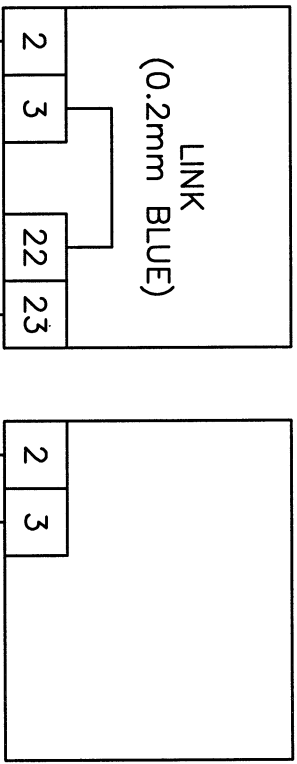
IF IN DOUBT ASK

SPINDLE DRIVE
SEE SHEET 13
FOR DETAILS

TOOLPOST DRIVE
SEE SHEET 18
FOR DETAILS

GUARD INTERLOCK
WITH SOLENOID

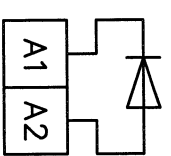
(REMOVE LINK 12 - 41)



GUARD
SWITCH
CONTACTS

78	BLACK	11	12	BROWN	79
214	RED	21	22	YELLOW	215
61	GREEN	33	34	BLUE	125

GUARD
SOLENOID



128



R B
E L
D U
E