

VARIABLE SPEED DRIVES OPERATION



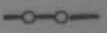



SILCON S DRIVE SYSTEM

GENERAL NOMENCLATURE

THE FOLLOWING NOMENCLATURE IS NORMALLY USED. PREFIXES OR SUFFIXES MAY BE ADDED TO DESIGNATE A PARTICULAR UNIT, SECTION OR DRIVE OR MERELY TO DIFFERENTIATE BETWEEN SIMILAR DEVICES.

A	AMMETER	LS	LIMIT SWITCH
BMC	BLOWER MOTOR STARTER	MA	AC LINE CONTACTOR OR STARTER
CAP	CAPACITOR	MD	DC LOOP CONTACTOR
CB	CIRCUIT BREAKER	MRH	MOTOR OPERATED RHEOSTAT
CVT	CONTROL VOLTAGE TRANSFORMER	MTH	MOTOR THERMAL SWITCH
CT	CURRENT TRANSFORMER	OL	OVERLOAD
DBC	DYNAMIC BRAKING CONTACTOR	POT	POTENTIOMETER
DBRES	DYNAMIC BRAKING RESISTOR	PL	PILOT LIGHT
		PB	PUSHBUTTON
		RC OR RR	REVERSE CONTACTOR OR RELAY
ESR	EMERGENCY STOP RELAY	RES	RESISTOR
EXC	(STATIC) EXCITER	SUP	COIL SUPPRESSION
F	SCR MODULE FAULT RELAY	SH	(AMMETER) SHUNT
FTR	FIELD TRIM RESISTOR	SS	SELECTOR SWITCH
FLR	FIELD LOSS RELAY	TI	TACHO INDICATOR
FS	FUSE	TG	TACHO GENERATOR
FC OR FR	FORWARD CONTACTOR OR RELAY	TR	TIMING RELAY
HTH	HEATSINK THERMAL SWITCH	UVR	UNDERVOLTAGE RELAY
IVT	ISOLATION TRANSFORMER	V	VOLTMETER
IOC	INSTANTANEOUS OVER CURRENT RELAY	VR	VOLTAGE SENSING RELAY
IR	INCH RELAY		
IFR	INCH FORWARD RELAY		
IRR	INCH REVERSE RELAY		

SYMBOLS

	- SCREENED LEADS
	- TWISTED LEADS
	- TERMINAL BOARD JUMPER
	- MOUNTED IN MOTOR
	- REMOTE MOUNTED DEVICE
	- DEVICES IN OPERATOR STATION

THE TABLE BELOW LISTS CONNECTIONS THAT HAVE BEEN MADE IN THE DRIVER/REGULATOR TO PROVIDE THE REQUIRED SYSTEM OPERATION. REFER TO THE SYSTEM INSTRUCTION BOOK FOR CIRCUIT AND OPERATING DETAILS OF THE DRIVE REGULATOR.

FOR MULTIPLE DRIVE EQUIPMENTS, DRIVER/REGULATOR OPERATING TABLES ARE ON SHEETS 1A, 2A, 3A ETC.

DRIVER/REGULATOR OPERATING TABLE
(LEFT BLANK FOR MULTIPLE DRIVES)

LINE FREQUENCY	DRIVER CURRENT LIMIT	REGULATING LOOP
* 60HZ <input checked="" type="checkbox"/> 50HZ <input checked="" type="checkbox"/>	NONE <input type="checkbox"/> 0-75HP <input type="checkbox"/> 75HP <input checked="" type="checkbox"/>	VOLTAGE <input type="checkbox"/> CURRENT <input type="checkbox"/> DC TACH <input checked="" type="checkbox"/> AC TACH <input type="checkbox"/>
SYSTEM REFERENCE	LINEAR TIMING	TACHOMETER VOLTAGE
20V <input type="checkbox"/> 10V <input checked="" type="checkbox"/> 3V <input type="checkbox"/>	0 SEC <input type="checkbox"/> 0.5-3SEC <input checked="" type="checkbox"/> 3-30SEC <input type="checkbox"/> 30- SEC <input type="checkbox"/>	43-62 VDC, 26-48 VAC <input type="checkbox"/> 60-115 VDC, 47-85VAC <input type="checkbox"/> 100-200VDC, 82-152VAC <input checked="" type="checkbox"/> 180-380VDC, 151-275VAC <input type="checkbox"/>
AUXILIARY PRESET REFERENCE	AUXILIARY PRESET REF DIRECTION	REGULATOR COMPENSATION
NONE <input type="checkbox"/> TIMED <input type="checkbox"/> UNTIMED <input checked="" type="checkbox"/>	FWD <input type="checkbox"/> REV <input type="checkbox"/> EXTERNAL <input checked="" type="checkbox"/>	NONE <input checked="" type="checkbox"/> LOAD <input type="checkbox"/>
SEE SYSTEM ELEMENTARY FOR ADDITIONAL REGULATOR CIRCUITRY <input checked="" type="checkbox"/>	DIAGNOSTIC FUNCTION <input checked="" type="checkbox"/>	RESPONSE
		NORMAL <input checked="" type="checkbox"/> LOW <input type="checkbox"/>
		CURRENT LIMIT <input checked="" type="checkbox"/> 150% <input type="checkbox"/>
		TOP SPEED/BASE SPEED
		0.9-1.0 <input type="checkbox"/> 1.0-1.1 <input type="checkbox"/> 1.1-1.2 <input type="checkbox"/> 1.2-1.2 <input type="checkbox"/> 1.3-1.5 <input type="checkbox"/> 1.5-1.6 <input type="checkbox"/> 1.6-1.8 <input type="checkbox"/> 1.8-2.0 <input type="checkbox"/> 2.0-2.2 <input type="checkbox"/> 2.2-2.5 <input type="checkbox"/> 2.5-2.7 <input type="checkbox"/> 2.7-3.0 <input checked="" type="checkbox"/> 3.0-3.3 <input type="checkbox"/> 3.3-3.7 <input type="checkbox"/>

SEE MAIN SCHEMATIC 906P106RA FOR FULL DETAIL OF HEADSTOCK DRIVE.

* THE MACHINE WILL BE FOR 60HZ OPERATION BUT WILL BE TESTED AT CUSTOMERS SITE ON 50HZ. SEE DR/REG MODEL LIST FOR LINKS ADJUSTMENT.

902HM100AE SHEET 1

CONT. ON SH. NO. 1
SH. 2

902M102YB

ELEMENTARY DIAGRAM NOTES

BDC3062R 100 H.P. DRIVE
FOR N/C CONTROLLED LATHE.
(CRAWFORD - SWIFT)

DATE 28-6-78

DATE 28-7-77

ISSUED

ISSUED

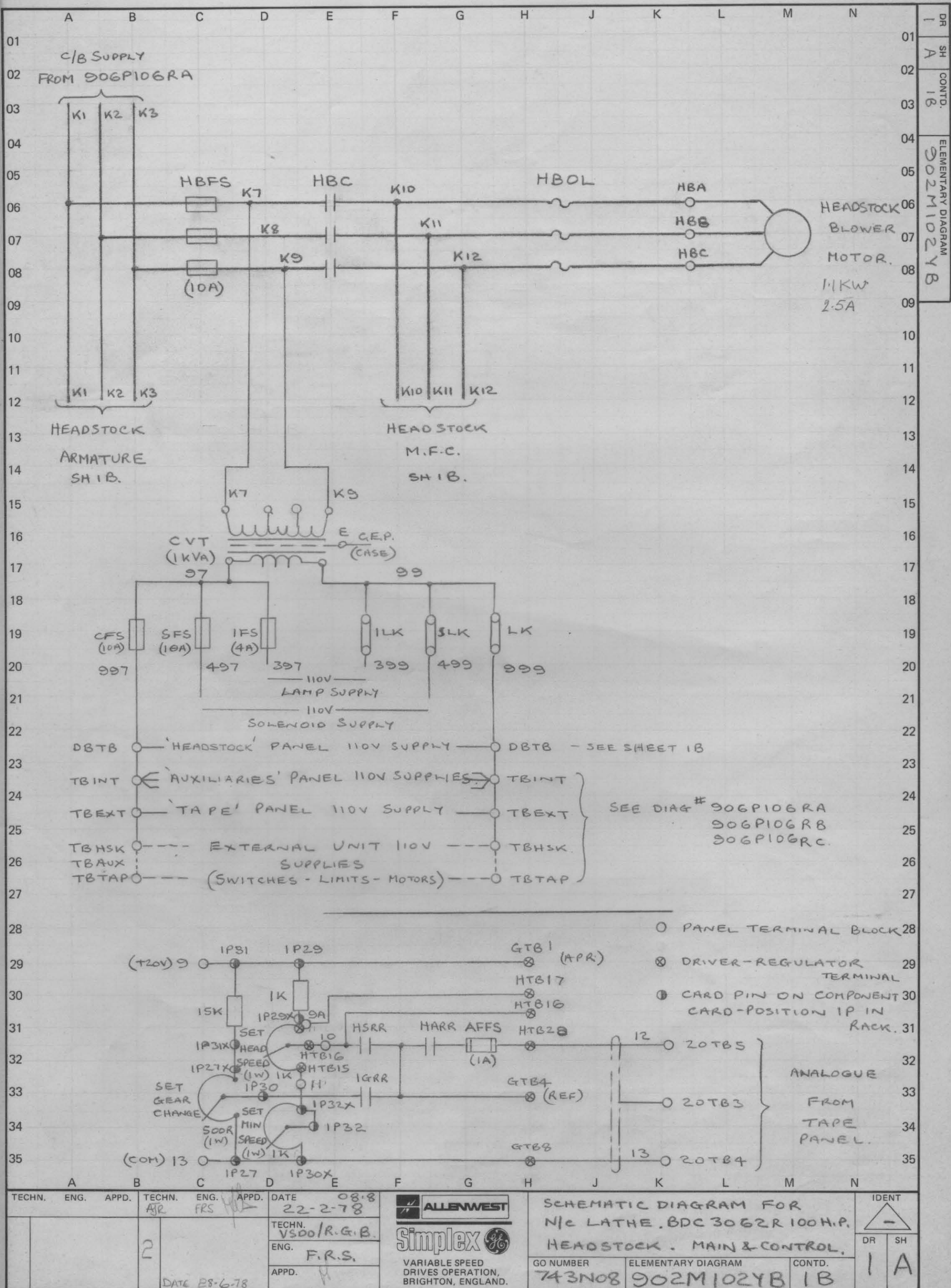
APPROVED

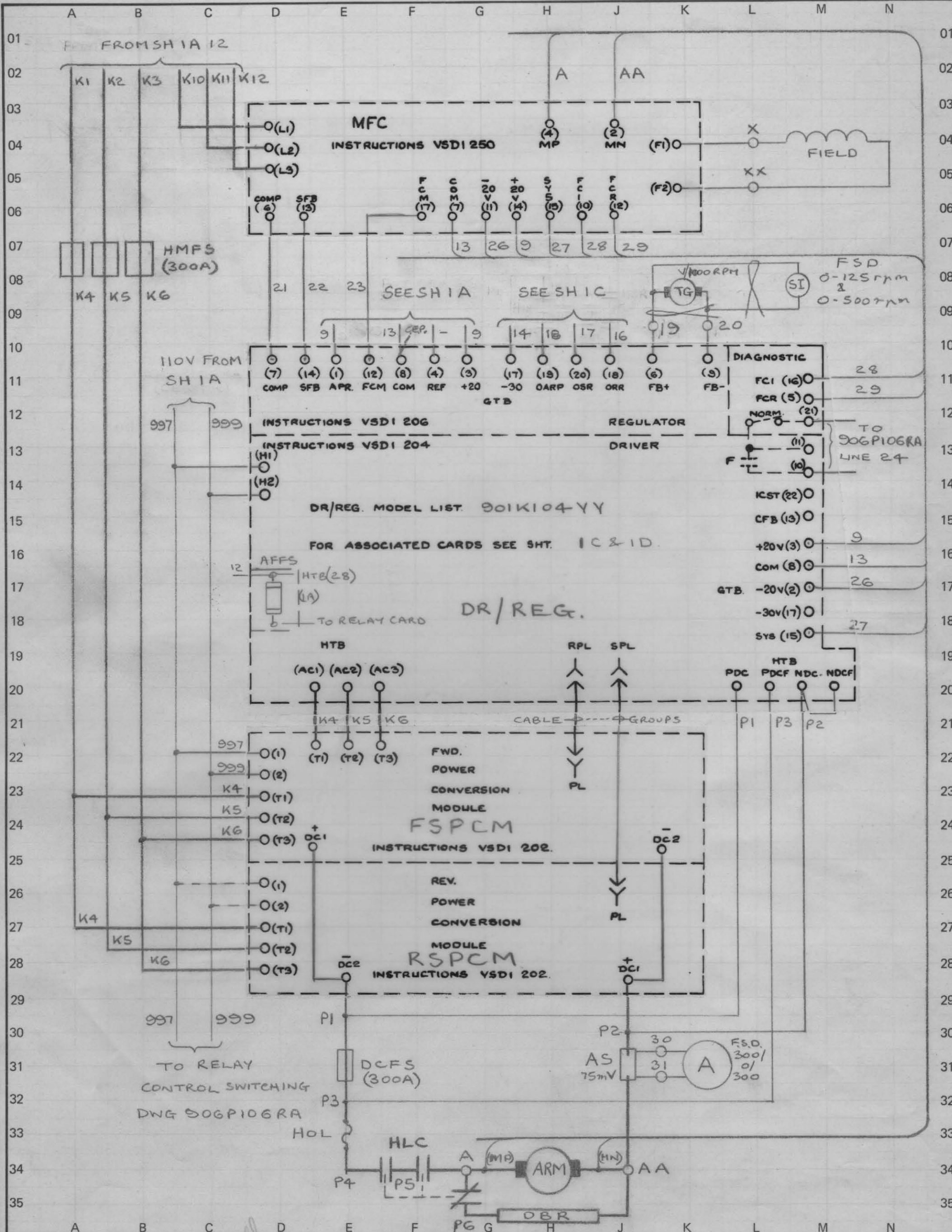
APPROVED

FIRST MADE FOR
743N08/003

VARIABLE SPEED DRIVES
OPERATION
BRIGHTON, ENGLAND

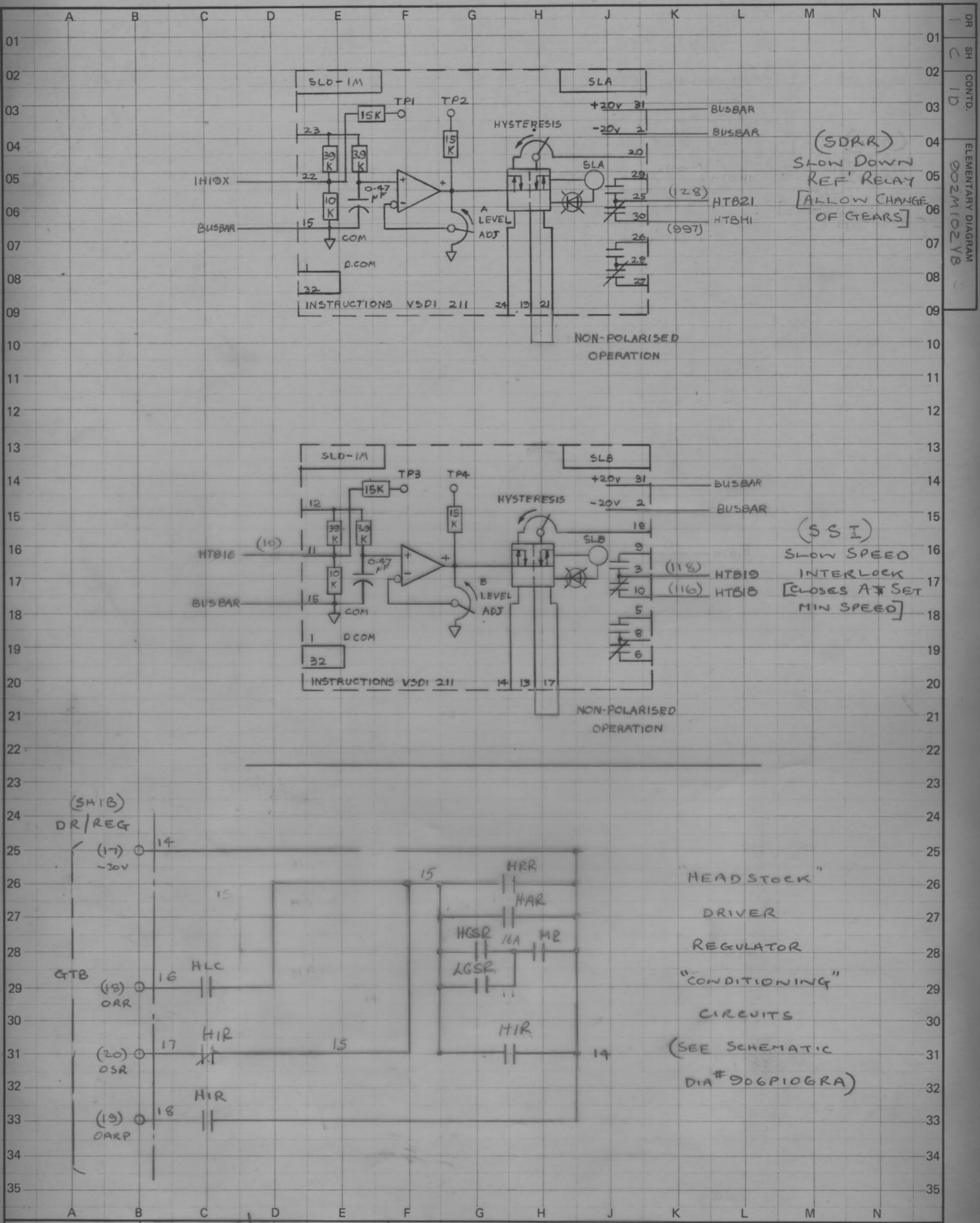
ALLENWEST





TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	08-8 22-2-78	 Simplex VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.	SCHEMATIC DIAGRAM FOR N/C LATHE. BDC3062R 100HP. HEADSTOCK. STACK & RACK.			IDENT DR SH 1 B
						TECHN. VSDO/R.G.B.			GO NUMBER 743N08	ELEMENTARY DIAGRAM 902M102YB 1C	CONTD.	
						ENG. F.R.S.						
						APPD.						

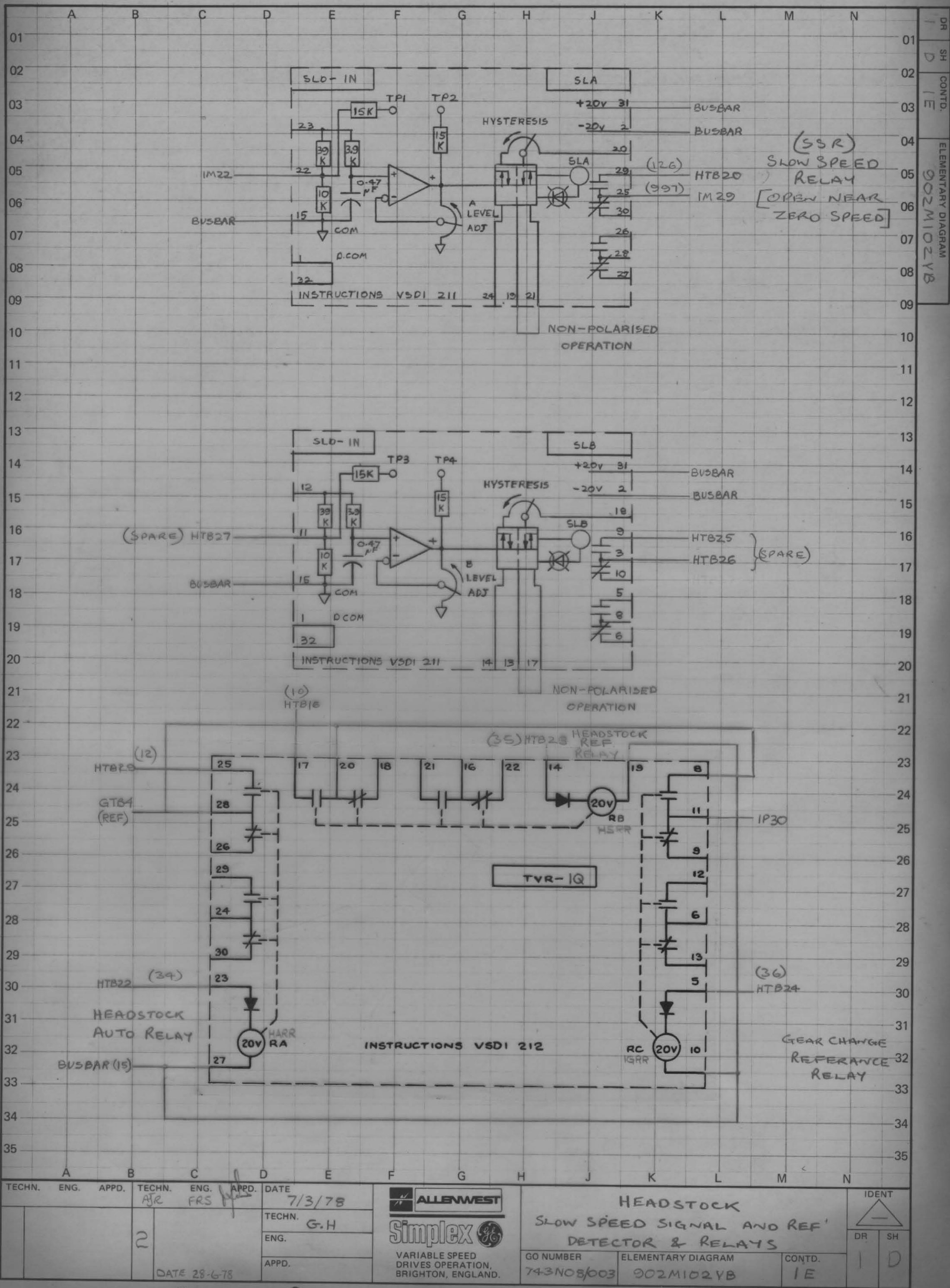
DATE 28-6-78

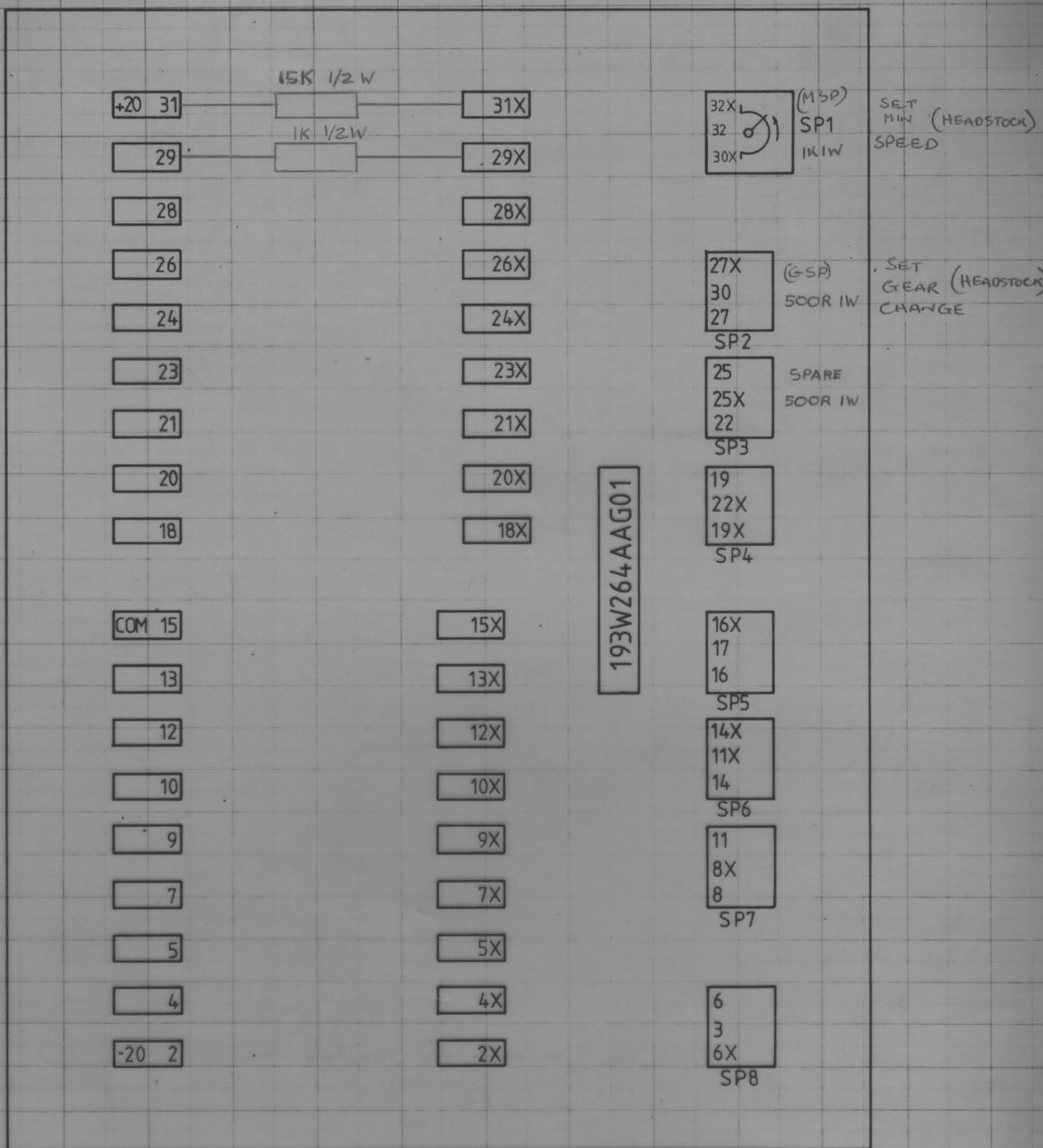


TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE			HEADSTOCK SLOW SPEED SIGNAL-LEVEL- DETECTOR CONNECTIONS.		IDENT
			AFR	FRS		8/3/78					DR
			2				VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.		GO NUMBER	ELEMENTARY DIAGRAM	SH
									743N08/003	902M102YB	1 C
										CONTD.	
										10	

DATE 28-6-78

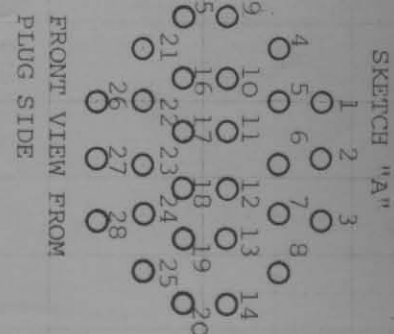
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FITTED IN POSITION P OF RACK

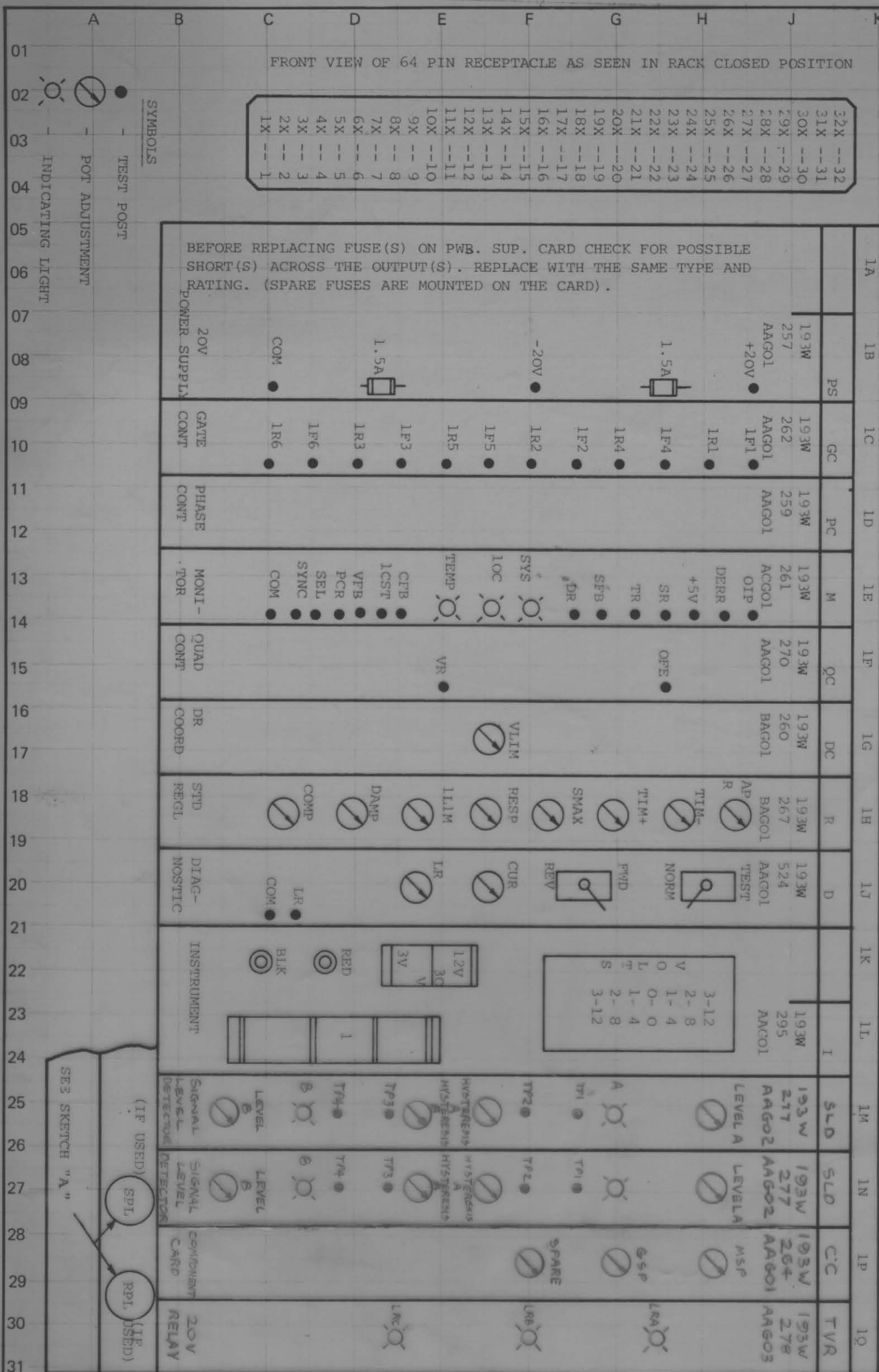
TECHN.		ENG.		APPD.		TECHN.		ENG.		APPD.		DATE				COMPONENT CARD 'HEADSTOCK'						IDENT							
						AJR		FRS				7/3/78				LAYOUT OF UNITS													
												TECHN.		G.H								DR		SH					
												ENG.																	
												APPD.				VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.						GO NUMBER		ELEMENTARY DIAGRAM				CONTD.	
																						743N08/003		902M102YB				IF	



ON PRINTED CIRCUIT CARDS USED IN THIS RACK THE LETTERS "AA" AFTER THE BASIC CARD CATALOGUE NUMBER INDICATES ORIGINAL DESIGN. SUBSEQUENT DESIGNS WITH THE SAME BASIC NUMBERS AND GROUP NUMBER WITH THE SECOND LETTER CHANGED SUCH AS, AB, AC, AD, ETC. ARE DIRECTLY INTERCHANGEABLE AND MAY BE SUPPLIED IN PLACE OF THE "AA" CARDS.

THE PRINTED CIRCUIT CARDS SHOULD ALWAYS BE REMOVED WITH THE CARD EXTRACTOR WHICH IS ATTACHED ON TOP OF THE CARD RACK. SOME CARDS CONTAIN PARTS WHICH WILL BE THERMALLY HOT AFTER BEING IN OPERATION. CARE SHOULD BE EXERCISED IN HANDLING ALL CARDS AFTER REMOVAL UNTIL THESE PARTS HAVE COOLED.

(FRONT VIEW OF RACK IN CLOSED POSITION)



BDC 3064R
FOR 1050T
NUMERICALLY CONTROLLED
LATHE.

MANUFACTURED FOR :-

CRAWFORD SWIFT LTD,
CLAREMONT WORKS,
HALIFAX,
HX3 6AW.

PURCHASERS ORDER :-
Nº 37908/A5007

DR
SH
CONTD.
ELEMENTARY DIAGRAM
902M126AC

	A	B	C	D	E	F	G	H	J	K	L	M	N	
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DR

SH

CONTD.

ELEMENTARY DIAGRAM

01

902M126AC

BDC 3064R

FOR 1050T

NUMERICALLY CONTROLLED

LATHE.

MANUFACTURED FOR :-

CRAWFORD SWIFT LTD,

CLAREMONT WORKS,

HALIFAX,

HX3 6AW.

PURCHASERS ORDER :-

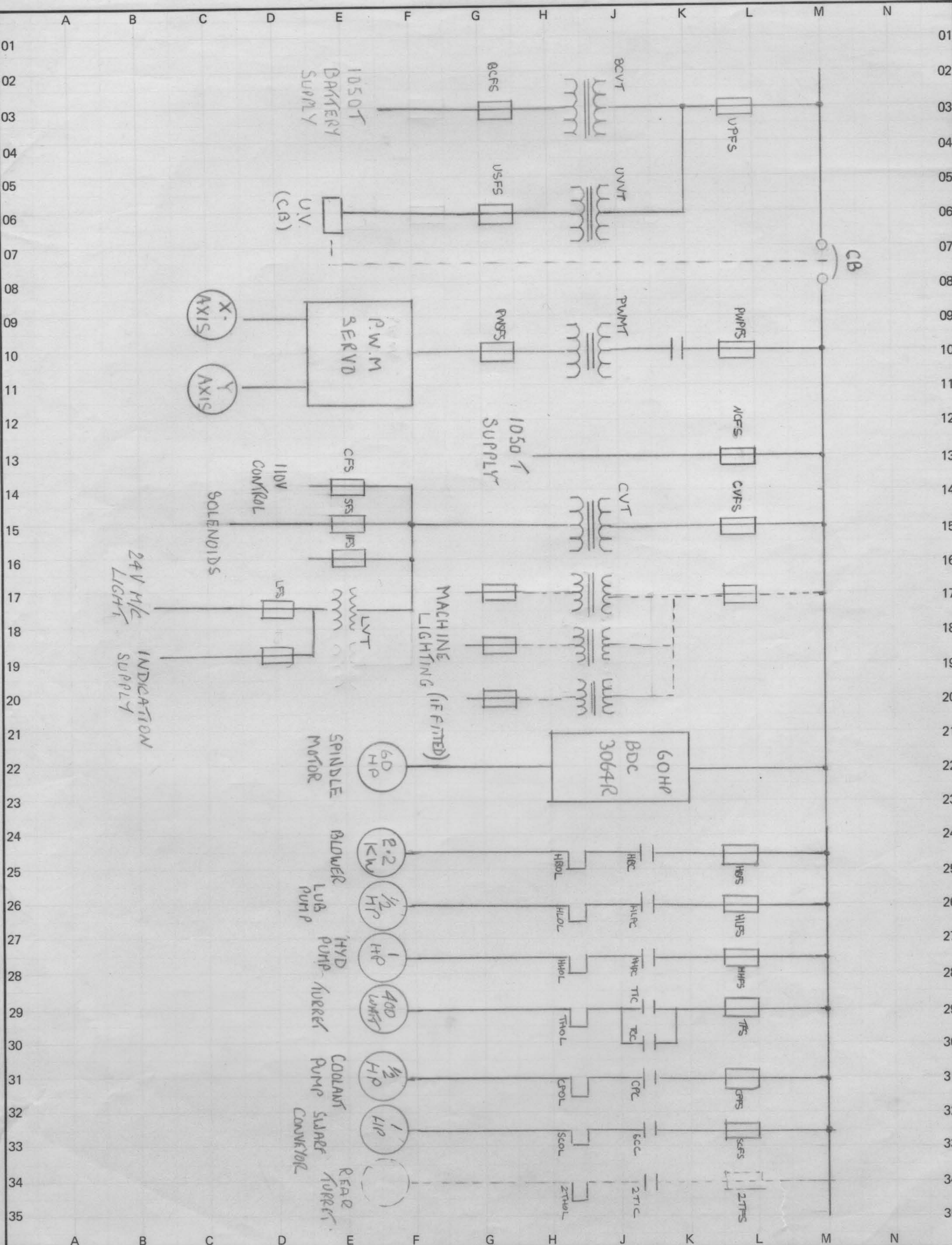
Nº 37908/A50007

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	SEE SH 54			5.2.82										
						GO NUMBER							ELEMENTARY DIAGRAM	
						128N02		902M126AC		01				

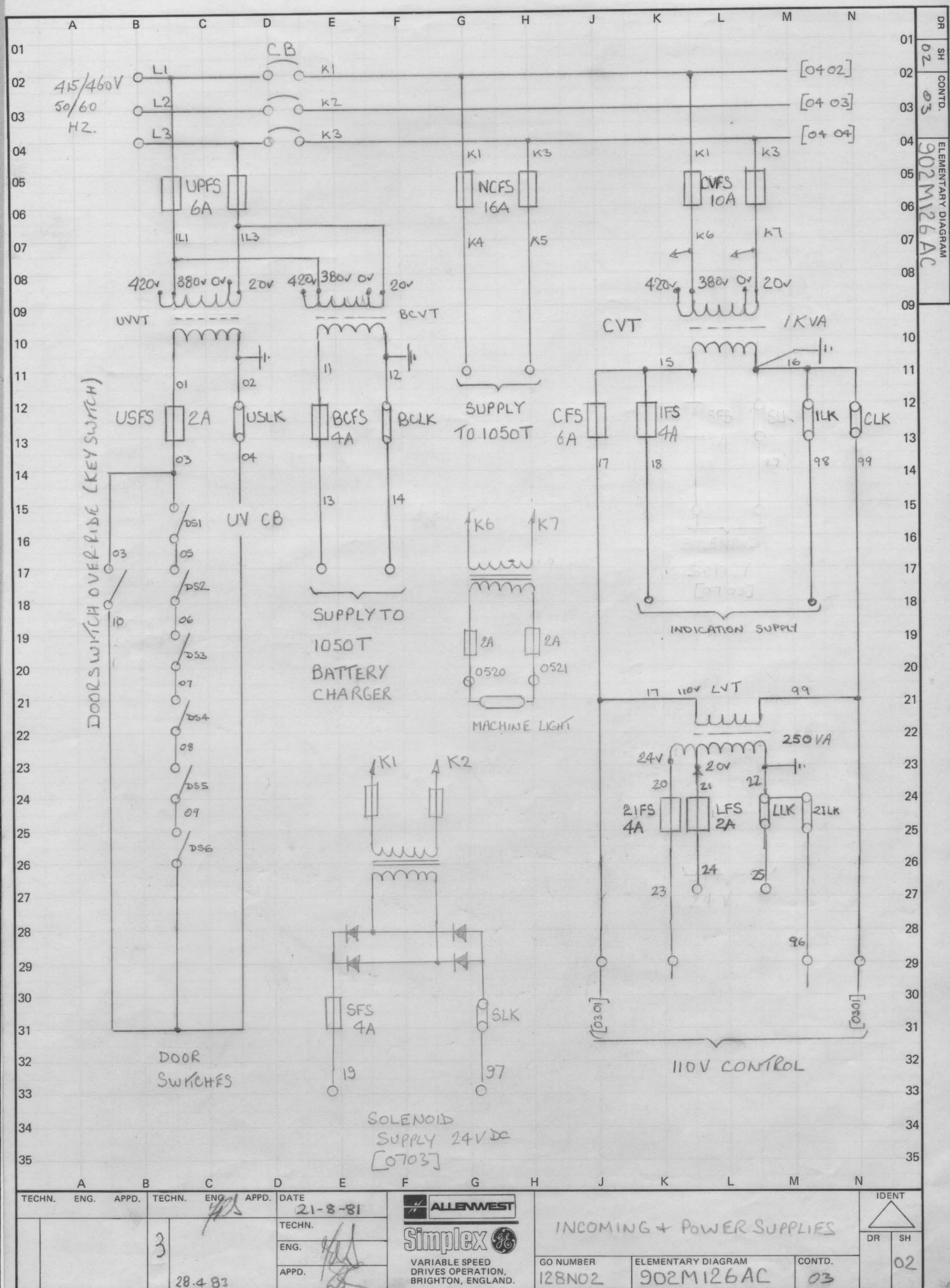
ALLENWEST

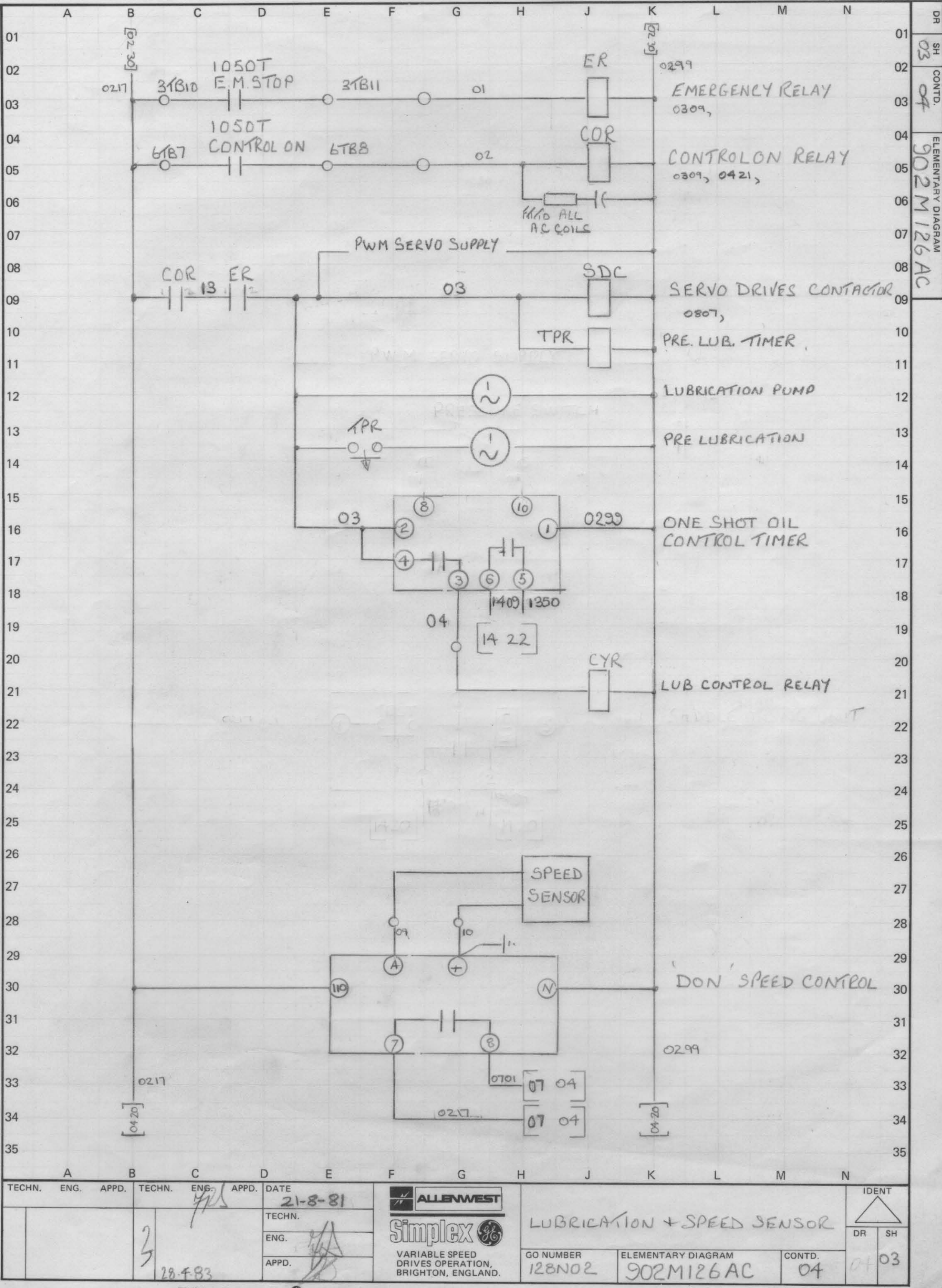
Simplex

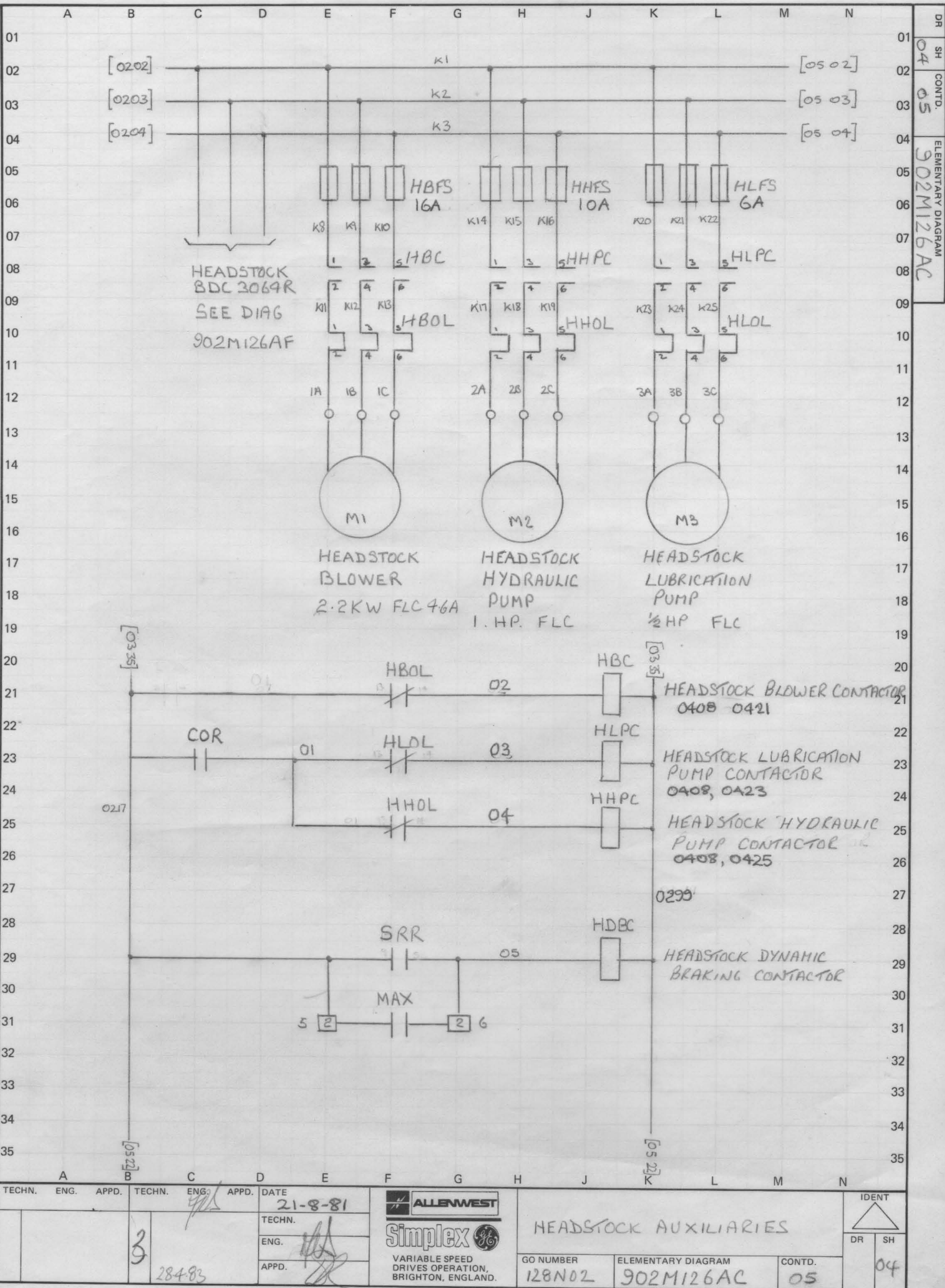
VARIABLE SPEED
DRIVES OPERATION,
BRIGHTON, ENGLAND.

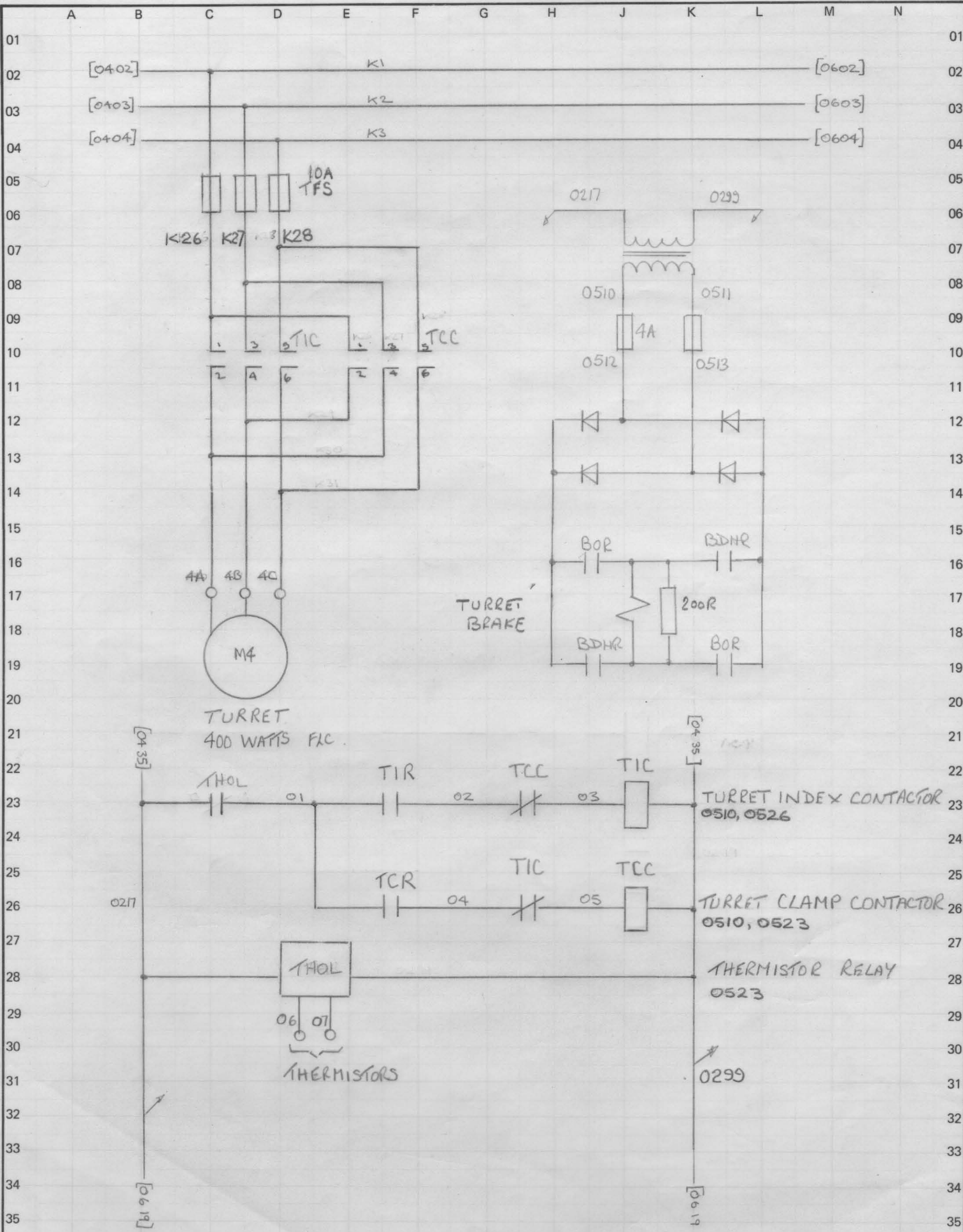


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			2			21-8-81												

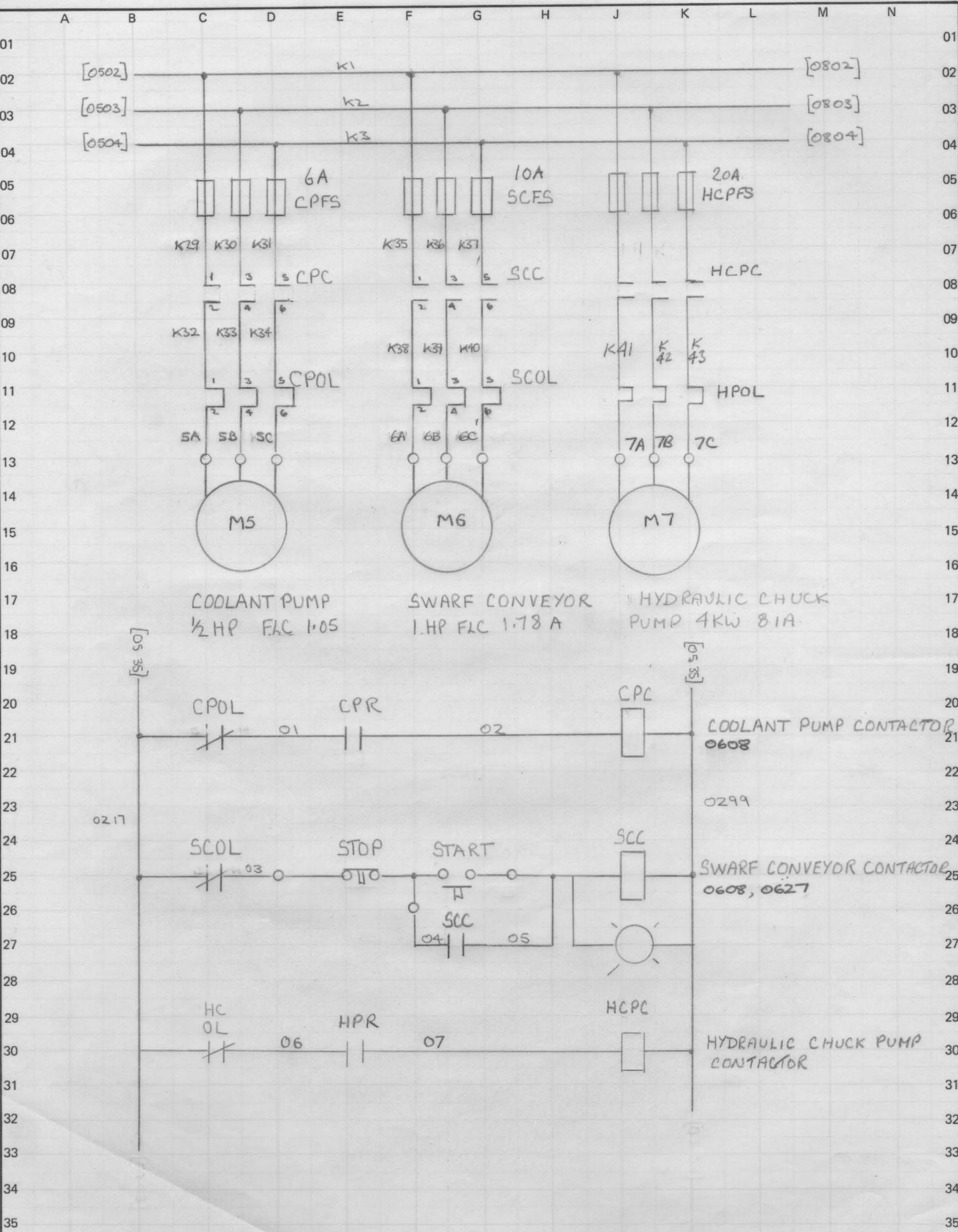




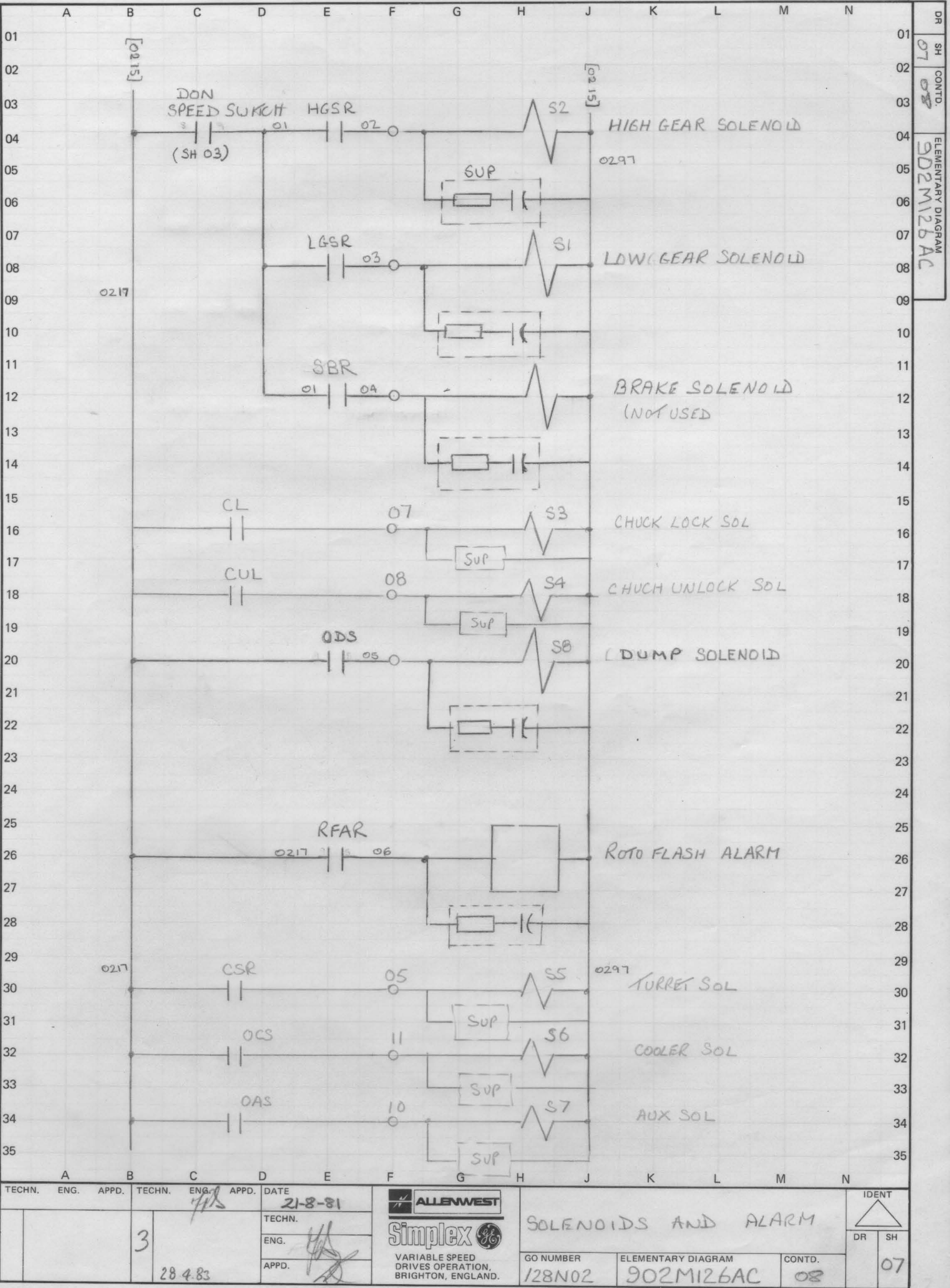




TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE					IDENT 	
						21-8-81	TURRET.		GO NUMBER 128N02		ELEMENTARY DIAGRAM 902M126AC	
							VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.		CONTD. 06		DR SH 05	

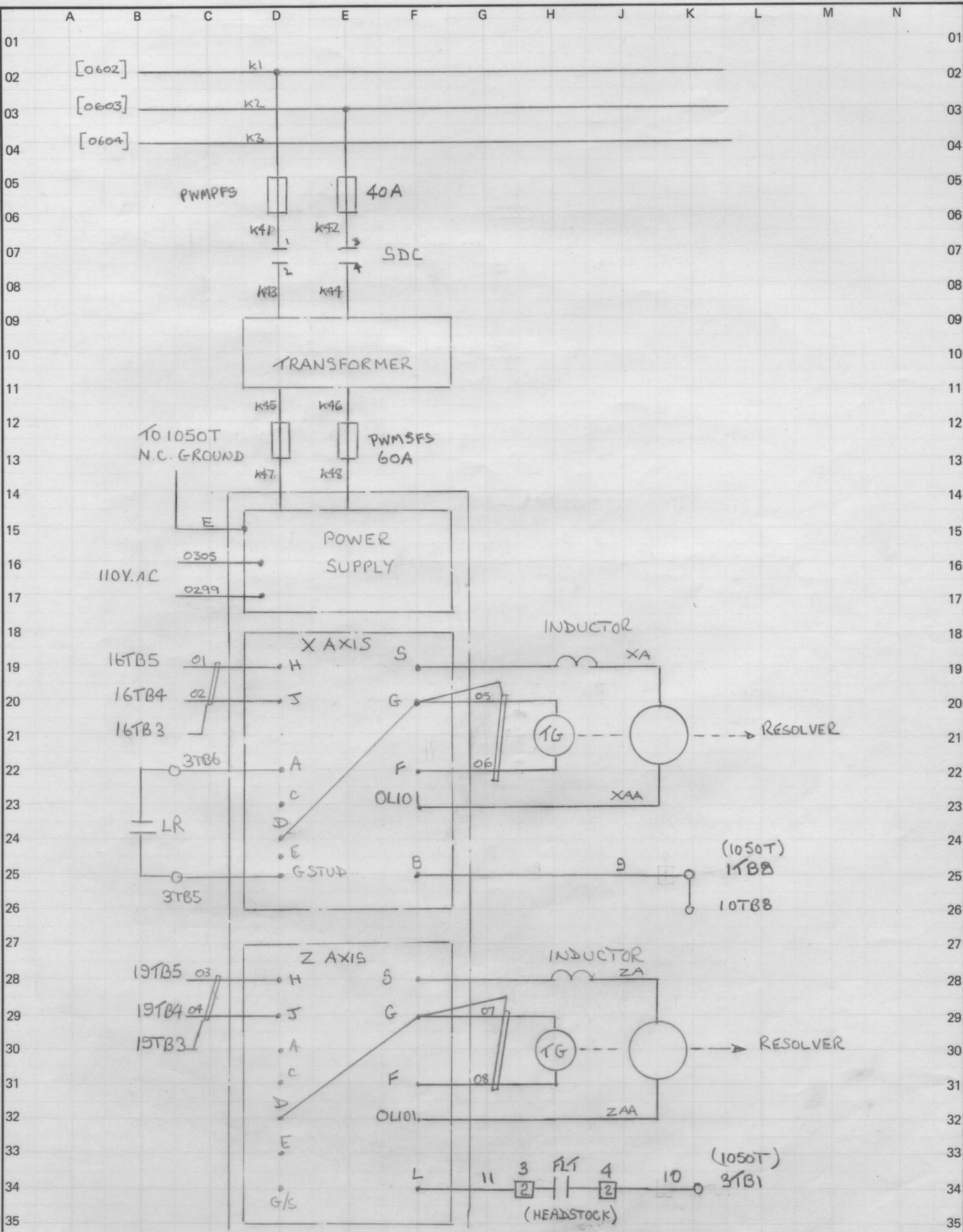


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			3			TECHN.			GO NUMBER	128N02	ELEMENTARY DIAGRAM	902M126AC	
						ENG.			CONTD.	07		06	

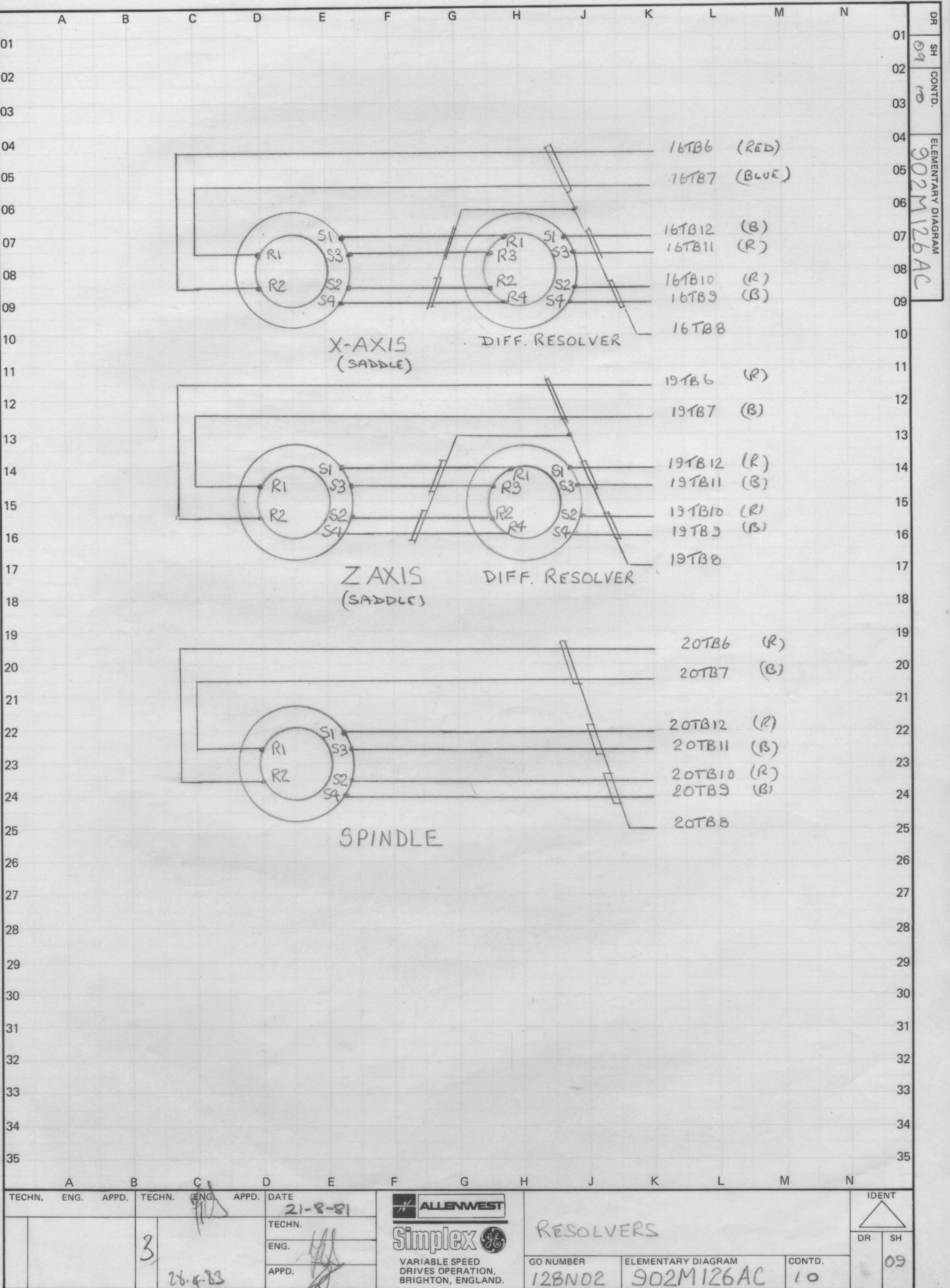


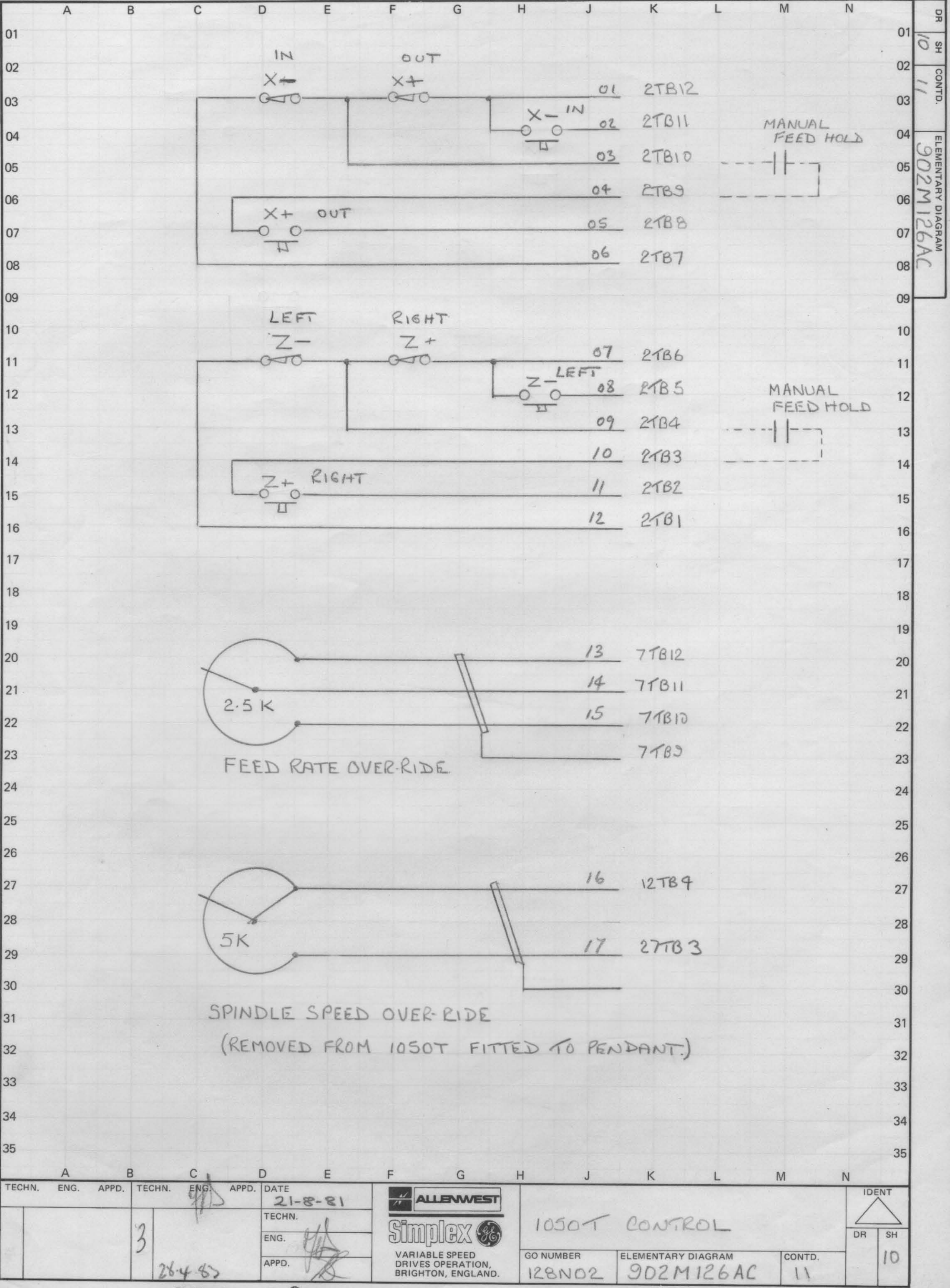
DR SH CONTD. ELEMENTARY DIAGRAM
07 08 902M126AC

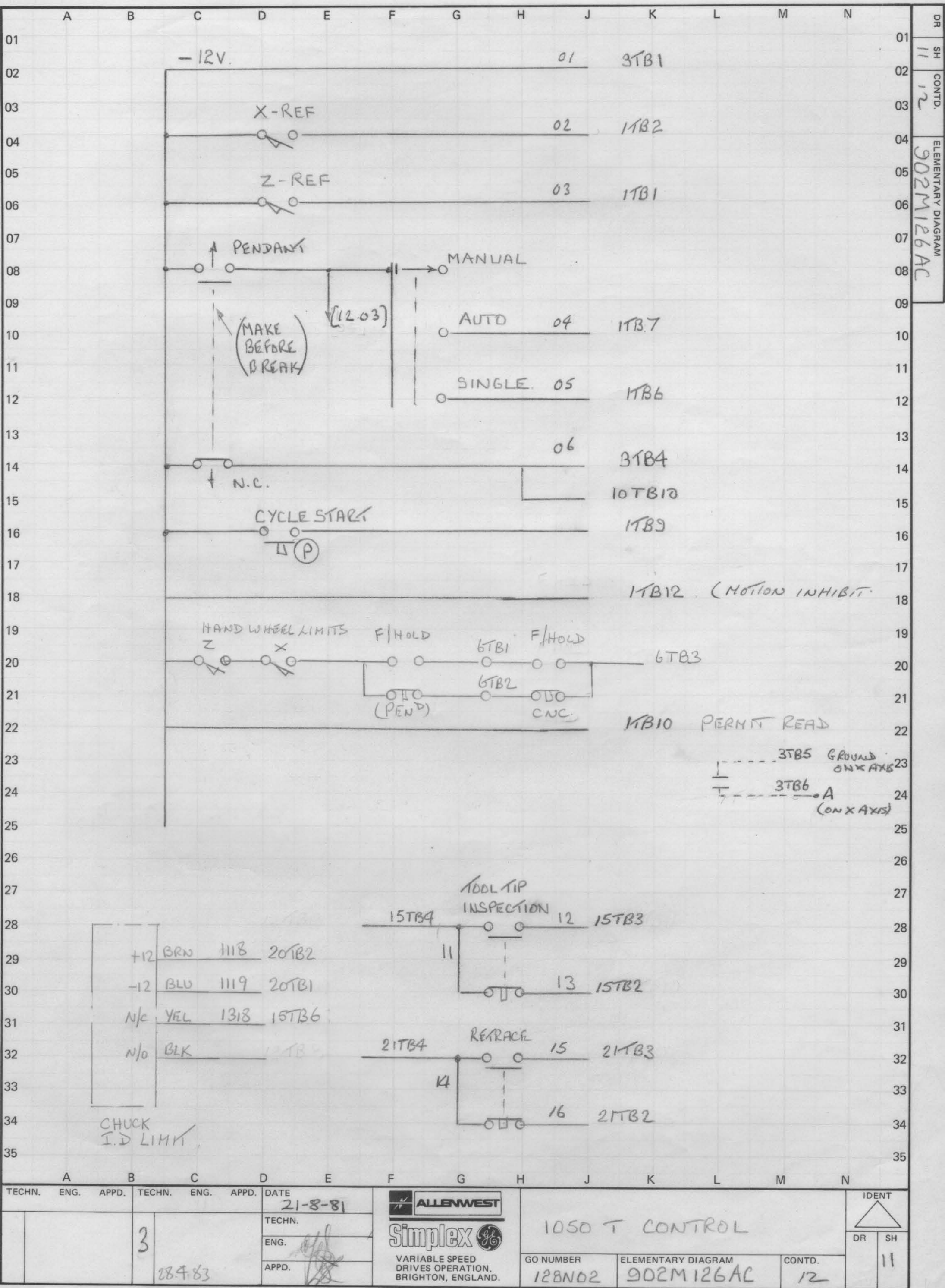
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						21-8-81	Simplex			GO NUMBER			DR SH	
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										ELEMENTARY DIAGRAM			08	
										902M126AC				

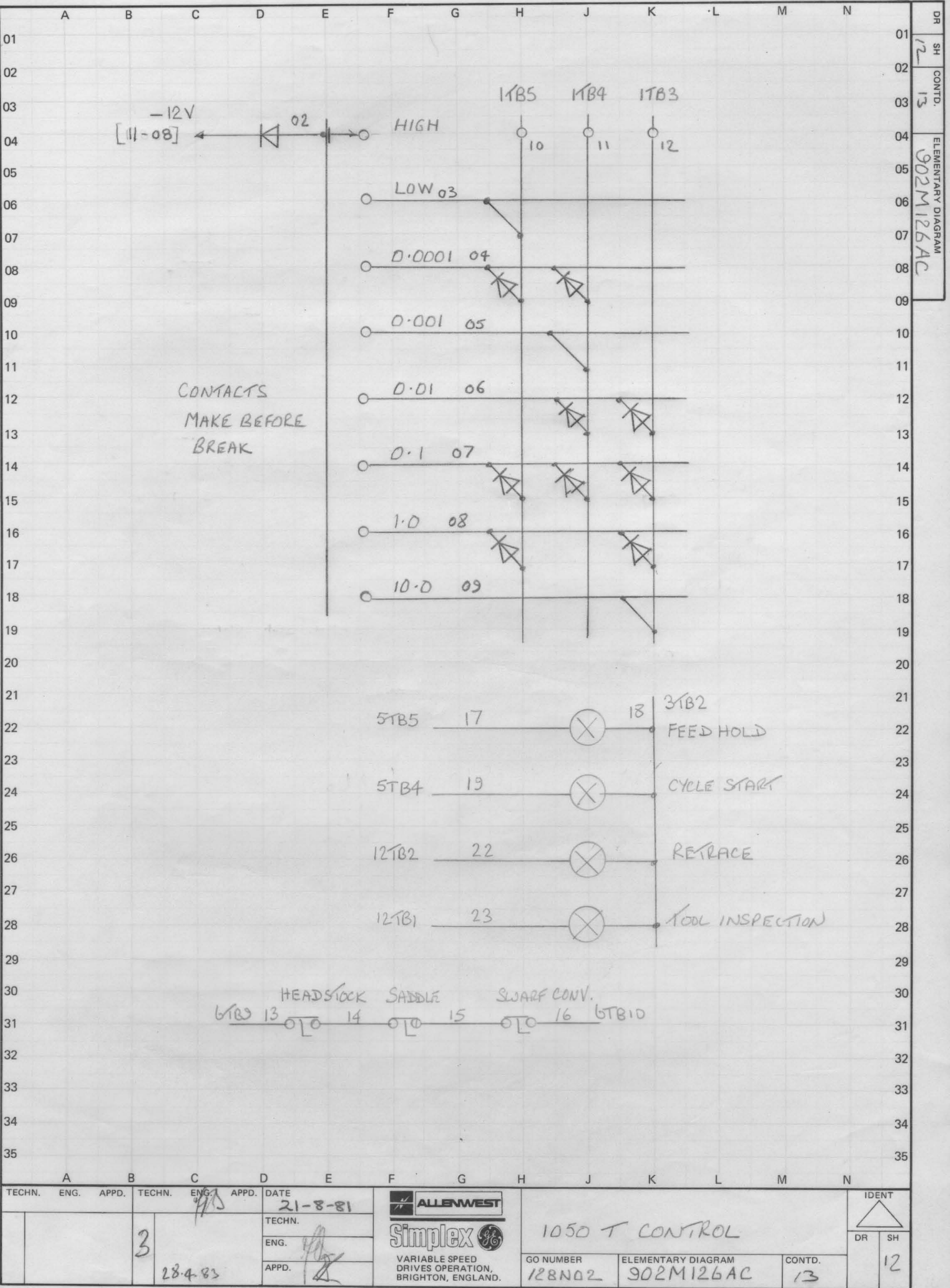


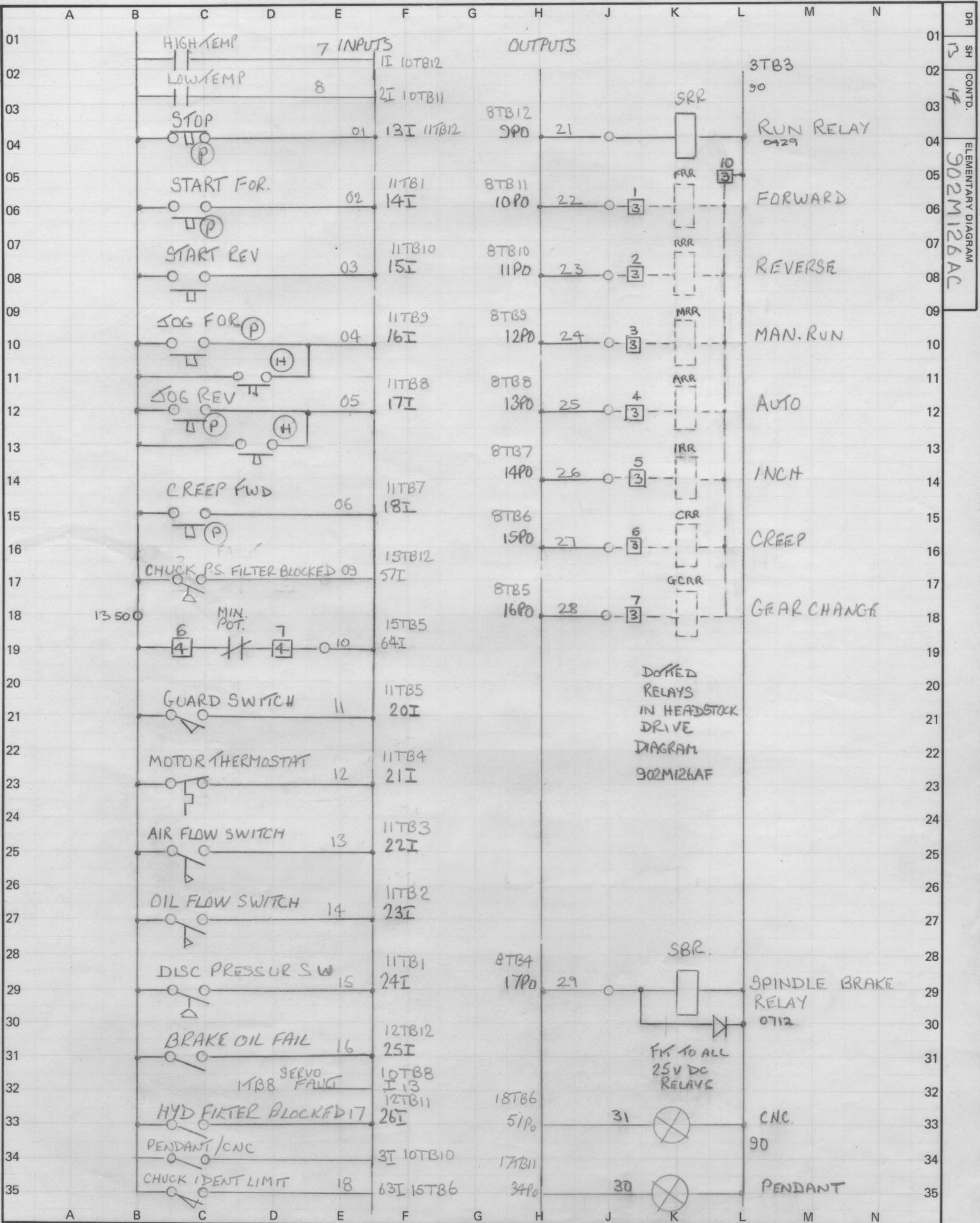
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			3			21-8-81					GO NUMBER 128N02		ELEMENTARY DIAGRAM 902M126AC	
							VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.		DRIVES OPERATION, BRIGHTON, ENGLAND.		CONTD. 09		SH 08	







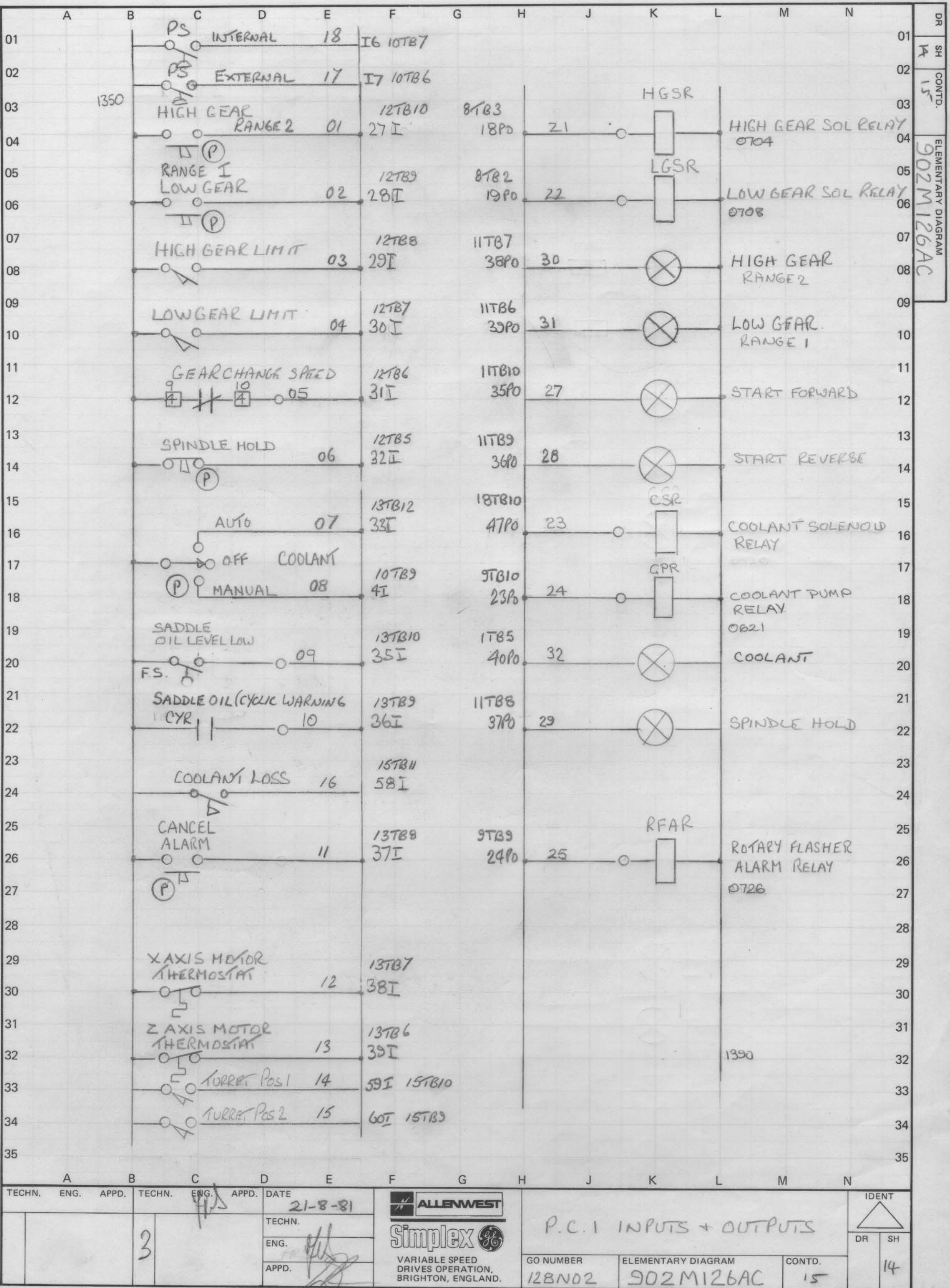




TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	ALLENWEST		P.C. 1 INPUTS + OUTPUTS		IDENT	
						21-8-81	Simplex				DR SH	
							VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.		GO NUMBER		13	
									128N02		902M126AC	
									ELEMENTARY DIAGRAM		CONTD.	
									14			

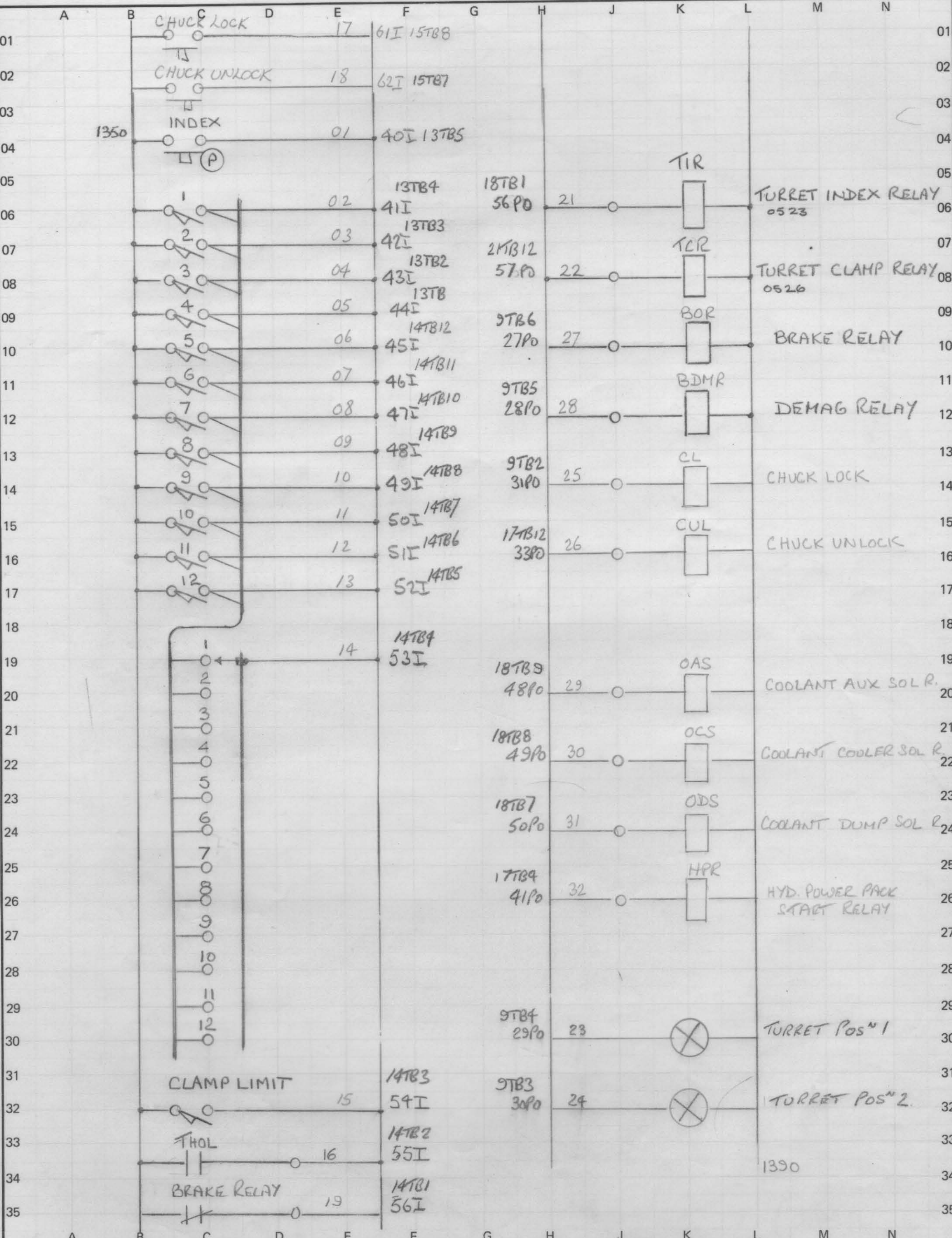
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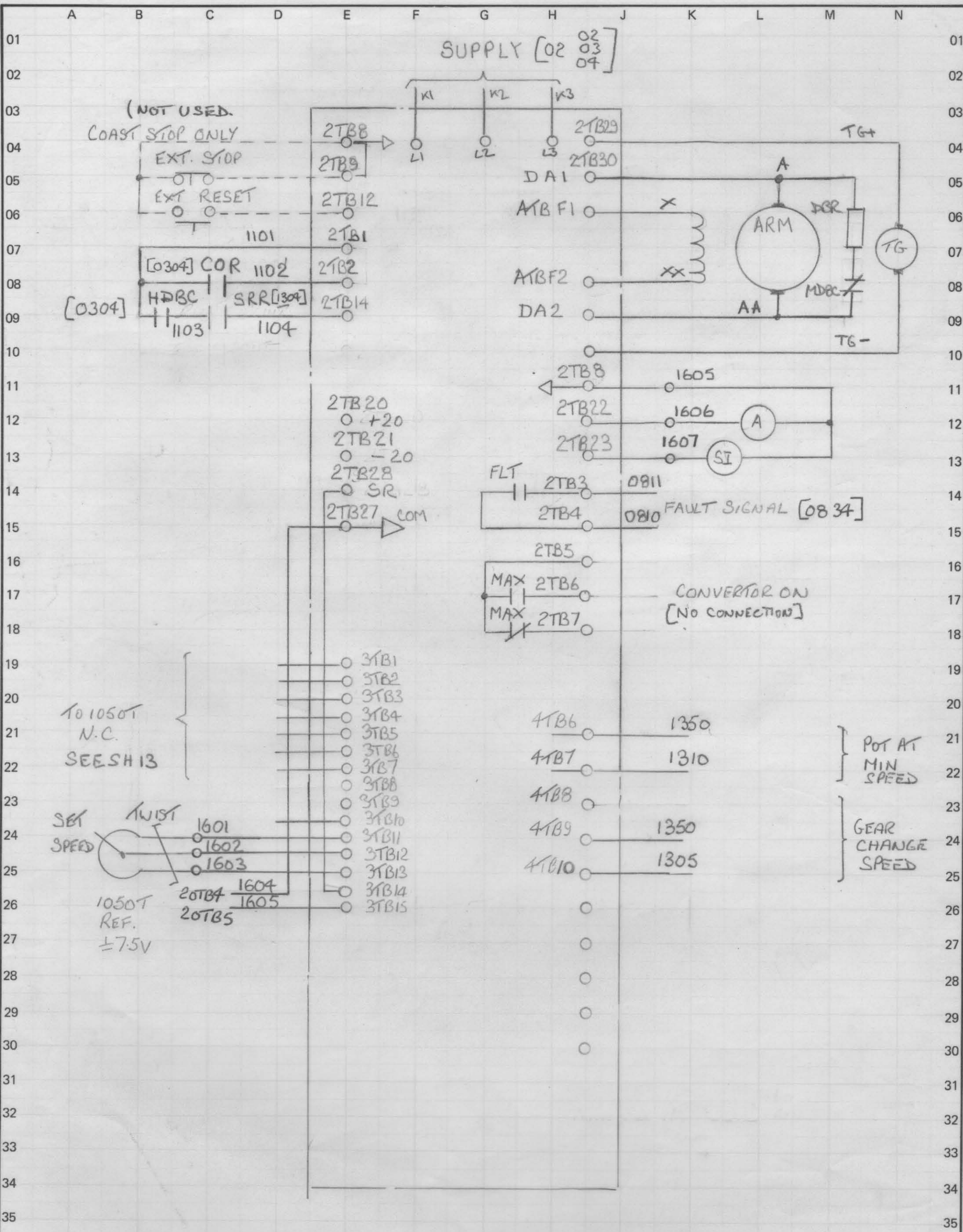
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DR SH CONTD. ELEMENTARY DIAGRAM 902M126AC

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	ALLENWEST			P.C.I. INPUTS + OUTPUTS			IDENT		
						21-8-81	Simplex						DR SH		
							VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.			GO NUMBER 128N02		ELEMENTARY DIAGRAM 902M126AC		CONTD. 15	
														14	





TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	TECHN.	ENG.	APPD.	GO NUMBER	ELEMENTARY DIAGRAM	CONTD.	IDENT
						21-8-81				128N02	902M126AC	17	16
<p>Allenwest Simplex VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.</p>							<p>BDC 3064R C. SWIFT</p>						

	A	B	C	D	E	F	G	H	J	K	L	M	N	DR
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03														902M126AC
04														ELEMENTARY DIAGRAM
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L. H. PANEL

A	AA	X	XX	TG+	TG-	1601	1602	1603	1604	1605	1606	1607	1322	1323	1324	1325	1326	1327	1328	1329	0301	0302	1A	1B	1C
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CENTRE PANEL

02K4	02K5	0219	0297	0297	0218	0298	0217	0295	0223	0296	0224	0225	0506	0507	0601	0602	0603	0604	0605	1409	1516	2A	2B	2C	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	6C
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L1	L2	L3
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0213	0214
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0307	0308	0304
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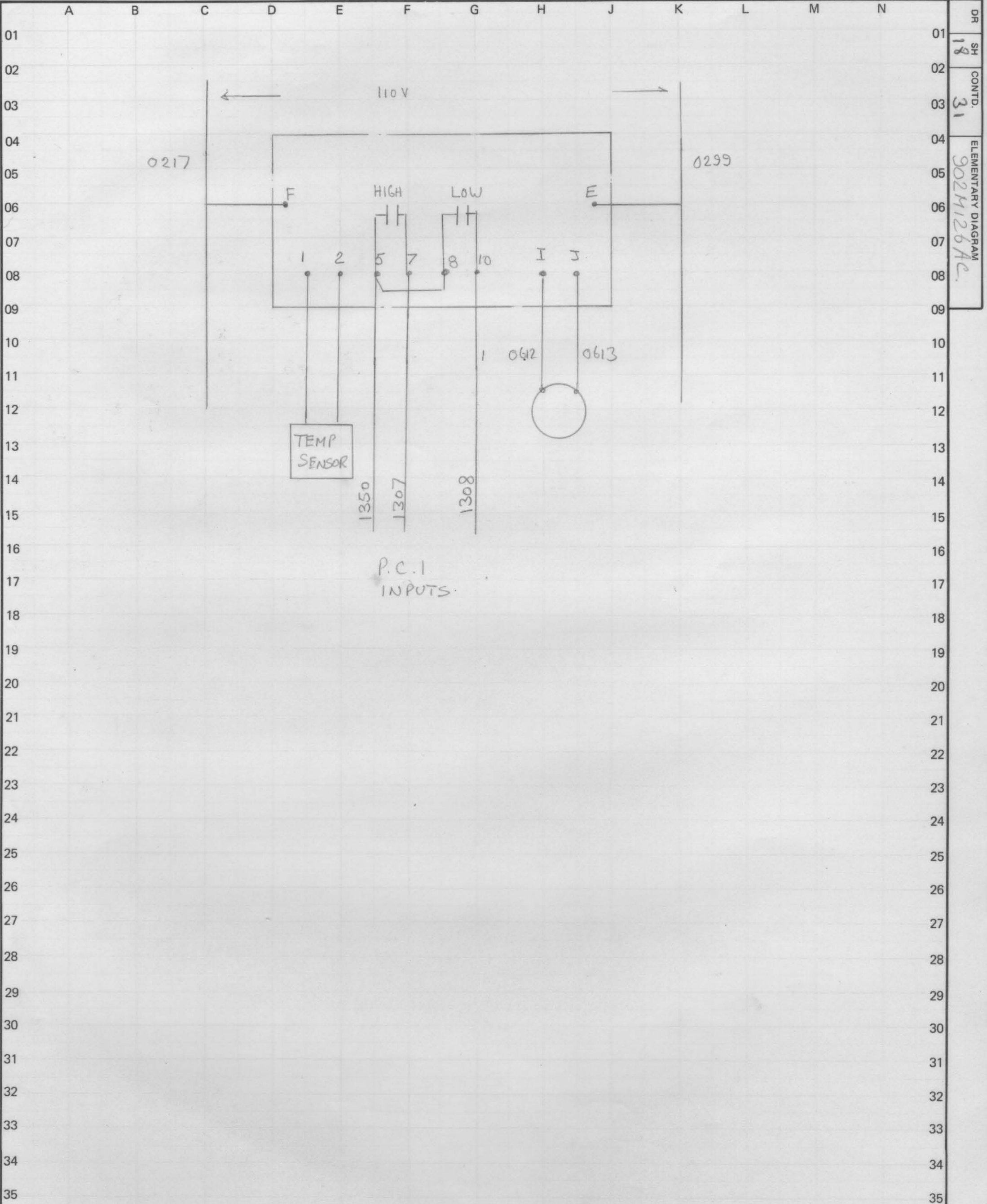
R. H. PANEL

XA	XAA	ZA	ZAA	039	0310	0701	0701	0703	0704	0705	1310	1390	1321	1329	1350	1409	1421	1422	1423	1425	1521	1522	0809	0810
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NOTE ALL AC RELAYS AND CONTACTORS
TO BE FITTED WITH RC SUPPRESSION
ACROSS COILS

ALL DC RELAY COILS TO BE FITTED
WITH DIODE SUPPRESSION

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	9-12-81		ALLENWEST		Simplex		VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.		GO NUMBER 128N02		ELEMENTARY DIAGRAM 902M126AC		CONTD. 18		IDENT 17	
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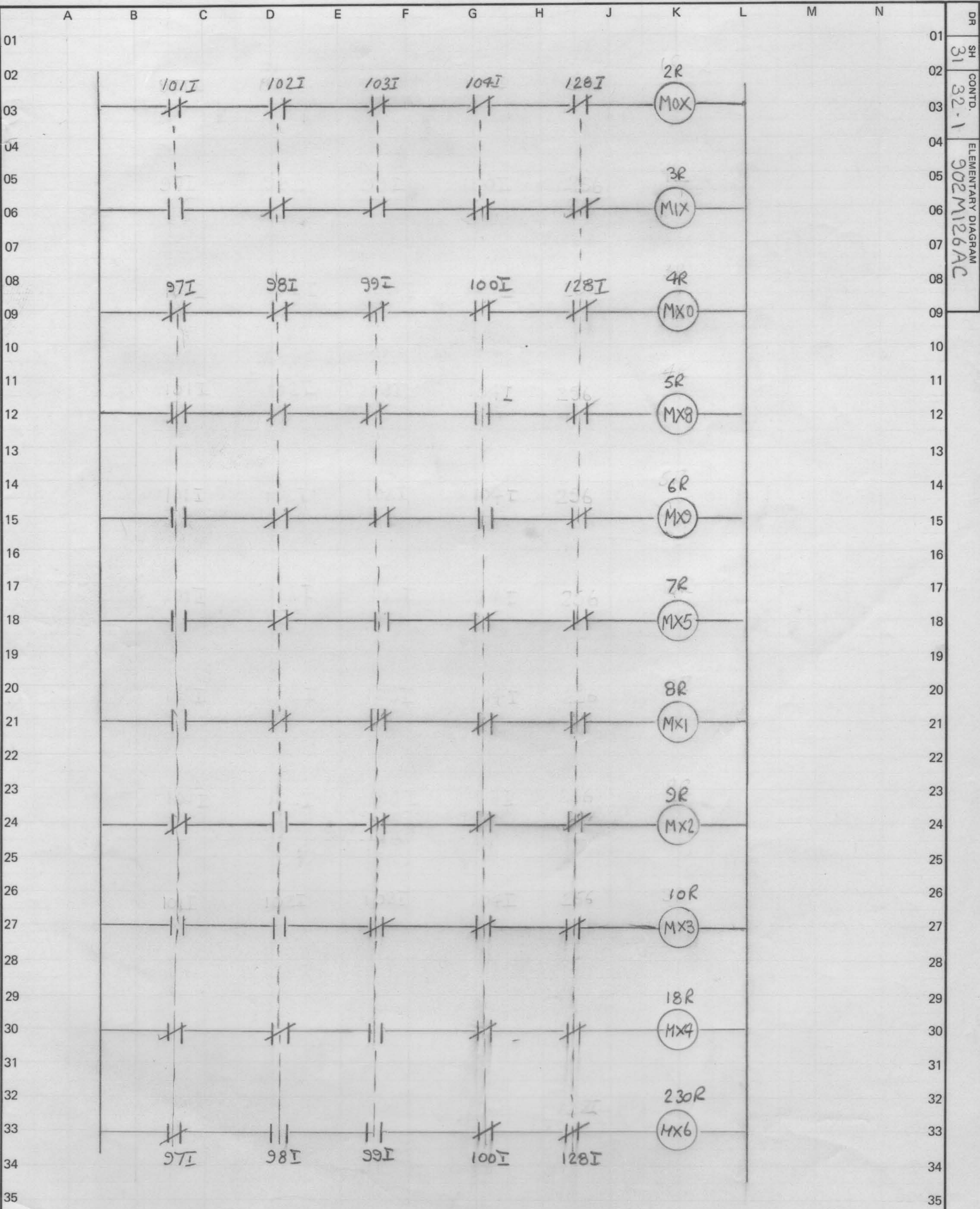


P.C.I.
INPUTS

DR 18
SH 31
CONTD.
ELEMENTARY DIAGRAM
902M126AC

TECHN.		ENG.		APPD.		TECHN.		ENG.		APPD.		DATE		29.4.83		ALLENWEST		TEMPERATURE CONTROLLER		IDENT	
						3						TECHN.				Simplex				DR	
						NEW SHEET						ENG.				VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.		GO NUMBER		SH	
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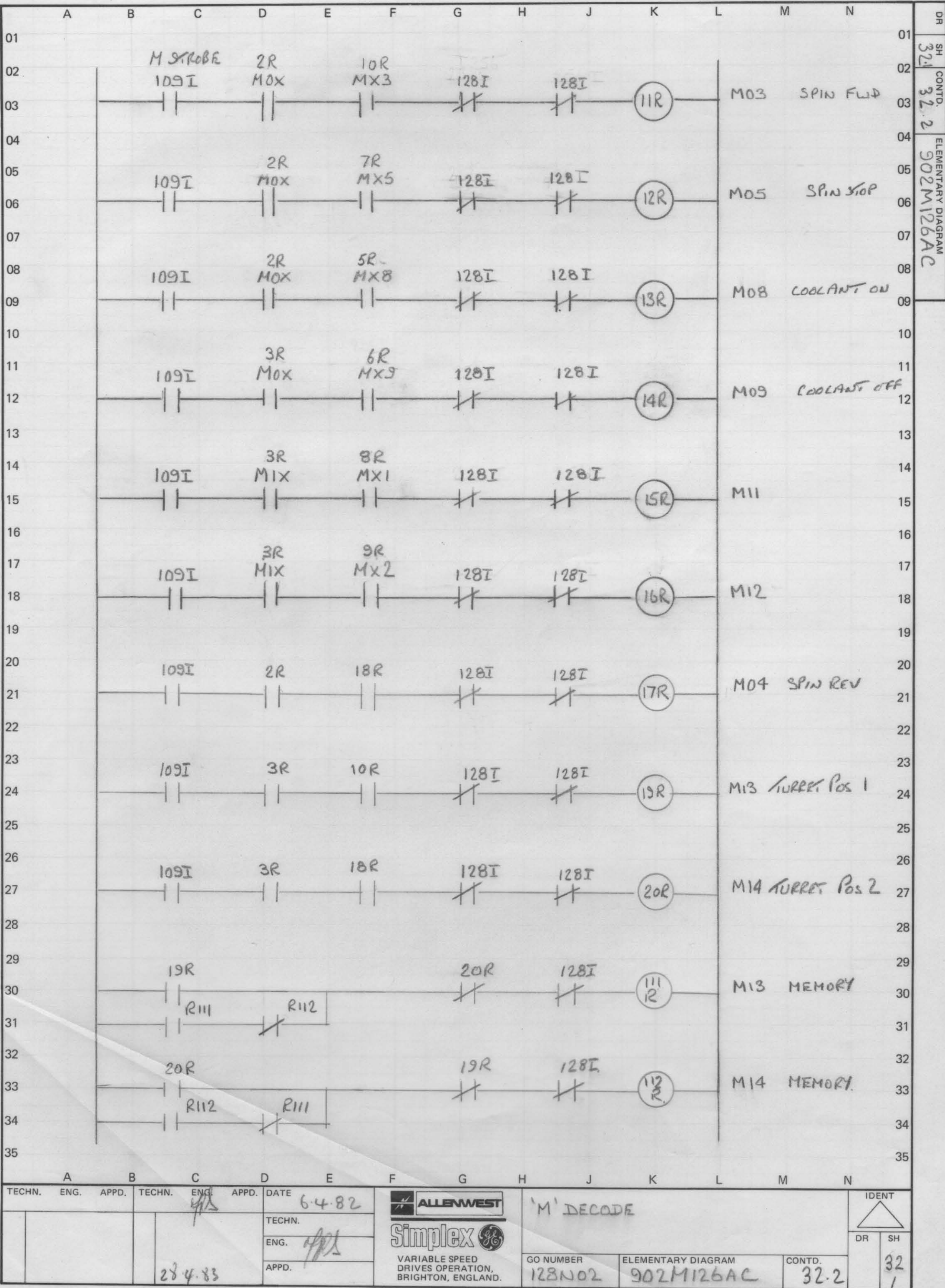
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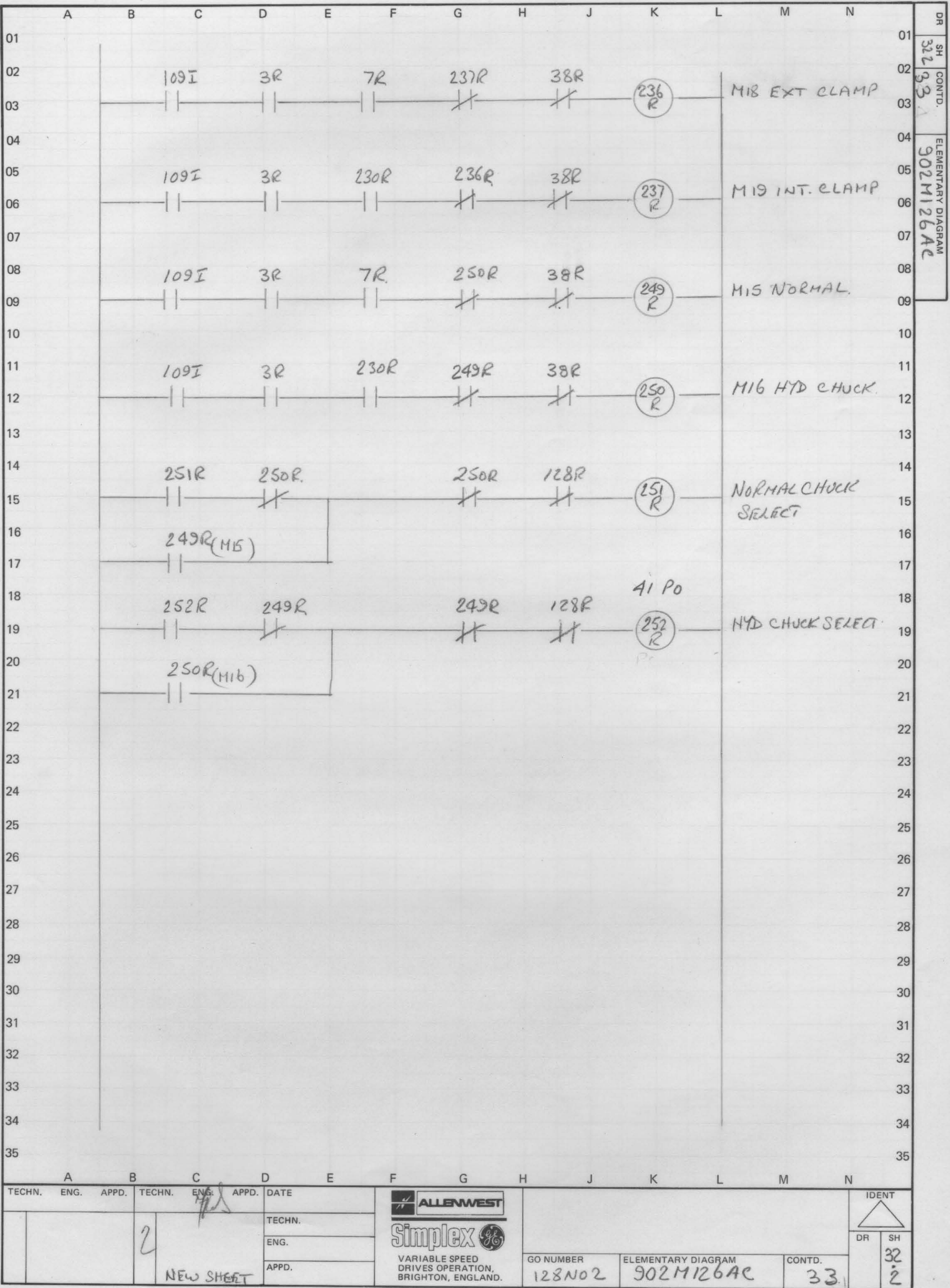
DR SH CONTD. ELEMENTARY DIAGRAM
31 32-1 902M126AC

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE					'M' DECODE		IDENT 	
						6.4.82							DR SH 31	
			2			29.4.83.	GO NUMBER 128N02		ELEMENTARY DIAGRAM 902M126AC		CONTD. 32-1			

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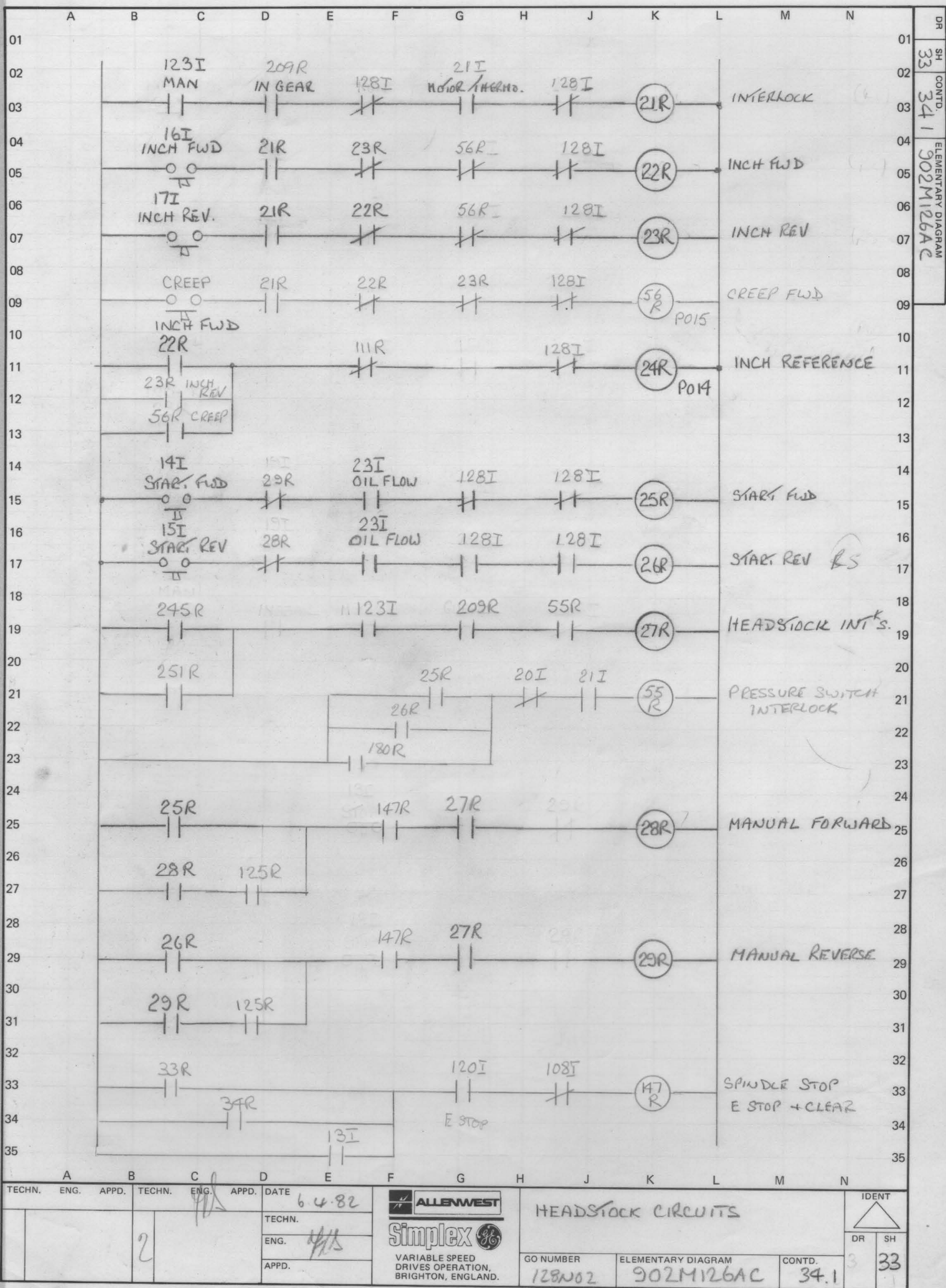


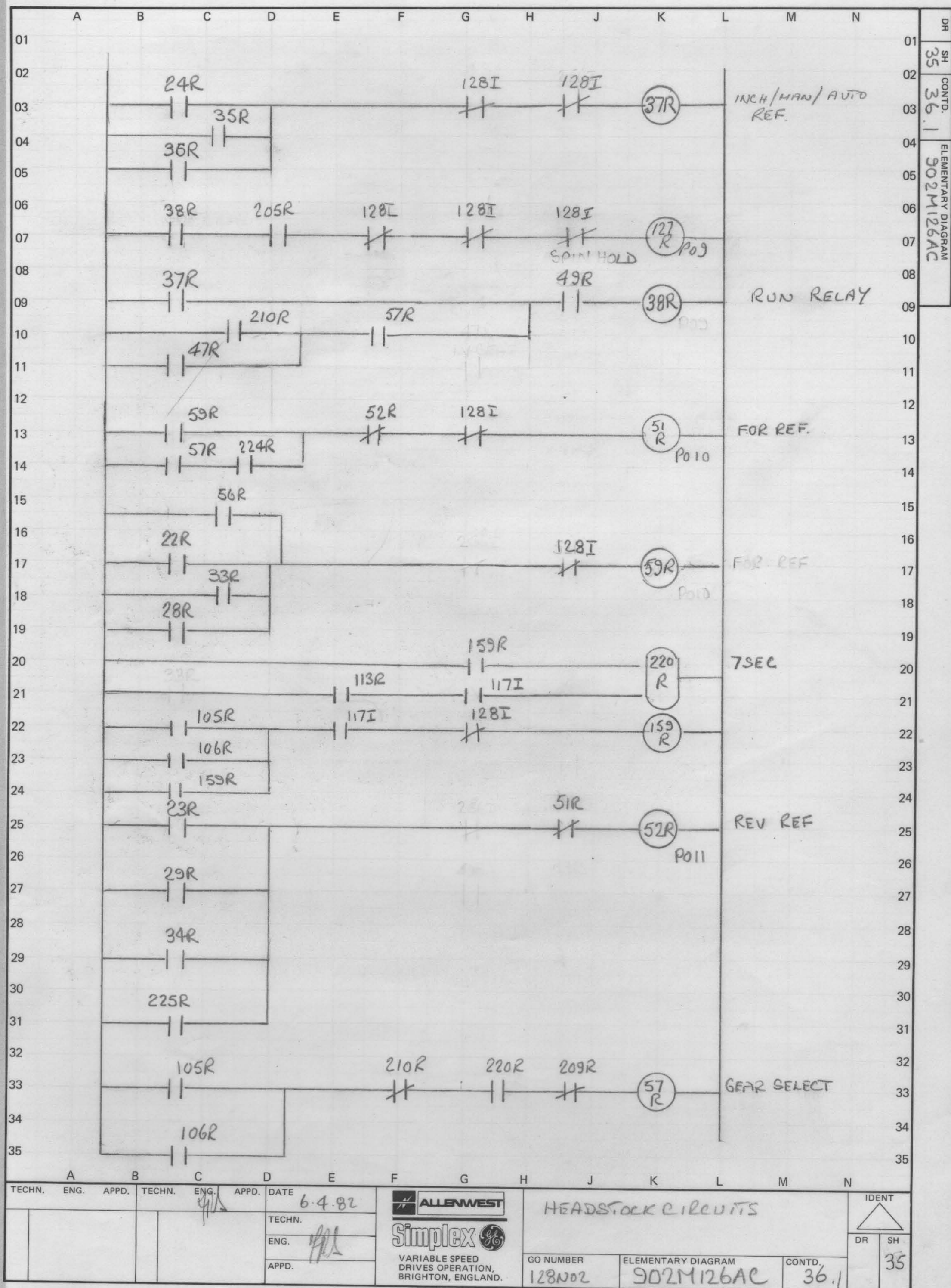
TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	6.4.82	 Simplex VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.	'M' DECODE			IDENT	
							DR					SH	
									GO NUMBER	128N02	ELEMENTARY DIAGRAM	902M126AC	CONTD.






DR 32293
SH CONTD.
ELEMENTARY DIAGRAM
902M1264C

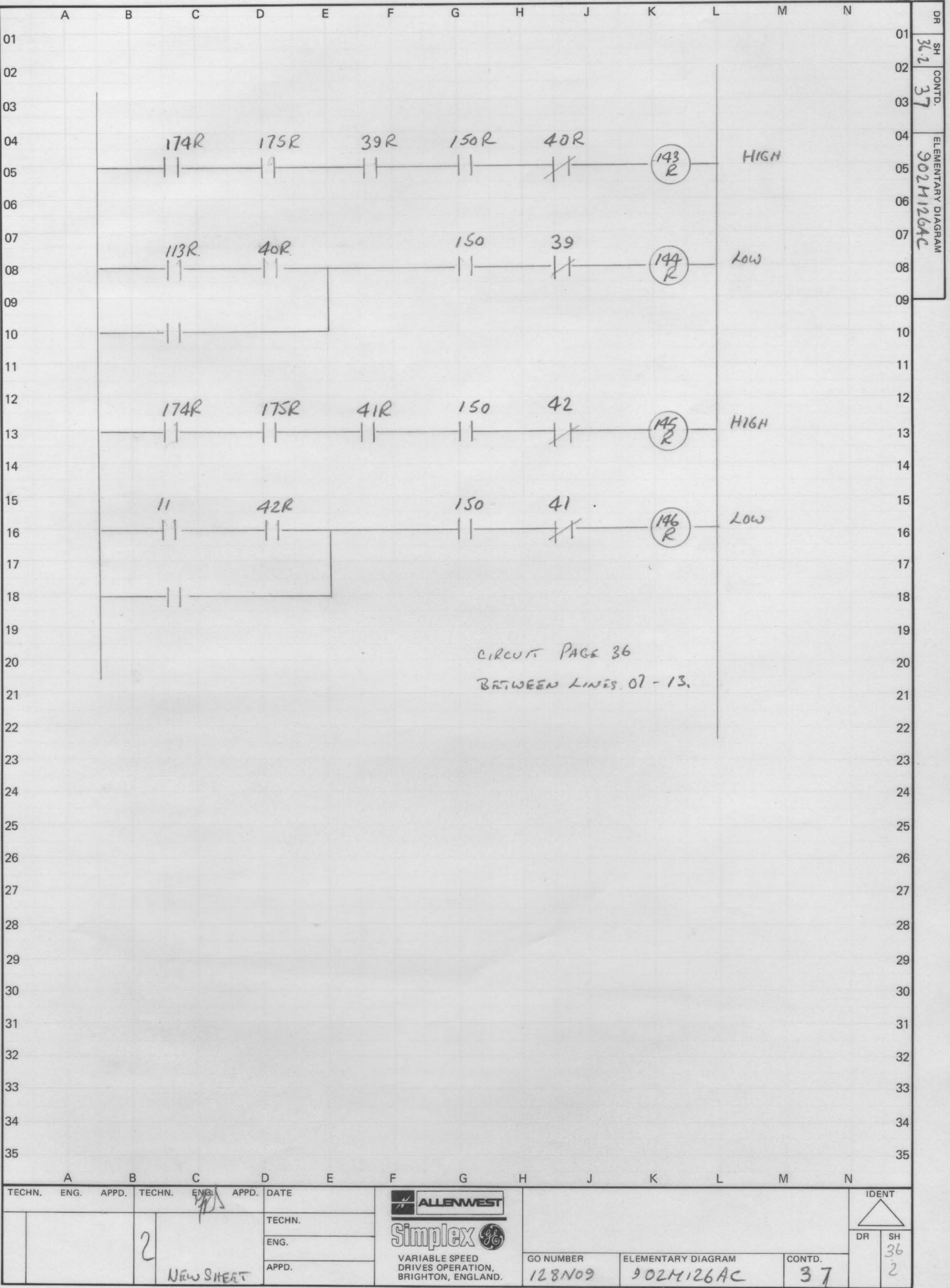
TECHN.		ENG.		APPD.		DATE		IDENT	
				2				DR SH	
				NEW SHEET				32 2	
				Allenwest Simplex VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.				GO NUMBER 128N02	
								ELEMENTARY DIAGRAM 902M1264C	
								CONTD. 33	

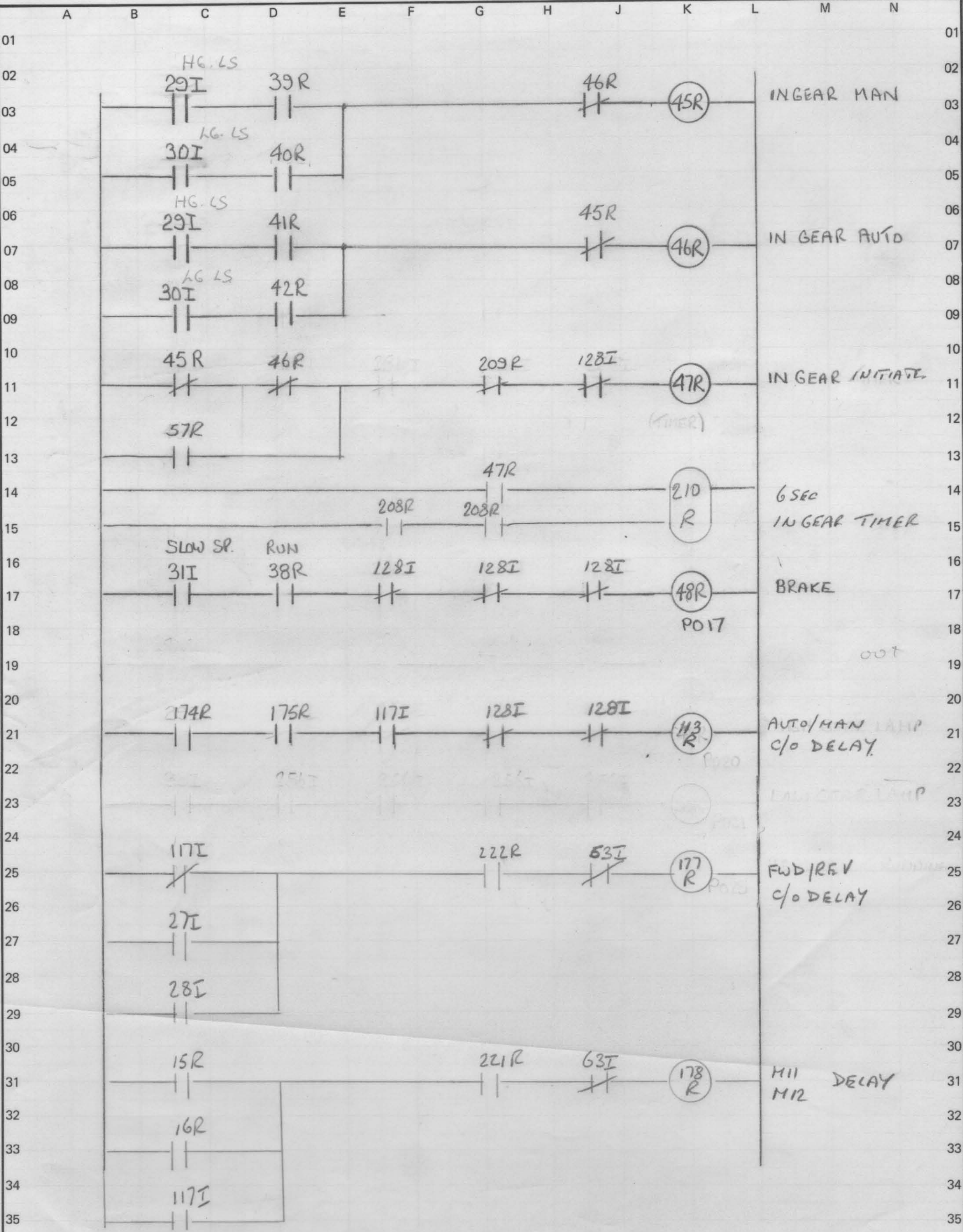






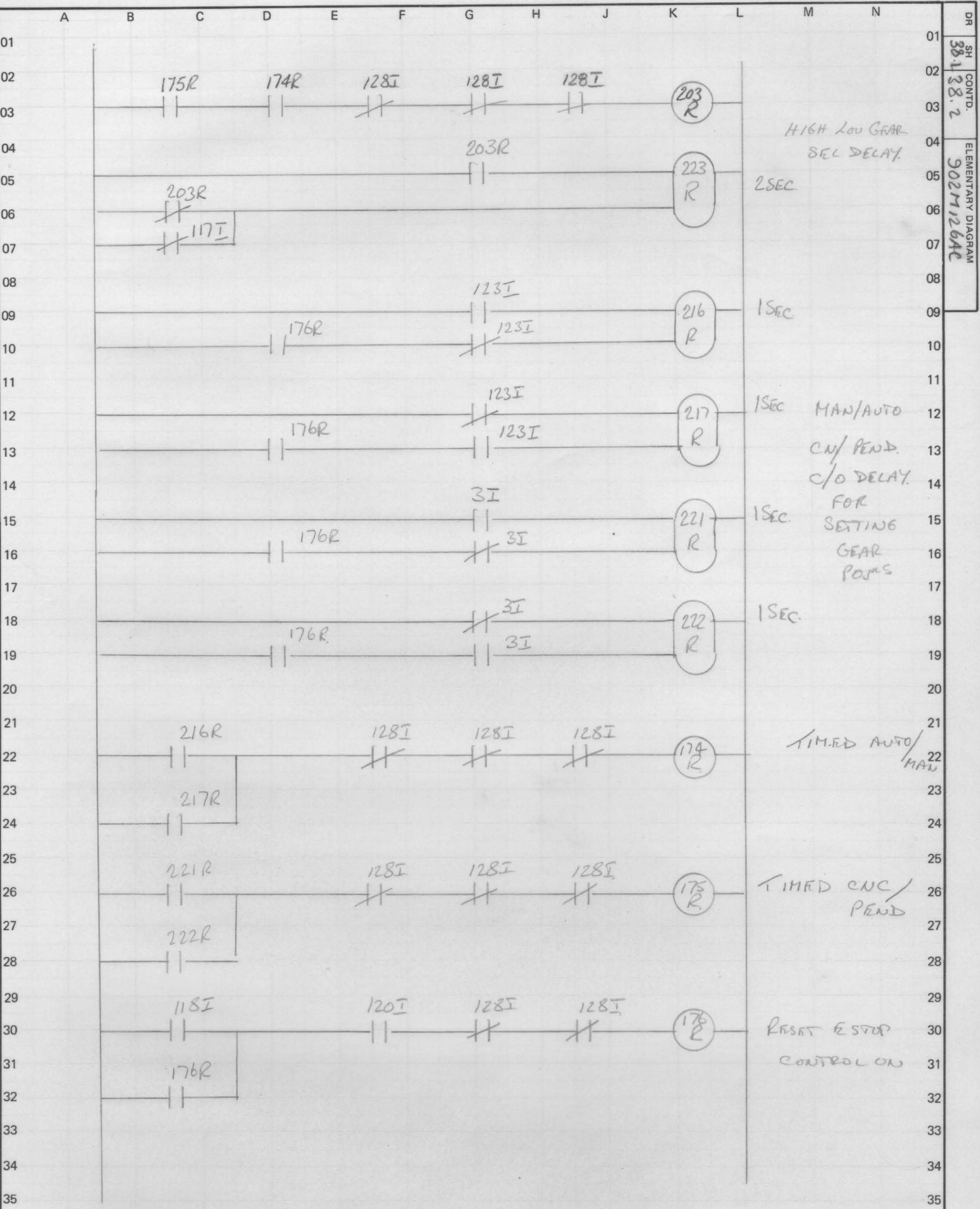
TECHN.		ENG.		APPD.		TECHN.		ENG.		APPD.		DATE				HEADSTOCK GEAR CHANGE.						IDENT 			
												6-4-82												DR	
																						VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.			
																128N09		902M126AC		362		36 1			





TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	HEADSTOCK GEAR CHANGE			IDENT	
						6.4.82				DR SH	
							GO NUMBER			37	
							ELEMENTARY DIAGRAM			38.1	
							902M126AC				

Allenwest Simplex VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.

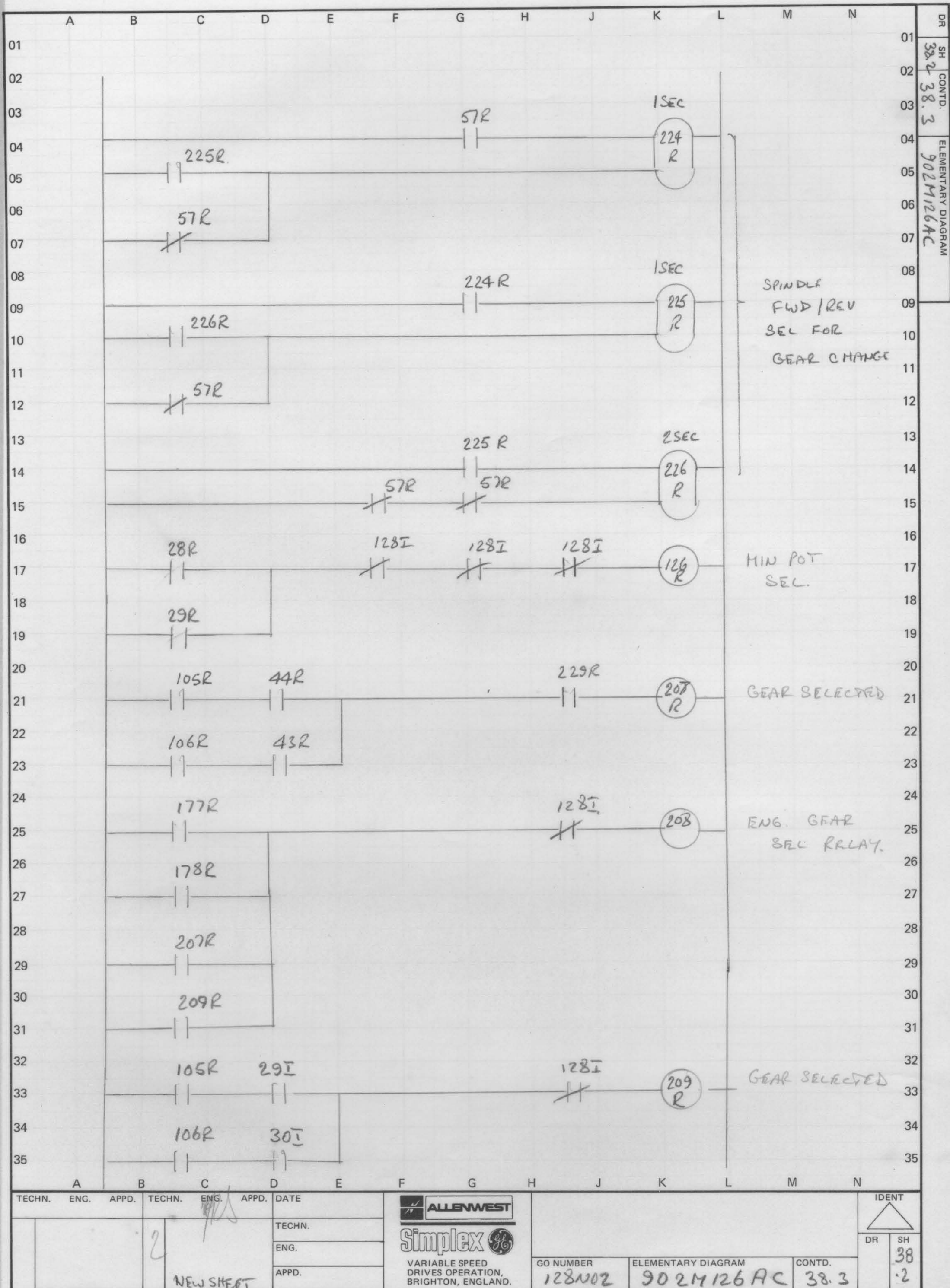


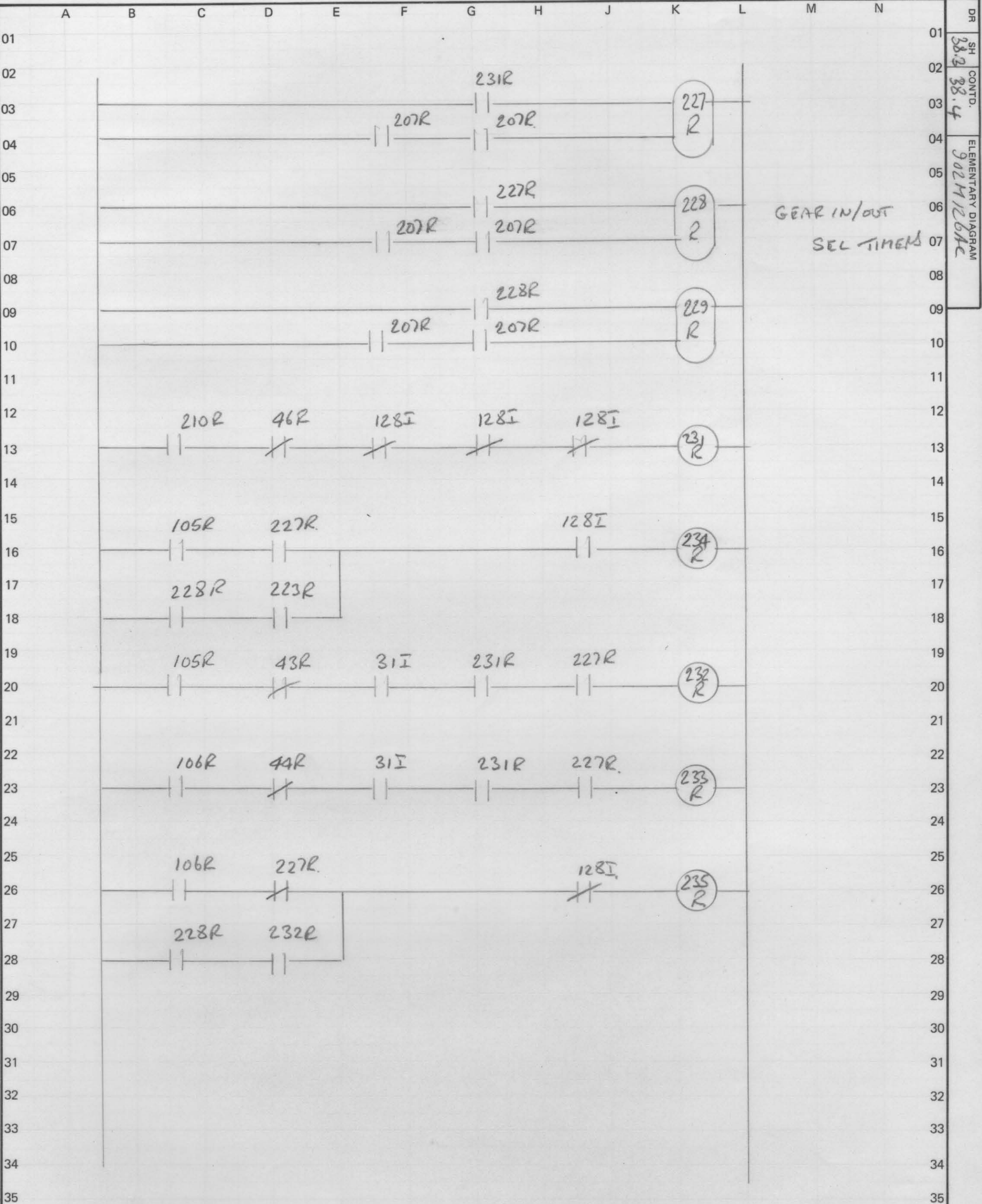
DR SH CONTD. 38.1 38.2 ELEMENTARY DIAGRAM 902M126AC

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	ALLENWEST	GO NUMBER	ELEMENTARY DIAGRAM	CONTD.	IDENT
							Simplex	128N02	902M126AC.	38.2	38
							VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.				DR SH
											1

2 NEW SHEET

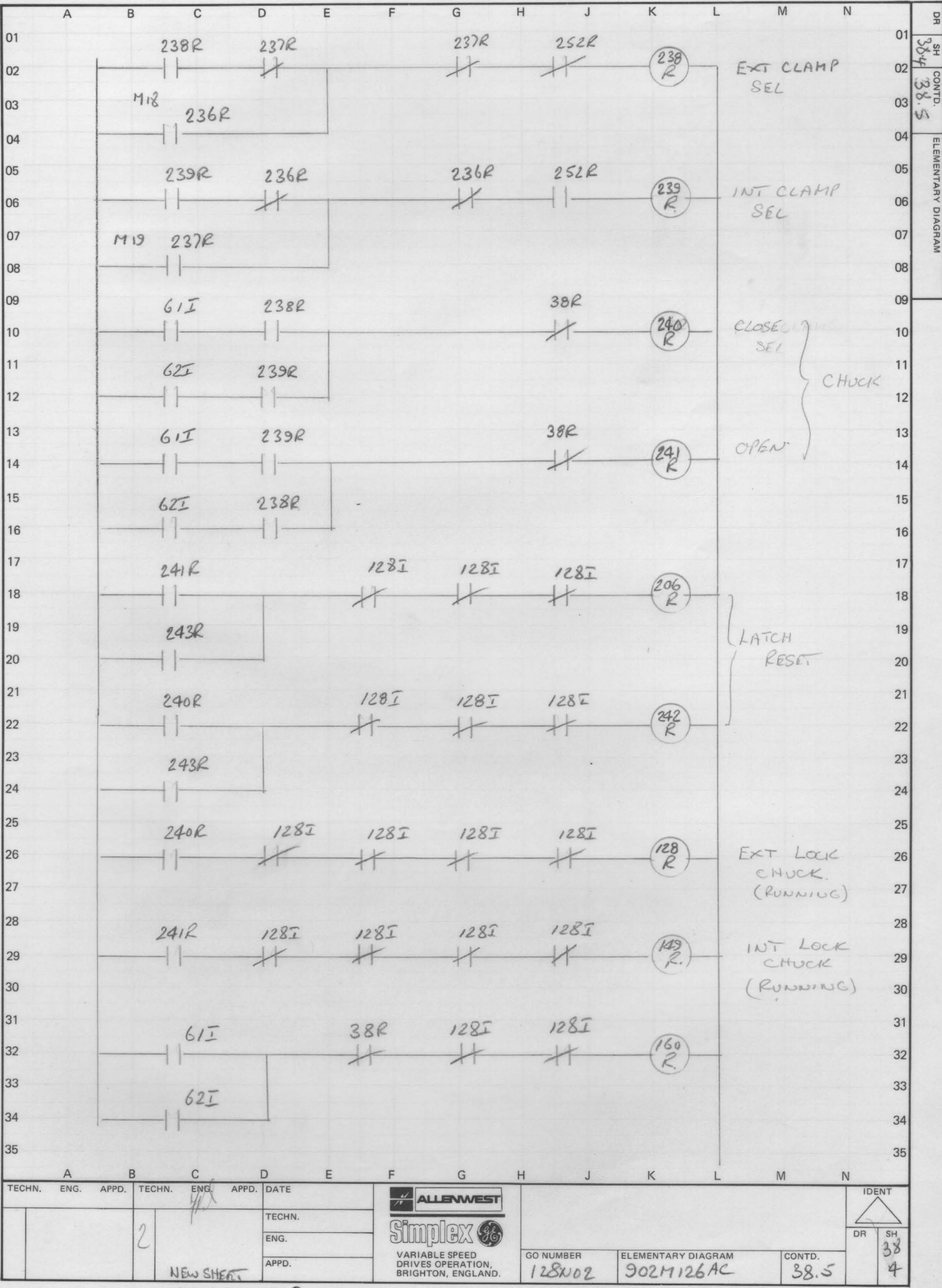
Disclaimer Statement The trade mark is the trade mark of General Electric Company of U.S.A. which is not connected with the English Company of a similar name.

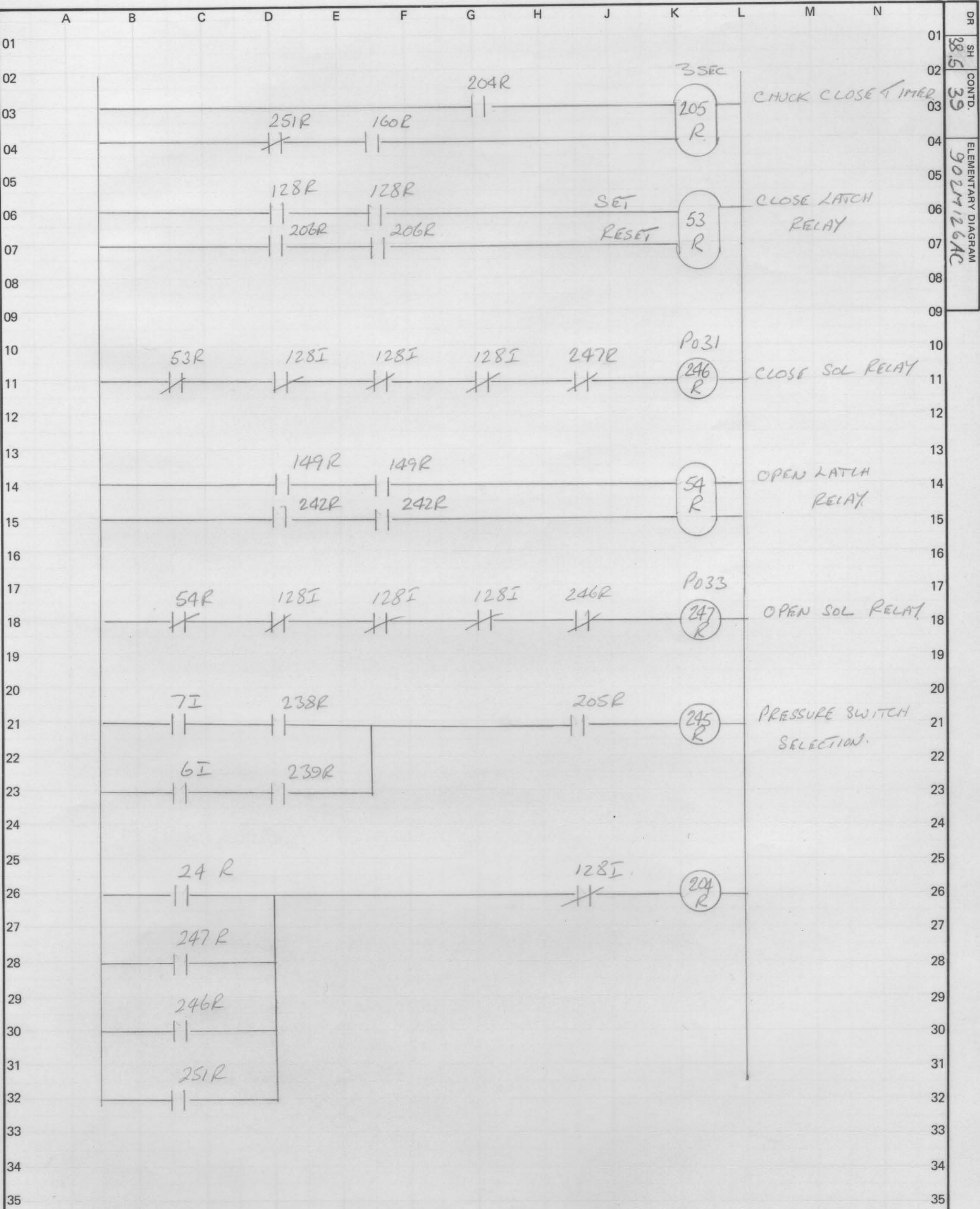




DR SH CONTD. ELEMENTARY DIAGRAM
38.2 38.4 902M126AC

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	ALLENWEST	GO NUMBER	ELEMENTARY DIAGRAM	CONTD.	IDENT
							Simplex	128N02	902M126AC	38.4	DR SH 38 3
NEW SHEET							VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.				

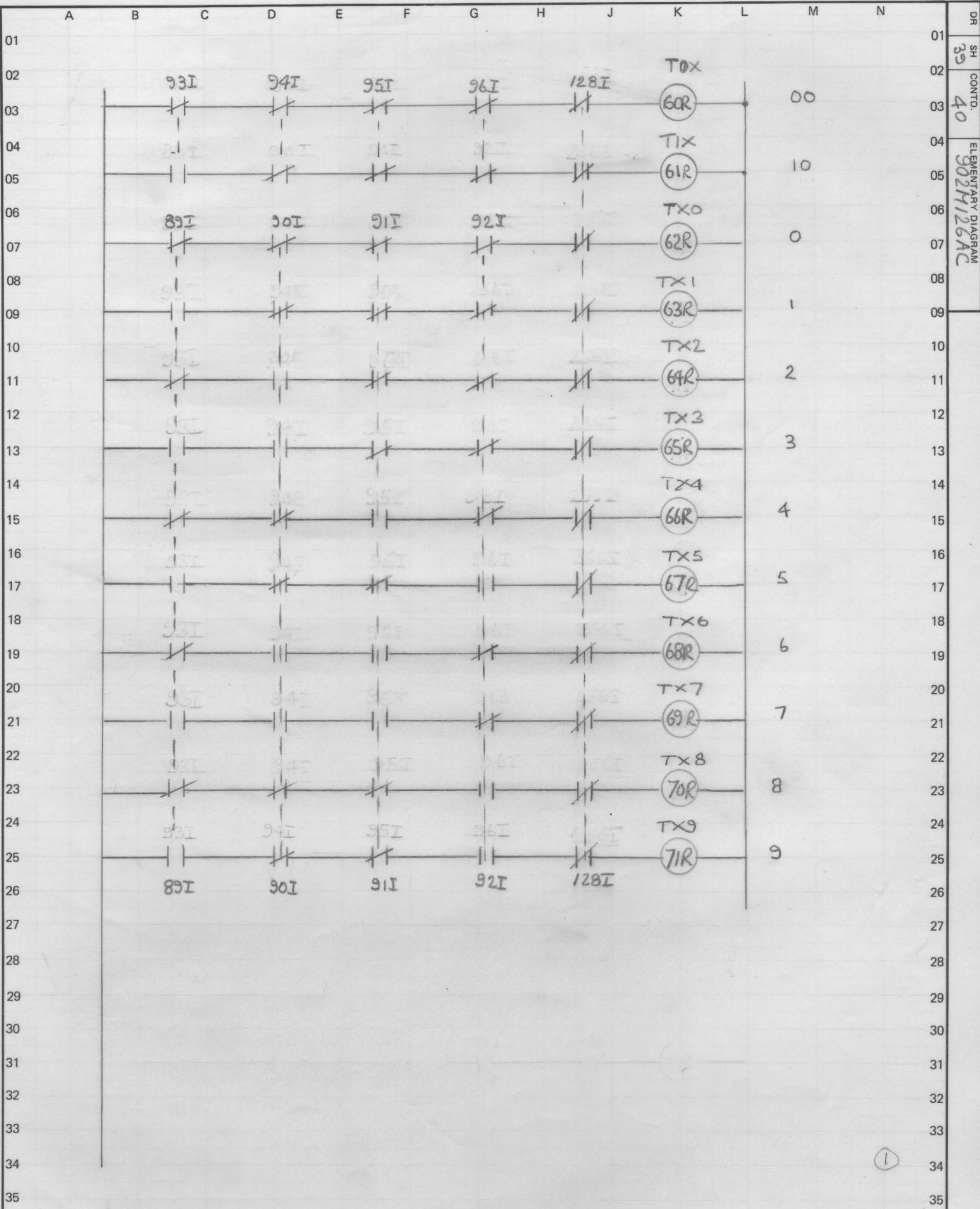




DR SH CONTD. ELEMENTARY DIAGRAM
38.5 39 902M126AC

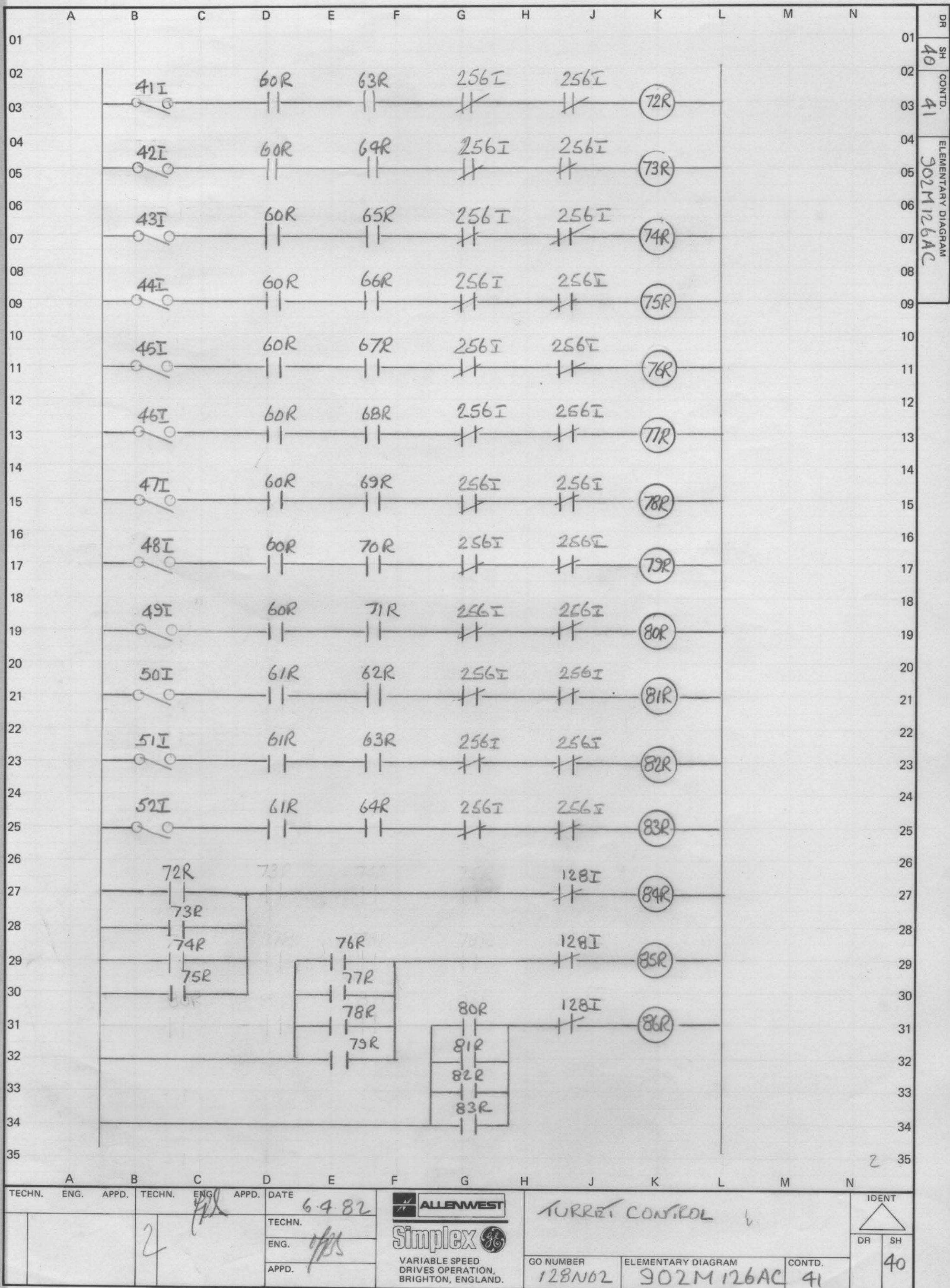
TECHN. ENG. APPD.			TECHN. ENG. APPD.			DATE	GO NUMBER			ELEMENTARY DIAGRAM			CONTD.			IDENT	
			2				128N02			902M126AC			39			38.5	
			NEW SHEET														

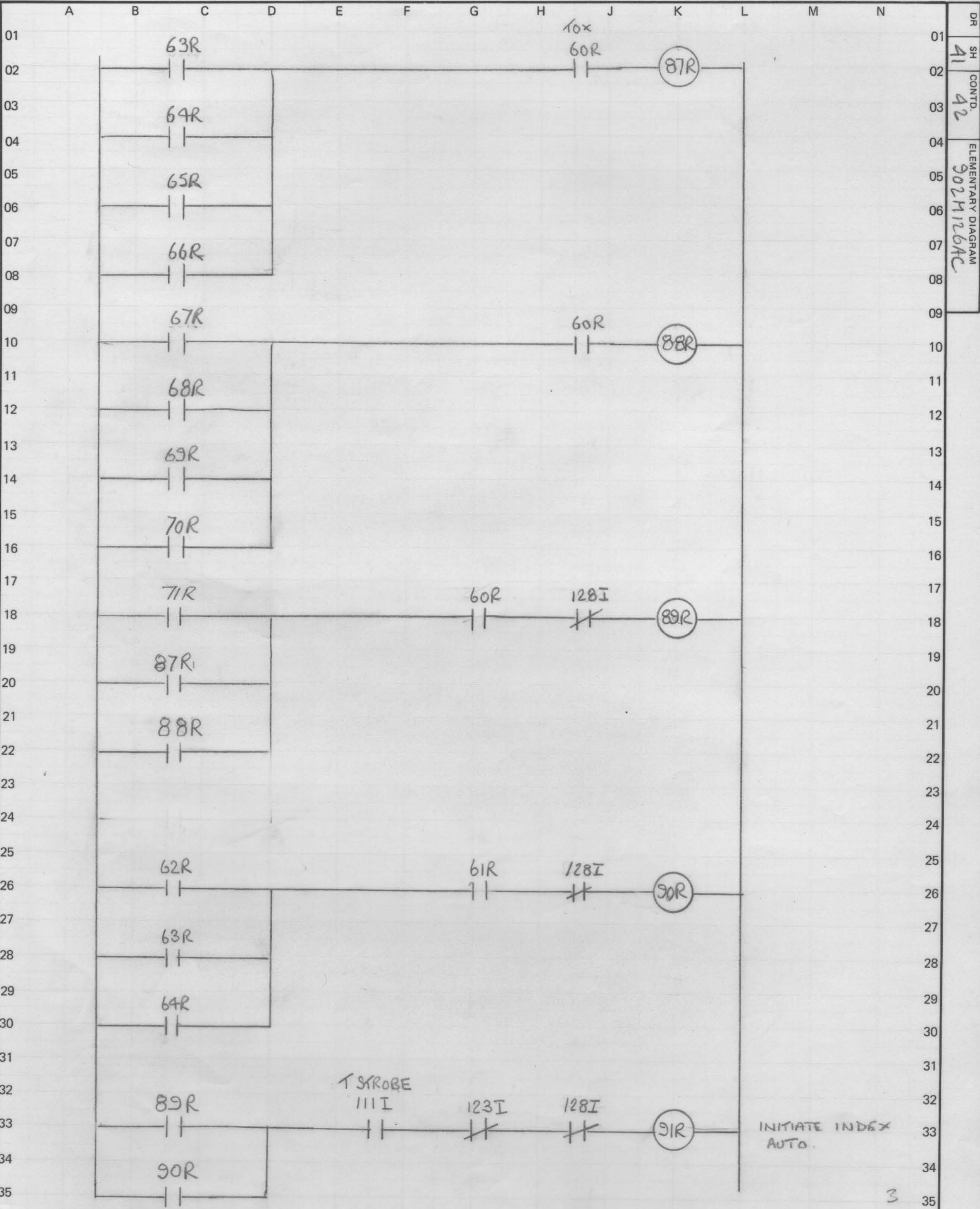
VARIABLE SPEED
DRIVES OPERATION,
BRIGHTON, ENGLAND.



DR SH CONTD. ELEMENTARY DIAGRAM
39 40 902M126AC

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	6482	ALLENWEST	T. DECODE.	IDENT	DR	SH
			2			TECHN.		Simplex				
						ENG.		VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.	GO NUMBER	ELEMENTARY DIAGRAM	CONTD.	
						APPD.			128N02	902M126AC	40	39



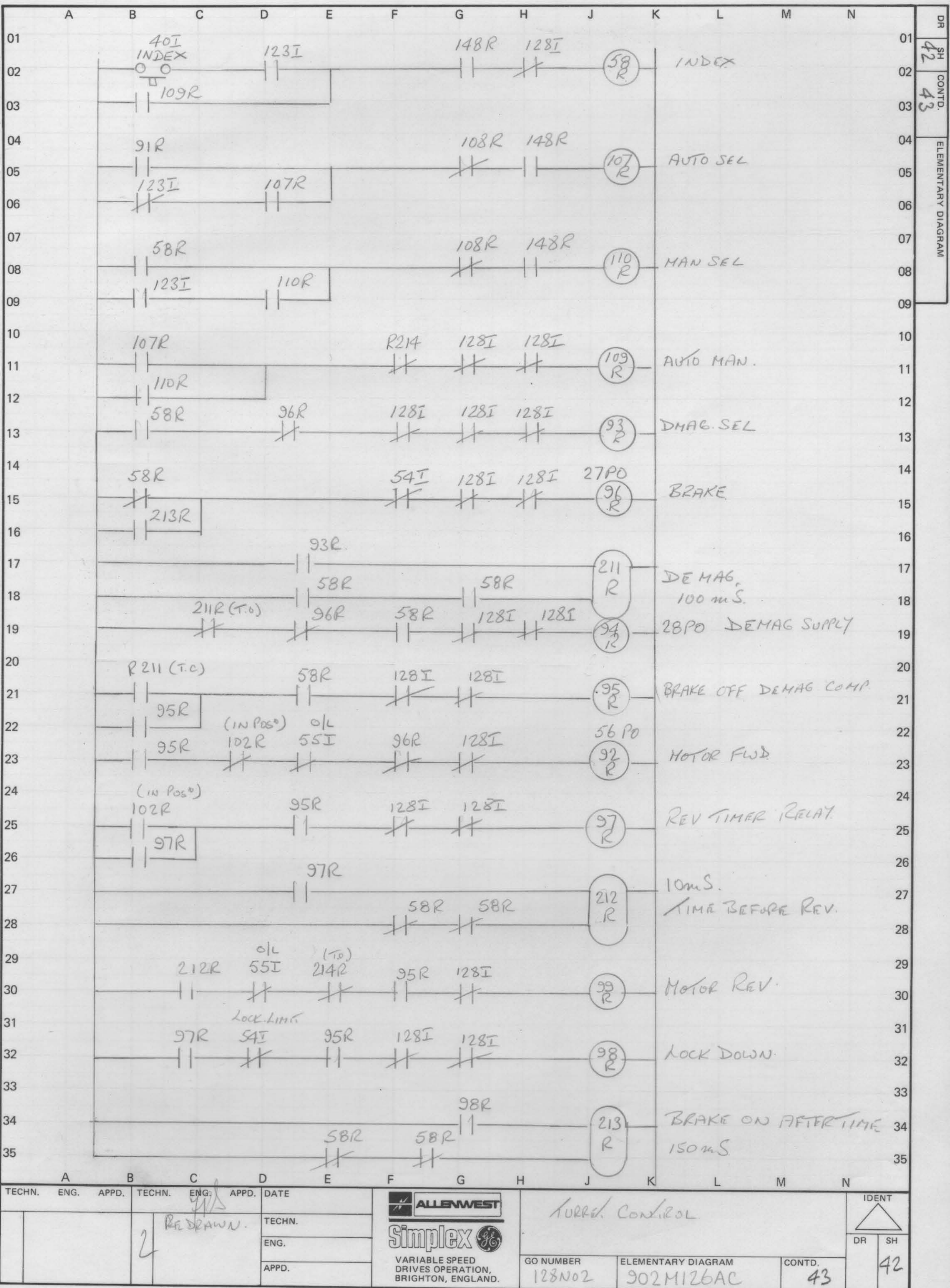


DR SH CONTD. ELEMENTARY DIAGRAM
41 42 902M126AC

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	6.4.82		TURRET CONTROL		IDENT	
						TECHN.			GO NUMBER		DR SH	
						ENG.			ELEMENTARY DIAGRAM		41	
						APPD.			902M126AC		42	

Allenwest Simplex VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.

Disclaimer Statement The trade mark is the trade mark of General Electric Co. Ltd.

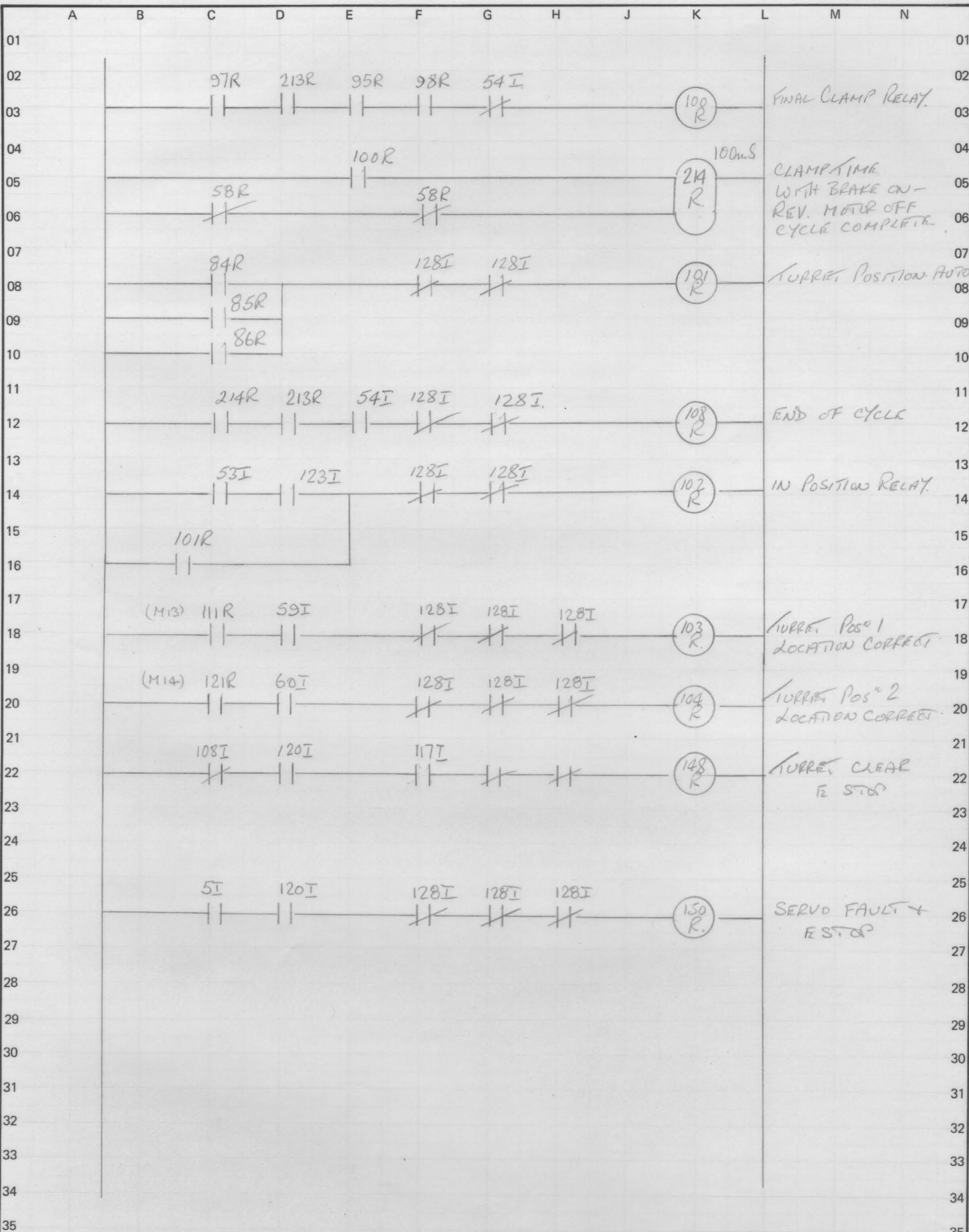


DR SH CONTD. ELEMENTARY DIAGRAM

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	TURRET CONTROL			IDENT	
							GO NUMBER			DR SH	
							ELEMENTARY DIAGRAM			42	
							CONTD.			43	

Allenwest Simplex VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.

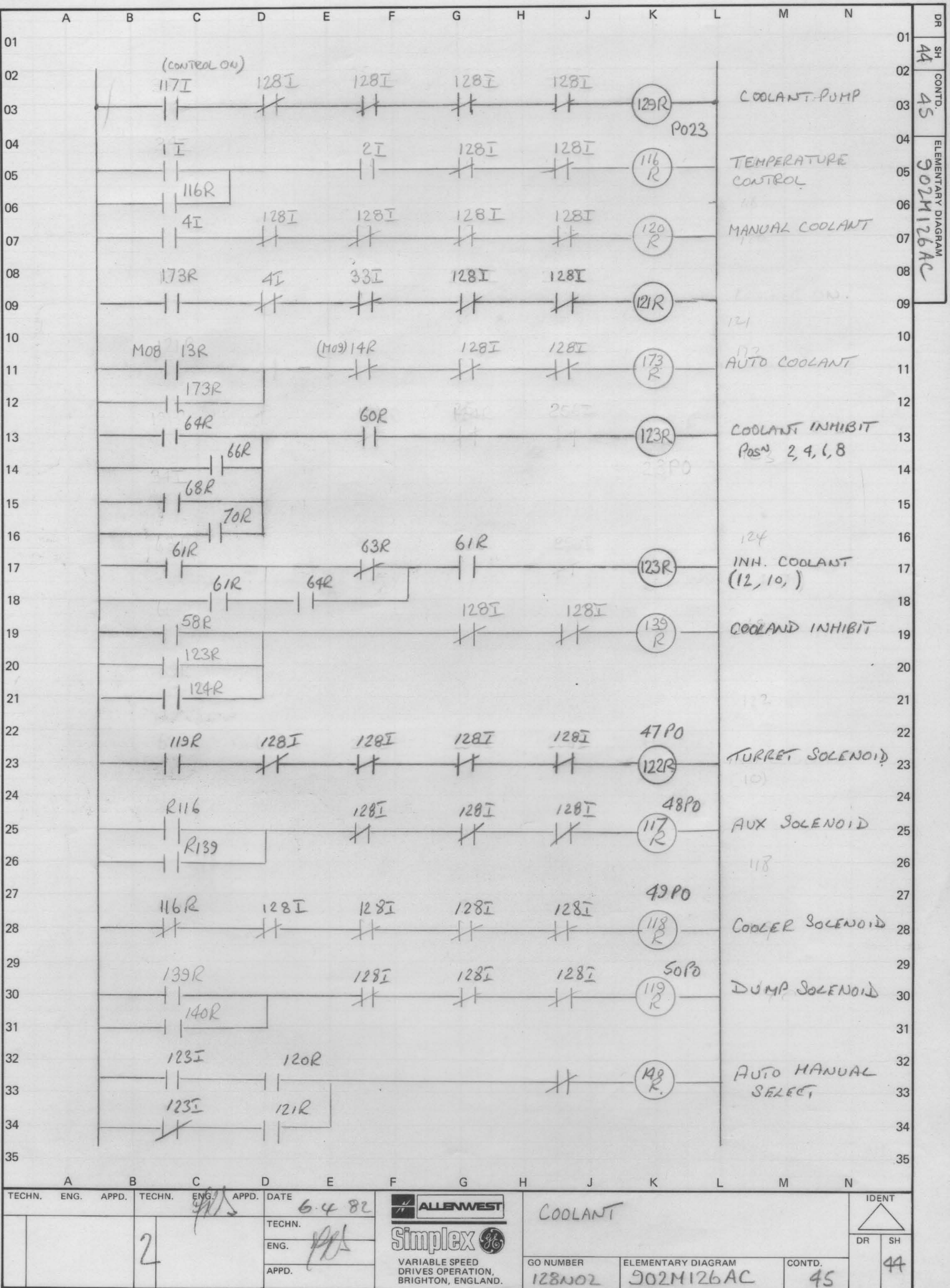
2 RE DRAWN.



TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	GO NUMBER			ELEMENTARY DIAGRAM			CONTD.			IDENT			
							128N02			902M126AC			44			43			
<div>Allenwest Simplex VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.</div>							TURRET CONTROL									DR		SH	

2 REDRAWN

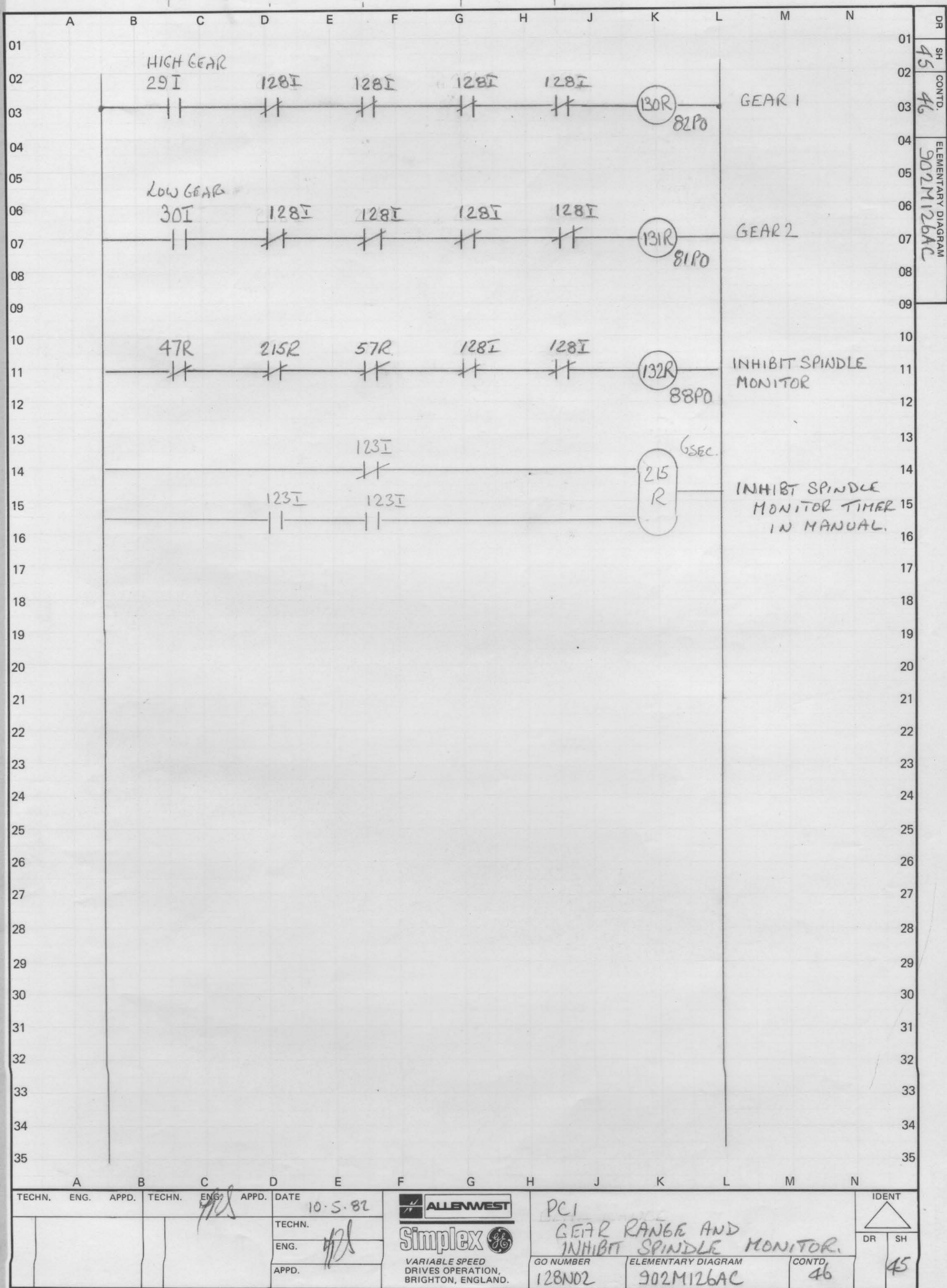
Disclaimer Statement The trade mark is the trade mark of General Electric Company of U.S.A. which is not connected with the English Company of...

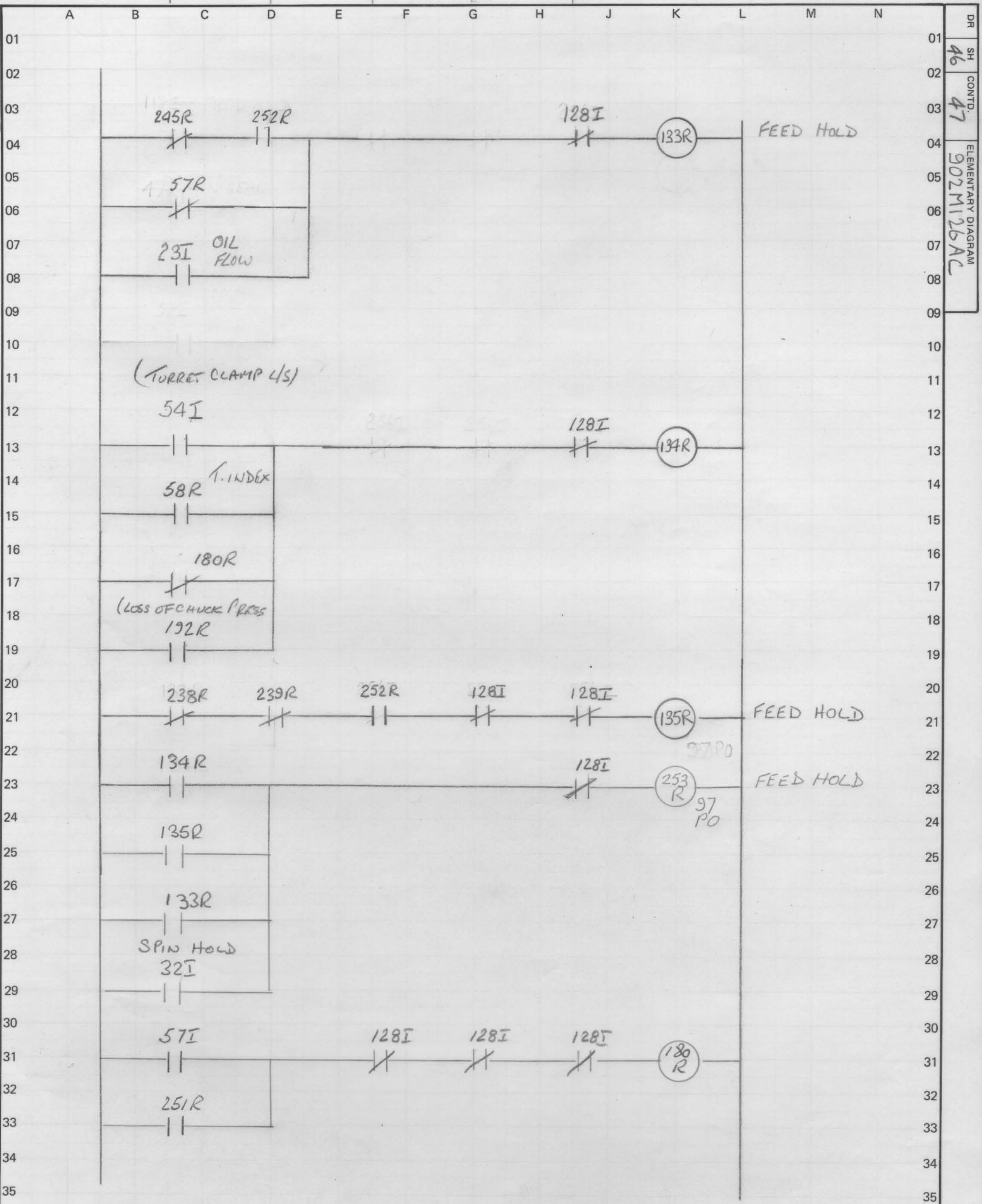


DR SH CONTD. ELEMENTARY DIAGRAM
44 45 902M126AC

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	COOLANT			IDENT	
			2			6.4.82				DR SH	
							GO NUMBER			44	
							128N02			902M126AC	
							ELEMENTARY DIAGRAM			45	
							CONTD.				

Allenwest Simplex VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.

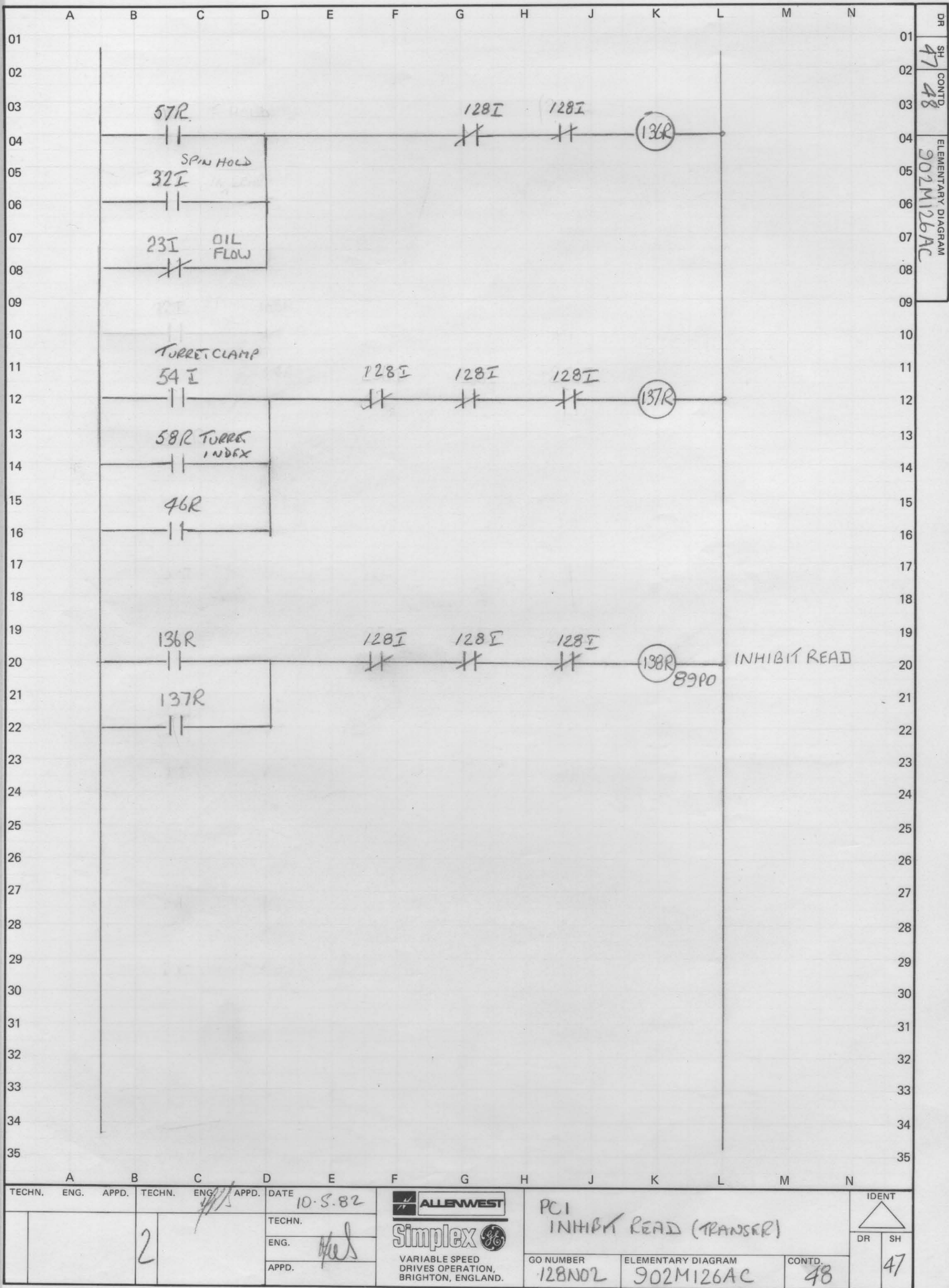


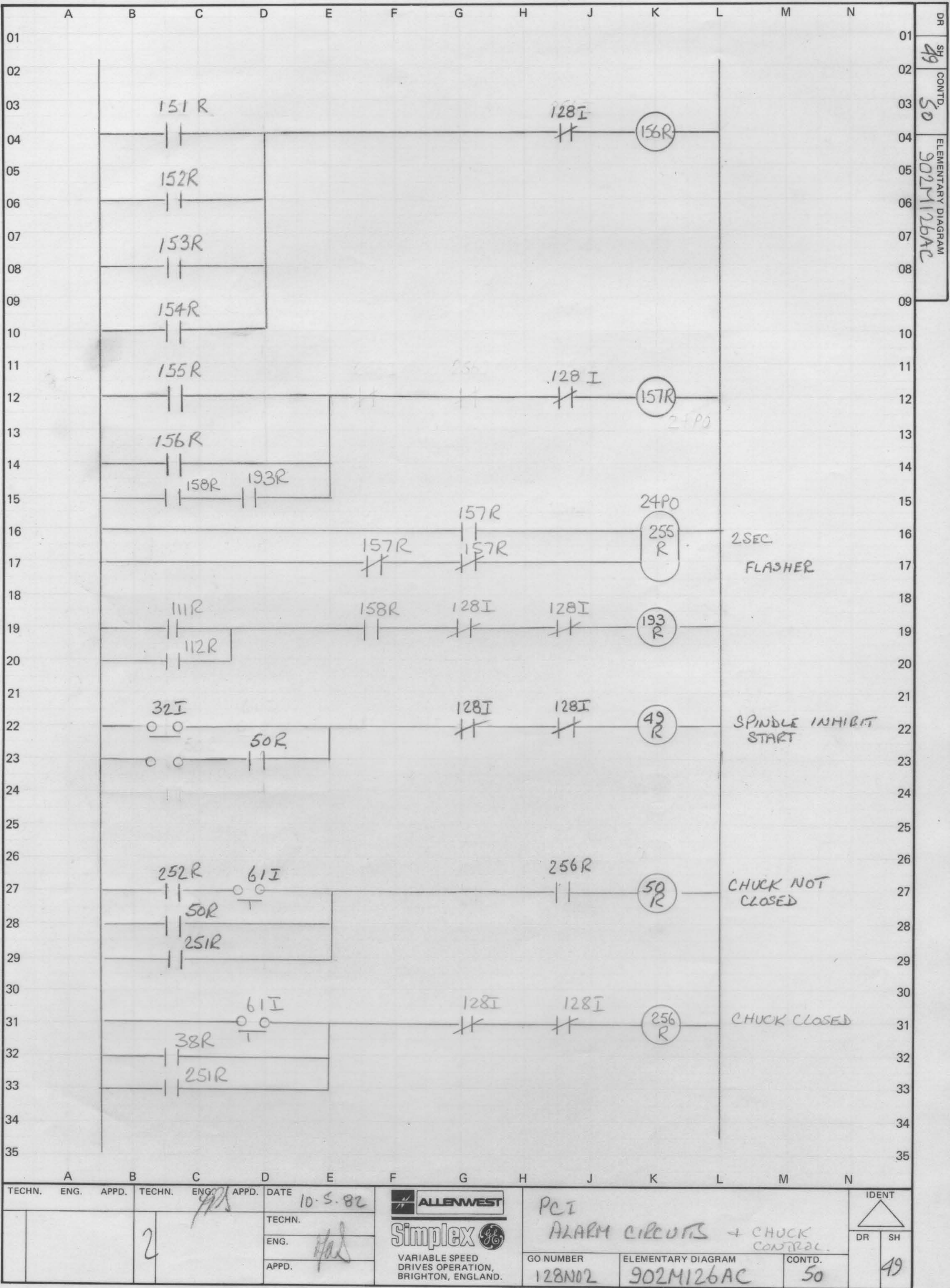


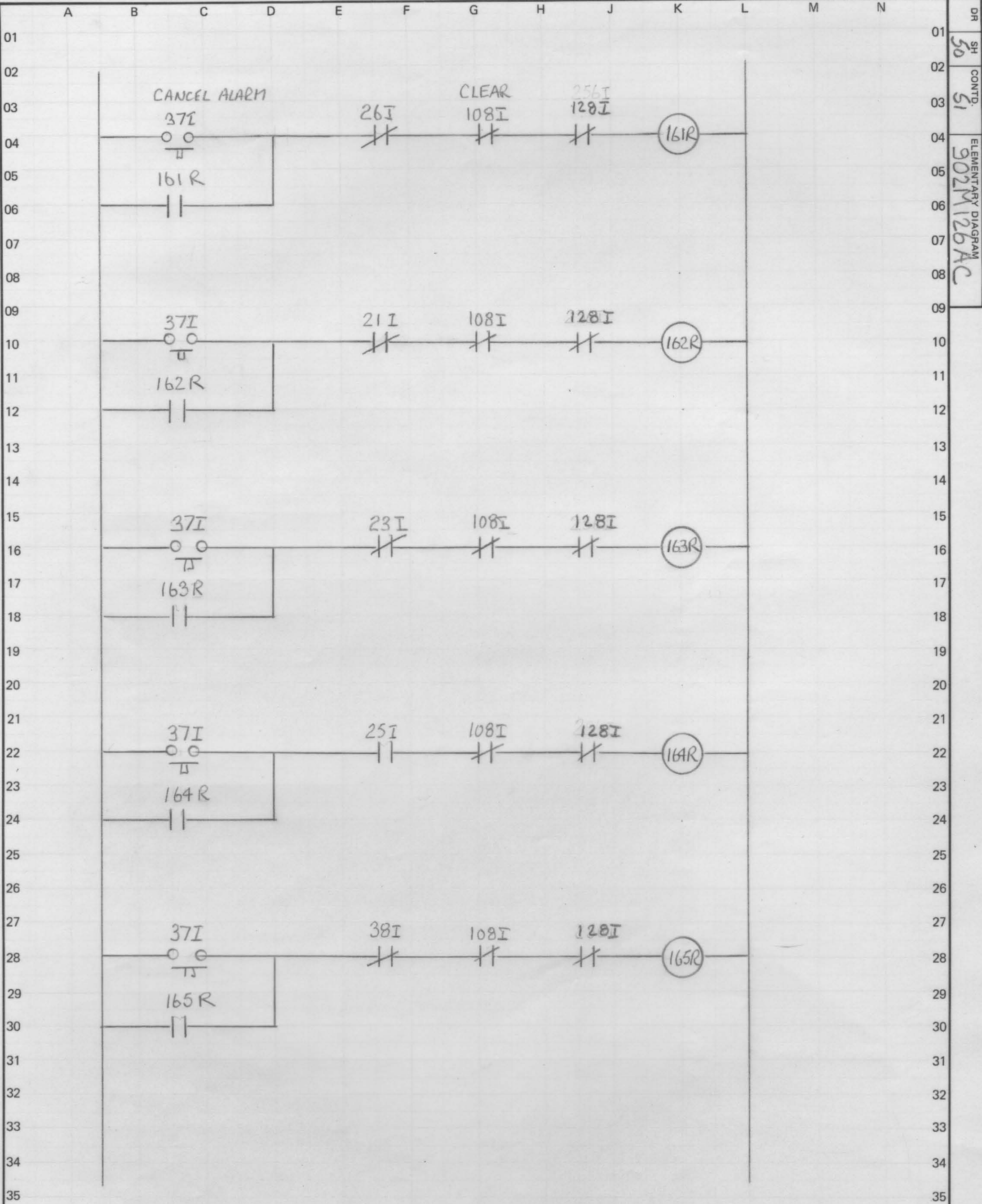
DR 46 SH CONTD. 47 ELEMENTARY DIAGRAM 902M126AC

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	10.5.82	PC1.	FEED HOLD	GO NUMBER	128N02	ELEMENTARY DIAGRAM	902M126AC	CONTD.	47	IDENT	DR	SH	46
			2																
VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.																			

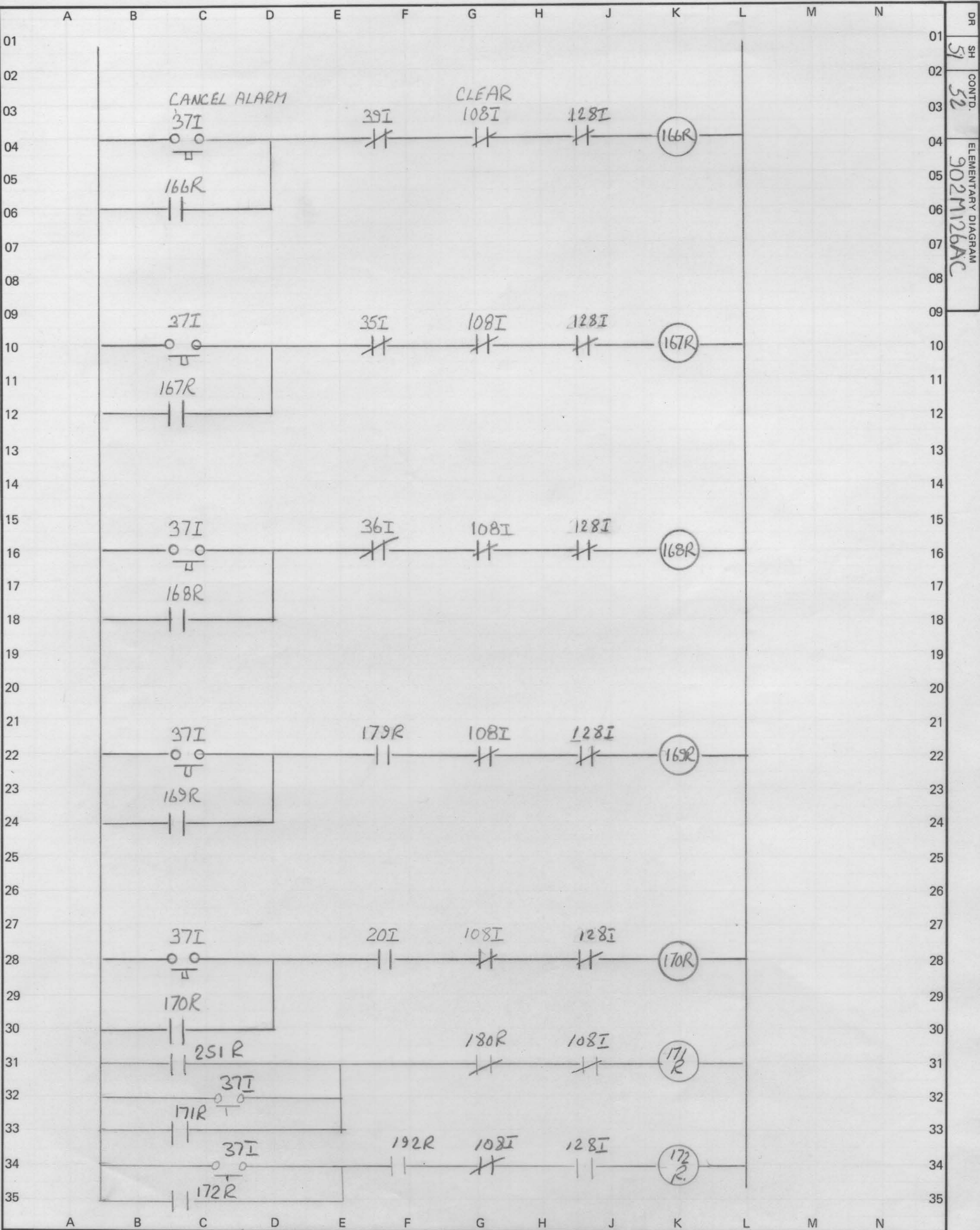
Disclaimer Statement The trade mark is the trade mark of General Electric Company of U.S.A. which is not connected with the English Company of...





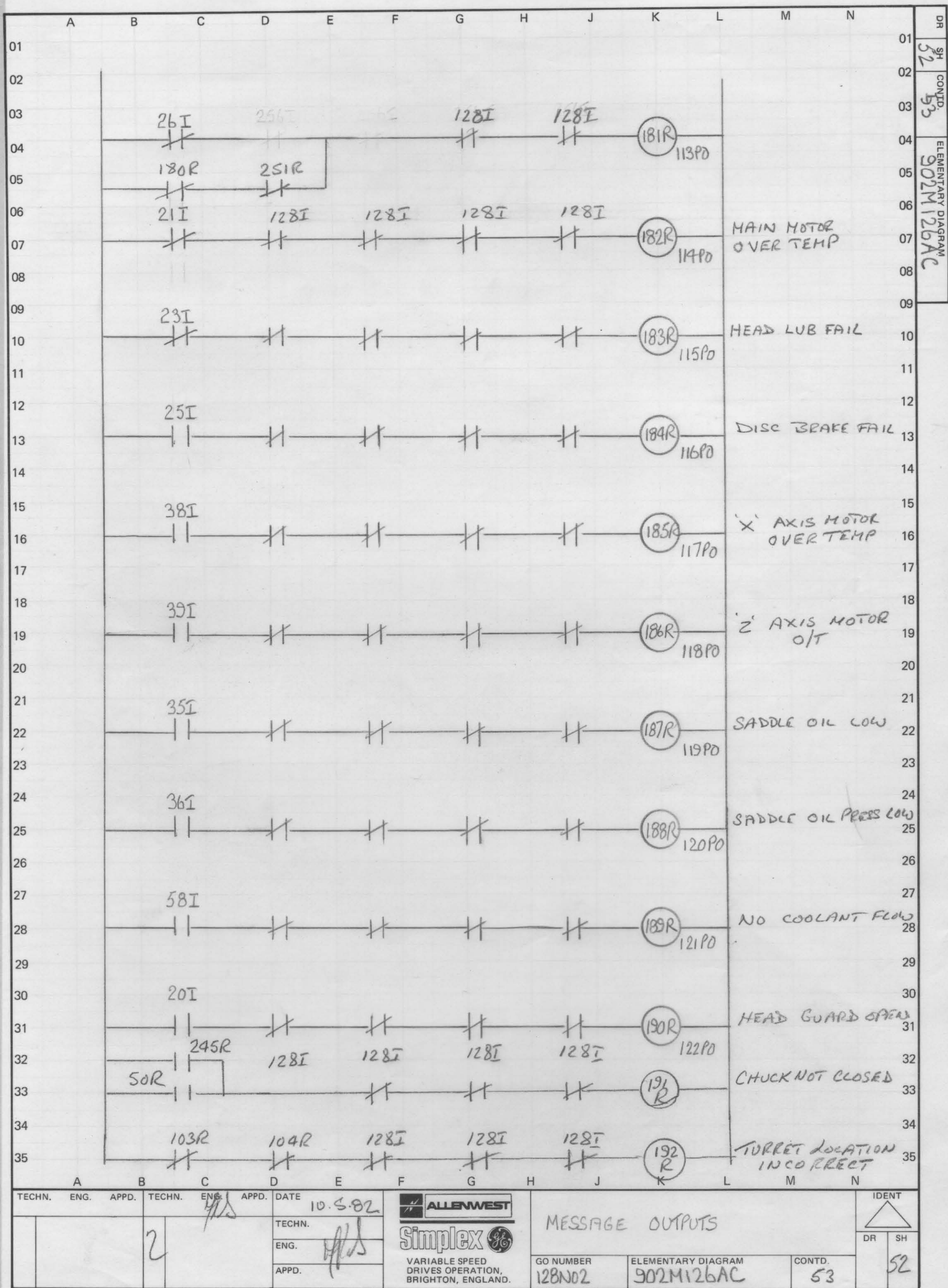


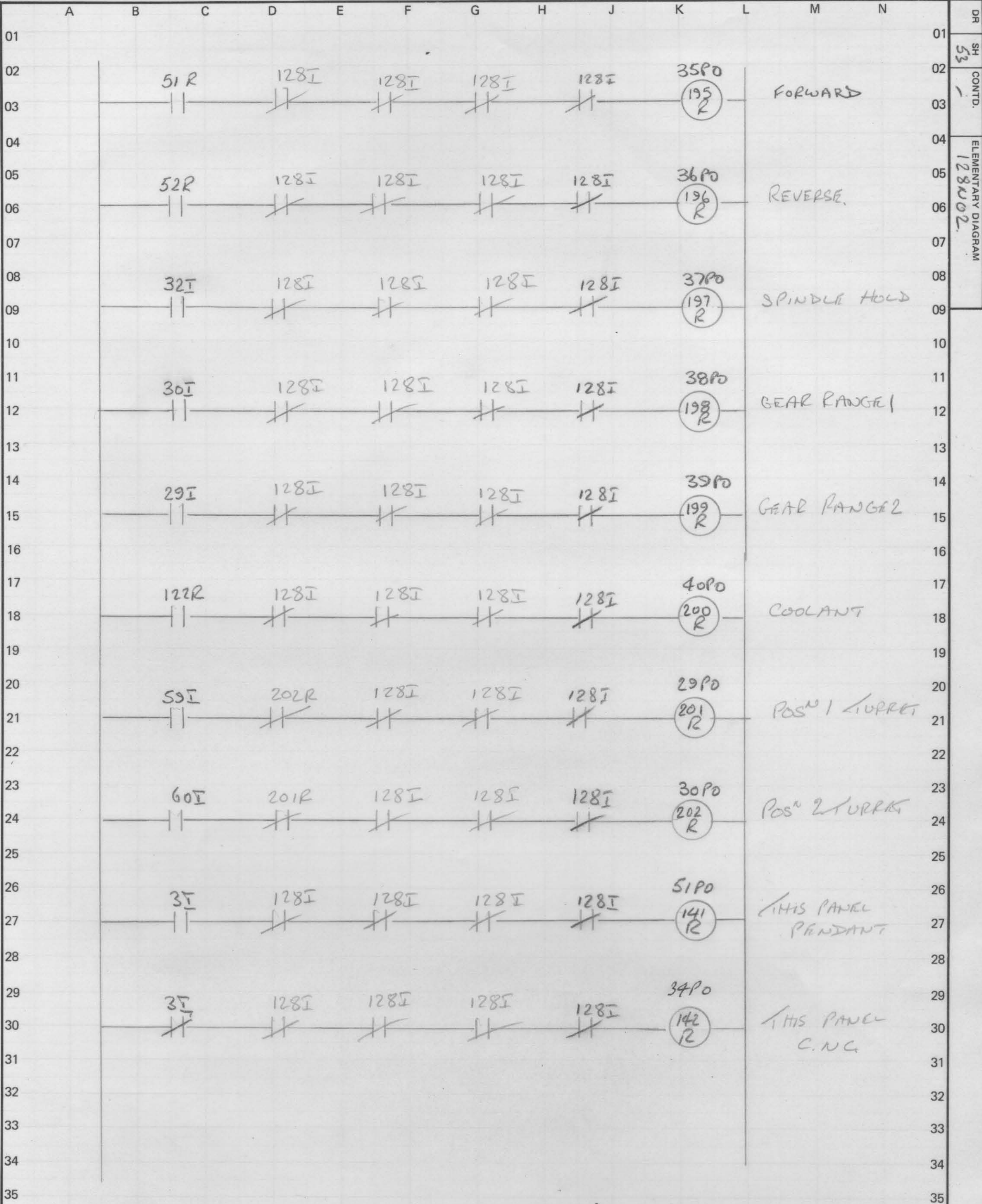
TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE				PCI CANCEL ALARM CIRCUITS			IDENT 	
			2			10.5.82							DR	SH
							VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.			GO NUMBER	ELEMENTARY DIAGRAM	CONTD.		
										128N02	902M126AC	51		50




DR SH CONTD. ELEMENTARY DIAGRAM
51 52 902M126AC

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	10.5.82	ALLENWEST	PCF	IDENT	
			2			TECHN.		Simplex	CANCEL ALARM CIRCUITS		
						ENG.		VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.	GO NUMBER	ELEMENTARY DIAGRAM	CONTD.
						APPD.			128N02	902M126AC	52





TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	 Simplex VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.		GO NUMBER 128N02	ELEMENTARY DIAGRAM 902M126AC	CONTD.	IDENT DR SH 53
			2									
NEW SHEET												

Disclaimer Statement The trade mark is the trade mark of General Electric Company of U.S.A. which is not connected with the British

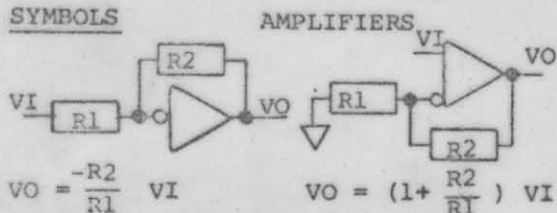
A B C D E F G H J K L M N

VOLTAGE POLARITIES SHOWN ARE FOR MOTORING DAI(+)

HARDWARE ABBREVIATIONS

MCC MAIN CONTROL CARD
 IFC INTERFACE CARD
 PSC POWER SUPPLY CARD
 SCR THYRISTOR ASSEMBLY
 DGC DIAGNOSTIC CARD
 MFC MOTOR FIELD CONTROL
 MFE MOTOR FIELD EXCITER
 MDR MODIFICATION RACK
 ACC AUXILIARY CONTROL CARD

SYMBOLS



CASE GROUND

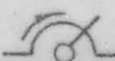
VO = SIGN () X ABSOLUTE VALUE OF VI

STAB ON TERMINAL

TERMINAL AT 2TB, 3TB, 4TB, RTB.

EX: 9 [2] - 2TB9; X2 [R] - RTBX2

TERMINAL AT T.B.'s



POTENTIOMETER ARROWS ON THE CARD
 ELEMENTARY DIAGRAMS INDICATE THE
 WIPER DIRECTION AS THE POTENTIOMETER
 SHAFT IS ROTATED CLOCKWISE TO INCREASE
 FUNCTION.



THESE RESISTORS ARE CRIMPED IN WIRE
 HARNESS.

FUNCTION	USE	LOC	JUMPERS
60HZ		MFC	ZA-ZB (IF USED)
50HZ	X	MCC	HZA - PHA
IOC-400%			(NONE)
-500%		IFC	I - IHI
-300%		IFC	I - ILO
SR5 - 9v	X		(NONE)
9 - 20v		MCC	SRH - COM
JOGR 10v			(NONE)
20v		MCC	JH - COM
LT. 3-7sec.	X		(NONE)
2 - 60sec			332Ω FROM LTI TO COM
VREG			NT-CEMF CC-COM
DC TACHO	X		(NONE)
AC TACHO		MCC	AT1 - AT2
TACHO FILT		IFC	TC - TC
TACHO V.		IFC	NT-NT1 PT - PT1
24-64vdc		IFC	NT-NT1 PT - PT1
27-71vac		IFC	NT-NT2 PT - PT2
60-160vdc		IFC	NT-NT2 PT - PT2
66-177vac		IFC	NT-NT2 PT - PT2
110-300vdc	X	IFC	NT-NT3 PT - PT3
120-300vac		IFC	NT-NT3 PT - PT3
G134 G256		IFC	MFC OR MFE
1.8 1.7		ME	NONE
1.3 2.8		ME	YB - YD
2.4 5.0		ME	YA - YB
4.0 8.0		ME	YA-YB, YC-YD
7.0 13		ME	YA - YC
13 25		ME	YA-YC, YB-YD
L/R < .25S		MFC	QA - QB
INH RUN		DGC	D1-D2 (IF USED)
INH DRV CL		MCC	DC1 - COM
FUSELESS		ACC	CFY - CFX

SIGNAL DEFINITIONS AND LOCATIONS

* CEMP COUNTER EMF (3-16)
 * CFB CURRENT FEEDBACK (3-16)
 CMFA ABSOLUTE VALUE CEMP (3-08)
 CRM CROSSOVER MODIFY (4-11)
 DFP DELAYED FIRING POWER (3-25)
 * DR DRIVER REFERENCE (3-33)
 * EAO ERROR AMP OUTPUT (3-33)
 EST EXTERNAL FLT STOP INPUT (3-14)
 FALT FAULT (3-14)
 * FC FIELD CURRENT (NS26)
 FDR FIELD DIAGNOSTIC REFERENCE (4-08)
 FEA FIELD ECONOMY ADJUST (3-25)
 FF FIELD FAULT (2-33)
 IABS MOTOR CURRENT ABSOLUTE (3-09)
 ILA CURRENT LIMIT ADJUST (3-23)
 IMET CURRENT SIGNAL FOR METER (3-10)
 * IPU INITIAL PULSE (3-20)
 * LR LOCAL REF. FROM DGC (3-33)
 * JOG JOG SWITCH INPUT (3-23)
 * JOGR JOG REFERENCE INPUT (3-31)
 * MAC MAX/MA CONTROL SIGNAL (3-20)
 MSW MODE SWITCH (3-30)
 * OSC OSCILLATOR (3-15)
 * PCR PHASE CONTROL REF. (3-26)
 * PRE DRIVE PRECONDITION (3-21)
 ØSEQ PHASE SEQUENCE (3-14)
 RERR REGULATOR ERROR (3-27)
 RIJ INTEGRATOR SUMMING JUNCTION (3-27)
 RJ REGULATOR SUMMING JUNCTION (3-31)
 RRA REGULATOR RESPONSE ADJUST (3-30)
 RSET RESET (3-16)
 * RTR READY TO RUN (3-16)
 * RUN RUN SWITCH INPUT (3-21)
 * SA-C PHASE SYN OUTPUT (3-16)
 * SFB SPEED FEEDBACK (3-20)
 SMET SPEED SIGNAL FOR METER (3-12)
 * SR SYSTEM REFERENCE INPUT (3-29)
 * SYS SYSTEM FAULT TRIP (3-13)
 * TA OUTPUT FOR TACHO TRIP ADJUST (3-20)
 TF TACHO FAULT (NS28)
 * TFB TACHOMETER FEEDBACK (3-20)
 TFR AC TACHO FREQUENCY OUTPUT (3-13)
 * TR TIMED REFERENCE (3-33)
 * VFB VOLTAGE FEEDBACK (3-19)
 * WFR WEAK FIELD REFERENCE (3-20)

(* - TEST POINT ON DOOR FRONT)

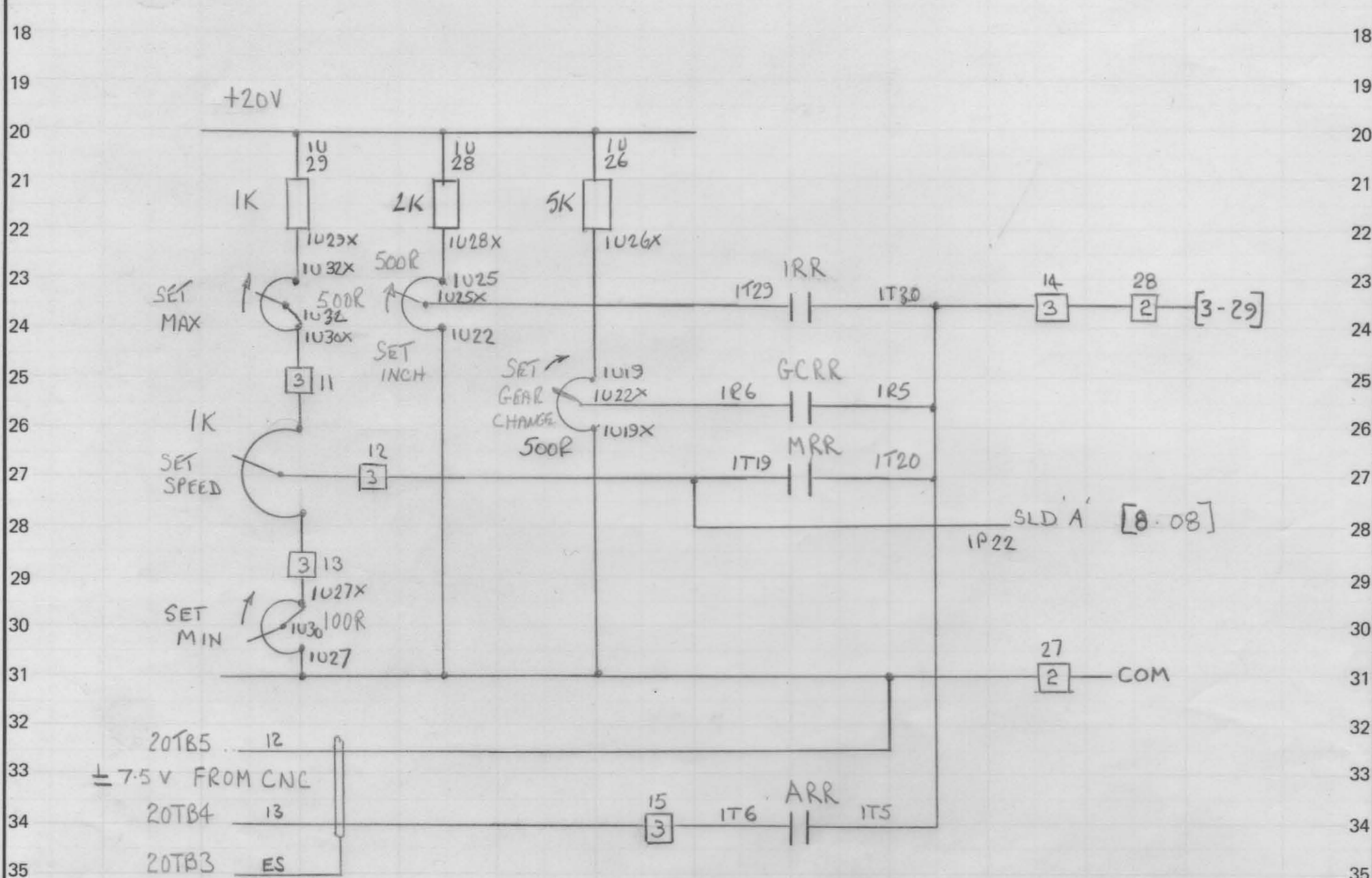
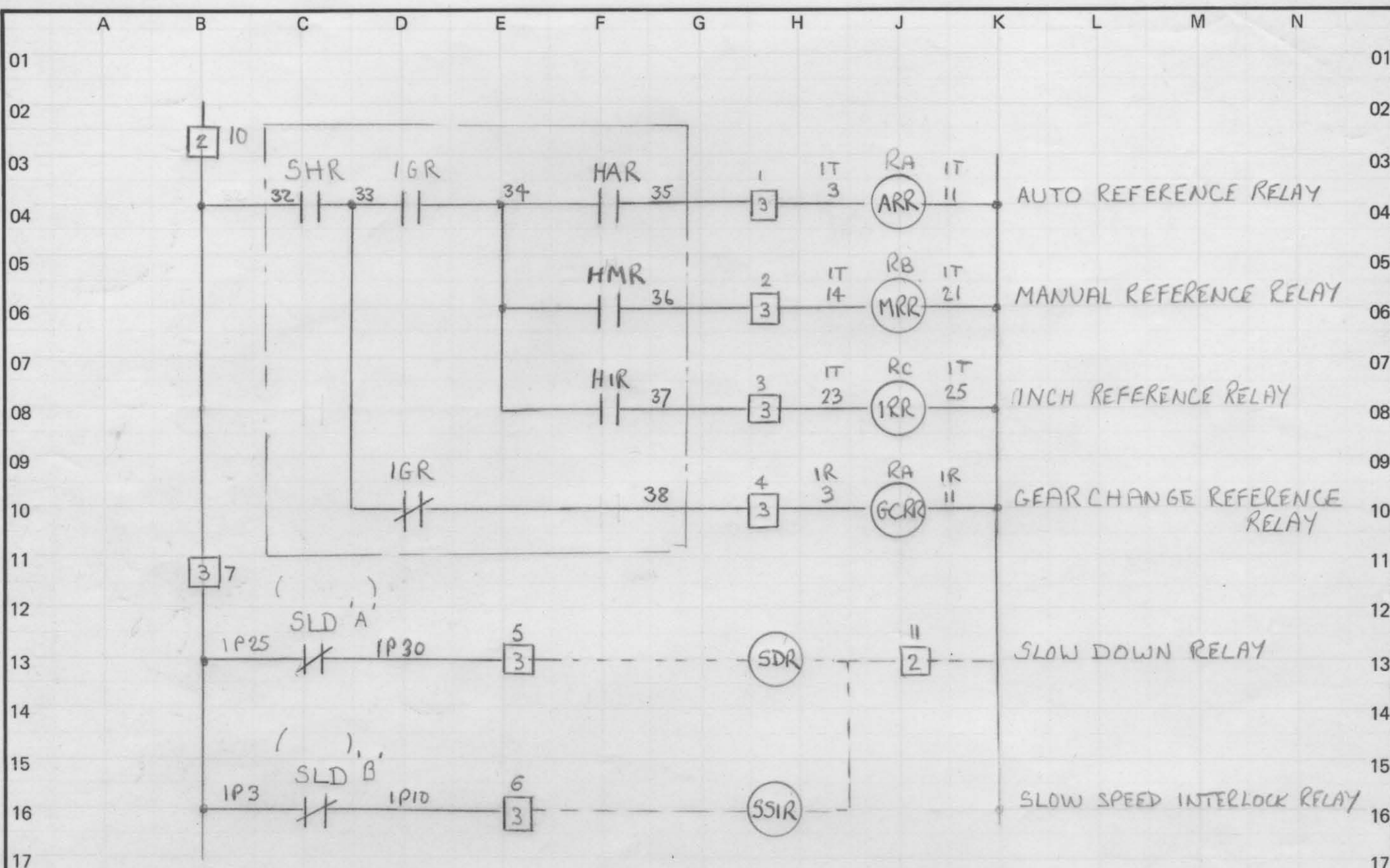
MAPPING SYSTEM

(NS/PS/TS) PS - PAST SHEET
 NS - NEXT SHEET
 TS - THIS SHEET

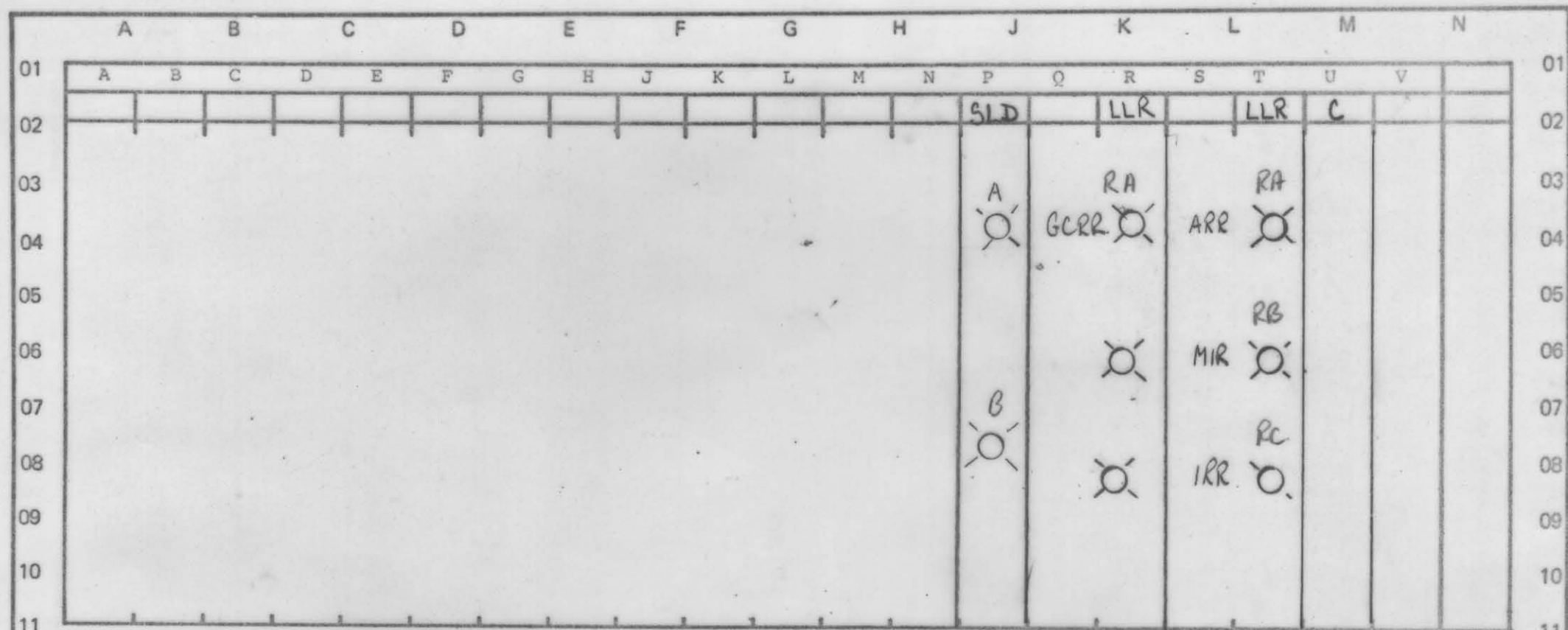
HENCE (PS - 12) DENOTES LOCATION ON PAST SHEET LINE 12. OTHER LOCATIONS ARE
 DENOTED BY SHEET NUMBER AND LINE? E.G. (1A16) SIGNIFIES LOCATION ON SHEET
 1A, LINE 16 ETC.

NOTE: FIELD EFFECT TRANSISTOR: THE
 CLOSED/OPEN (I/O) STATE OF THESE
 SWITCHED FOR "PRECONDITION" - "RUN"
 OR JOG" - "DIAGNOSTIC STATIC" -
 "DIAGNOSTIC RUN" IS SHOWN BY A
 FOUR DIGIT WORD WITH STATE SEQUENCE.

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	16.7.80	3064R - NC LATHE - 1050T	IDENT
						TECHN.		CRAWFORDSWIFT FOR	
						ENG.	F2S	DARLINGTON SIMPSON	
						APPD.		GO NUMBER	
								021N09	
								ELEMENTARY DIAGRAM	
								902M122 FD	
								CONTD.	
								2	



TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE			3064R NC. LATHE		IDENT	
			C.W.H.			16.7.80			CRAWFORD SWIFT			
			WIRE NUMBERS ADDED.								DR	
				FRS			VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.		GO NUMBER		SH	
									021N09		5	
			DATE. 29-9-80						ELEMENTARY DIAGRAM		CONTD.	
									902M122FD		6	



ON PRINTED CIRCUIT CARDS USED IN THIS RACK THE LETTERS 'AA' AFTER BASIC CATALOGUE NUMBER INDICATES ORIGINAL DESIGN. SUBSEQUENT DESIGNS WITH THE SAME BASIC NUMBERS AND GROUP NUMBER WITH THE SECOND LETTER CHANGED, SUCH AS: AB, AC, AD, ETC., ARE DIRECTLY INTERCHANGEABLE AND MAY BE SUPPLIED IN PLACE OF THE 'AA' CARDS.

THE PRINTED CIRCUIT CARD SHOULD ALWAYS BE REMOVED WITH THE CARD EXTRACTOR WHICH IS ATTACHED ON TOP OF THE CARD RACK. SOME CARDS CONTAIN PARTS WHICH WILL BE THERMALLY HOT AFTER BEING IN OPERATION. CARE SHOULD BE EXERCISED IN HANDLING ALL CARDS AFTER REMOVAL UNTIL THESE PARTS HAVE COOLED. DO NOT REMOVE OR INSERT CARDS WITH POWER APPLIED.

FRONT VIEW OF 64 PIN RECEPTACLE AS SEEN IN RACK CLOSED POSITION.

SYMBOLS:



TEST POST



POT ADJUSTMENT



INDICATING LIGHT

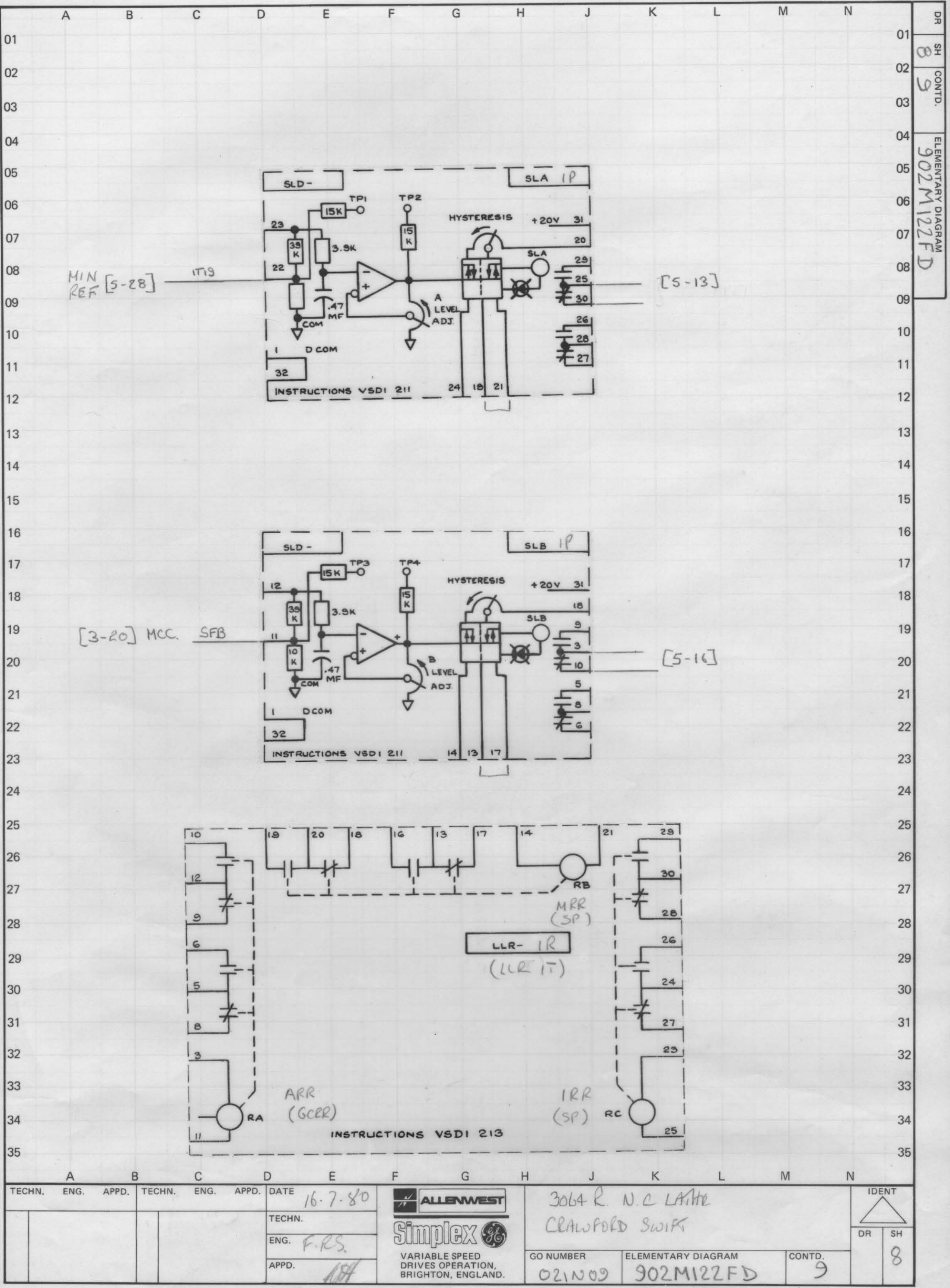
32	-	64	32	-	32X
31	-	63	31	-	31X
30	-	62	30	-	30X
29	-	61	29	-	29X
28	-	60	28	-	28X
27	-	59	27	-	27X
26	-	58	26	-	26X
25	-	57	25	-	25X
24	-	56	24	-	24X
23	-	55	23	-	23X
22	-	54	22	-	22X
21	-	53	21	-	21X
20	-	52	20	-	20X
19	-	51	19	-	19X
18	-	50	18	-	18X
17	-	49	17	-	17X
16	-	48	16	-	16X
15	-	47	15	-	15X
14	-	46	14	-	14X
13	-	45	13	-	13X
12	-	44	12	-	12X
11	-	43	11	-	11X
10	-	42	10	-	10X
9	-	41	9	-	9X
8	-	40	8	-	8X
7	-	39	7	-	7X
6	-	38	6	-	6X
5	-	37	5	-	5X
4	-	36	4	-	4X
3	-	35	3	-	3X
2	-	34	2	-	2X
1	-	33	1	-	1X



CARD RACK WIRE JUMPER TABLE

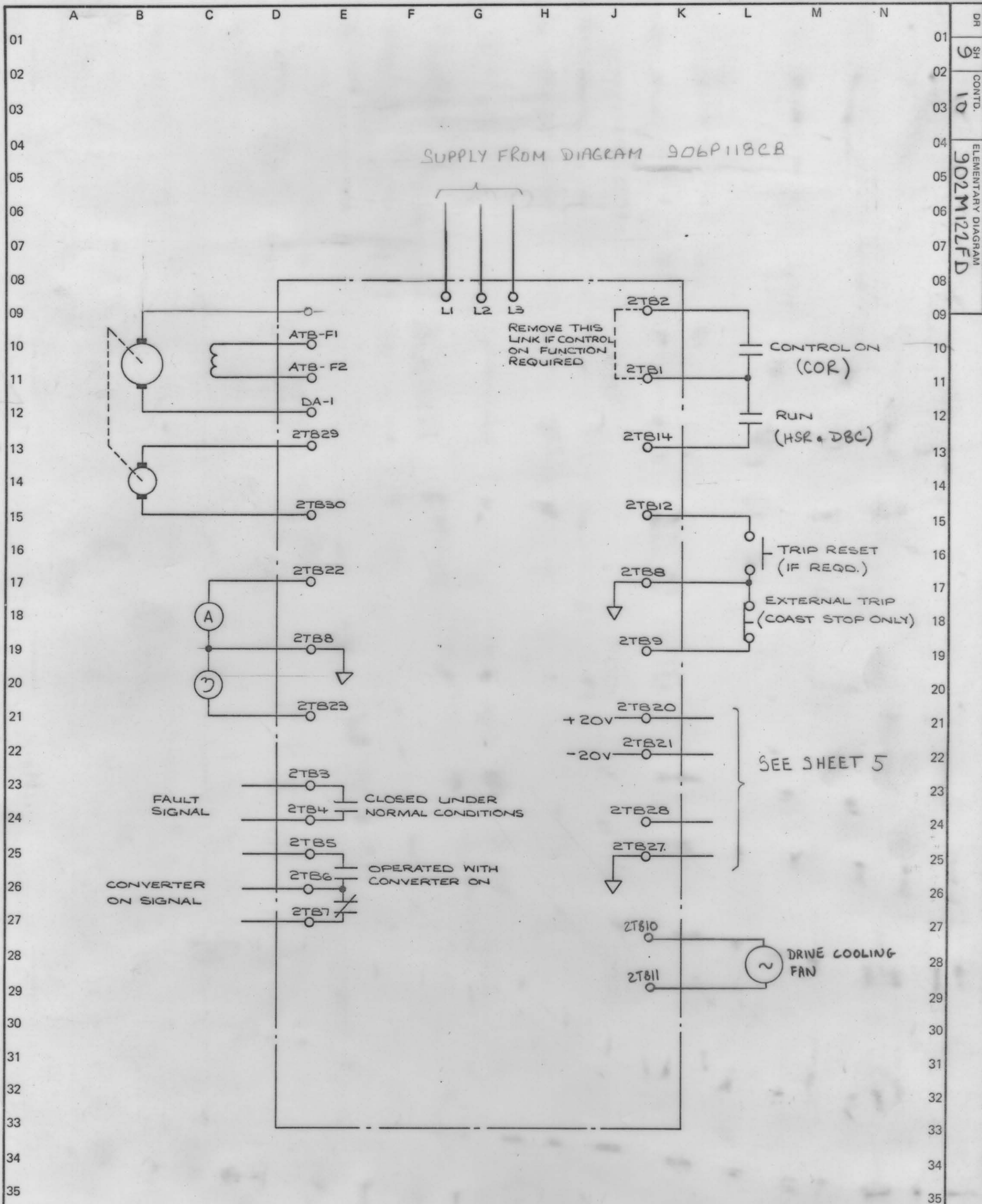
RTBx2 - IT11	RTB + 20 - 1029	1027X - 1030
IT11 - IT21	1029 - 1028	1027X - SP23
IT21 - IT25	1028 - 1026	1027 - 1022
IT25 - IR25	1029X - 1032X	1022 - 1019X
IR25 - IT21	1030X - 1032	1019X - RTBcom
IT21 - IT11	1030X - SP21	
IT3 - SP11	1028X - 1025	IP18 - IP21
IT14 - SP12	1025X - IT29	IP13 - IP17
IT25 - SP13	1026X - 1019	
IR3 - SP14	1022X - IR6	IP15 - 1027
	IT19 - IP22	1026 - IP31
	IT19 - SP22	
IP3 - IP25	IT6 - SP25	RTB-20 - 102
IP25 - SP17	IRS - IT5	102 - IP2
IP30 - SP15	ITS - IT20	
IP10 - SP16	IT20 - IT30	
	IT30 - SP24	
	3TB14 - 2TB28	

NOTE: RECEPTACLE PINS MAY BE NUMBERED AS SHOWN IN EITHER SKETCH. (PIN 33 CORRESPONDS TO PIN 1X, 34 TO 2X, ETC.)

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	SIMPLEX		3064R N.C. LAFITE		IDENT	
						16.7.80	VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.		CRAWFORD SWIFT		DR SH	
						F.R.S.			GO NUMBER 021N09		ELEMNTARY DIAGRAM 902M122FD	
									CONTO. 7		6	



TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	16.7.80	 Simplex VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.	3064 R. N.C. LAITE CLAWFORD SWIFT		IDENT  DR SH 8	
									GO NUMBER	ELEMENTARY DIAGRAM	CONTD.	
									021N09	902M122FD	9	



TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	3064 R NC LAITH CRAWFORD SWIFT		IDENT	
			CWH			16.7.80			DR SH	
			2	DRIVE COOLING FAN ADDED.		TECHN.				
						ENG.	F.R.S			
						APPD.				
				DATE 7-10-80				GO NUMBER	ELEMENTARY DIAGRAM	CONTD.
								021ND9	902M122FD	10

Allenwest Simplex VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.

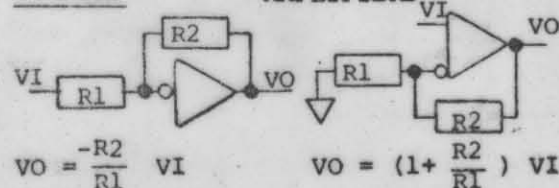
VOLTAGE POLARITIES SHOWN ARE FOR MOTORING DAI(+)

HARDWARE ABBREVIATIONS

MCC MAIN CONTROL CARD
 IFC INTERFACE CARD
 PSC POWER SUPPLY CARD
 SCR THYRISTOR ASSEMBLY
 DGC DIAGNOSTIC CARD
 MFC MOTOR FIELD CONTROL
 MFE MOTOR FIELD EXCITER
 MDR MODIFICATION RACK
 ACC AUXILIARY CONTROL CARD

SYMBOLS

AMPLIFIERS



CASE GROUND

VO = SIGN () X ABSOLUTE VALUE OF VI

STAB ON TERMINAL

TERMINAL AT 2TB, 3TB, 4TB, RTB.
 EX: 9 [2] - 2TB9; X2 [2] - RTB2

TERMINAL AT T.B.'s

POTENTIOMETER ARROWS ON THE CARD
 ELEMENTARY DIAGRAMS INDICATE THE
 WIPER DIRECTION AS THE POTENTIOMETER
 SHAFT IS ROTATED CLOCKWISE TO INCREASE
 FUNCTION.

THESE RESISTORS ARE CRIMPED IN WIRE
 HARNESS.

FUNCTION	USE	LOC	JUMPERS
60HZ		MFC	ZA-ZB (IF USED)
50HZ	X	MCC	BZA - PHA
IOC-400%	X		(NONE)
-500%		IFC	I - IHI
-300%		IFC	I - ILO
SR5 - 9v	X		(NONE)
9 - 20v		MCC	SRH - COM
JOGR 10v			(NONE)
20v		MCC	JH - COM
LT.3-7sec.	X		(NONE)
2 - 60sec			332Ω FROM LTI TO COM
VREG			NT-CEMF CC-COM
DC TACHO	X		(NONE)
AC TACHO		MCC	AT1 - AT2
TACHO FILT		IFC	TC - TC
TACHO V.		IFC	NT-NT1 PT - PT1
24-64vdc		IFC	NT-NT1 PT - PT1
27-71vac		IFC	NT-NT2 PT - PT2
60-160vdc		IFC	NT-NT2 PT - PT2
66-177vac		IFC	NT-NT2 PT - PT2
110-300vdc	X	IFC	NT-NT3 PT - PT3
120-300vac		IFC	NT-NT3 PT - PT3
G134 G256		IFC	MFC OR MFE
1.8T 1.7		MF	NONE
1.3 2.8		MF	YB - YD
2.4 5.0		MF	YA - YB
4.0 8.0		MF	YA-YB, YC-YD
7.0 13		MF	YA - YC
13 25		MF	YA-YC, YB-YD
L/R < .25S		MFC	QA - QB
INH RUN		DGC	D1-D2 (IF USED)
INH DRV CL		MCC	DC1 - COM
FUSELESS		ACC	CFY - CFX
200V D.C.	X	MCC	DCX - DCY

SIGNAL DEFINITIONS AND LOCATIONS

* CEMF COUNTER EMF (16)
 * CFB CURRENT FEEDBACK (16)
 CMFA ABSOLUTE VALUE CEMF (08)
 CRM CROSSOVER MODIFY (11)
 DFP DELAYED FIRING POWER (25)
 * DR DRIVER REFERENCE (33)
 * EAO ERROR AMP OUTPUT (33)
 EST EXTERNAL FLT STOP INPUT (14)
 FALT FAULT (14)
 * FC FIELD CURRENT (NS26)
 FDR FIELD DIAGNOSTIC REFERENCE (08)
 FEA FIELD ECONOMY ADJUST (25)
 FF FIELD FAULT (28)
 IABS MOTOR CURRENT ABSOLUTE (09)
 ILA CURRENT LIMIT ADJUST (23)
 IMET CURRENT SIGNAL FOR METER (10)
 * IPU INITIAL PULSE (20)
 * LR LOCAL REF. FROM DGC (33)
 * JOG JOG SWITCH INPUT (23)
 * JOGR JOG REFERENCE INPUT (31)
 * MAC MAX/MA CONTROL SIGNAL (20)
 MSW MODE SWITCH (30)
 * OSC OSCILLATOR (17)
 * PCR PHASE CONTROL REF. (26)
 * PRE DRIVE PRECONDITION (21)
 ØSEQ PHASE SEQUENCE (14)
 RERR REGULATOR ERROR (27)
 RIJ INTEGRATOR SUMMING JUNCTION (27)
 RJ REGULATOR SUMMING JUNCTION (31)
 RRA REGULATOR RESPONSE ADJUST (30)
 RSET RESET (16)
 * RTR READY TO RUN (16)
 * RUN RUN SWITCH INPUT (21)
 * SA-C PHASE SYN OUTPUT (16)
 * SFB SPEED FEEDBACK (20)
 SMET SPEED SIGNAL FOR METER (12)
 * SR SYSTEM REFERENCE INPUT (29)
 * SYS SYSTEM FAULT TRIP (13)
 * TA OUTPUT FOR TACHO TRIP ADJUST (20)
 TF TACHO FAULT (NS28)
 * TFB TACHOMETER FEEDBACK (20)
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 * TR TIMED REFERENCE (33)
 * VFB VOLTAGE FEEDBACK (19)
 * WFR WEAK FIELD REFERENCE (20)

(* - TEST POINT ON DOOR FRONT)

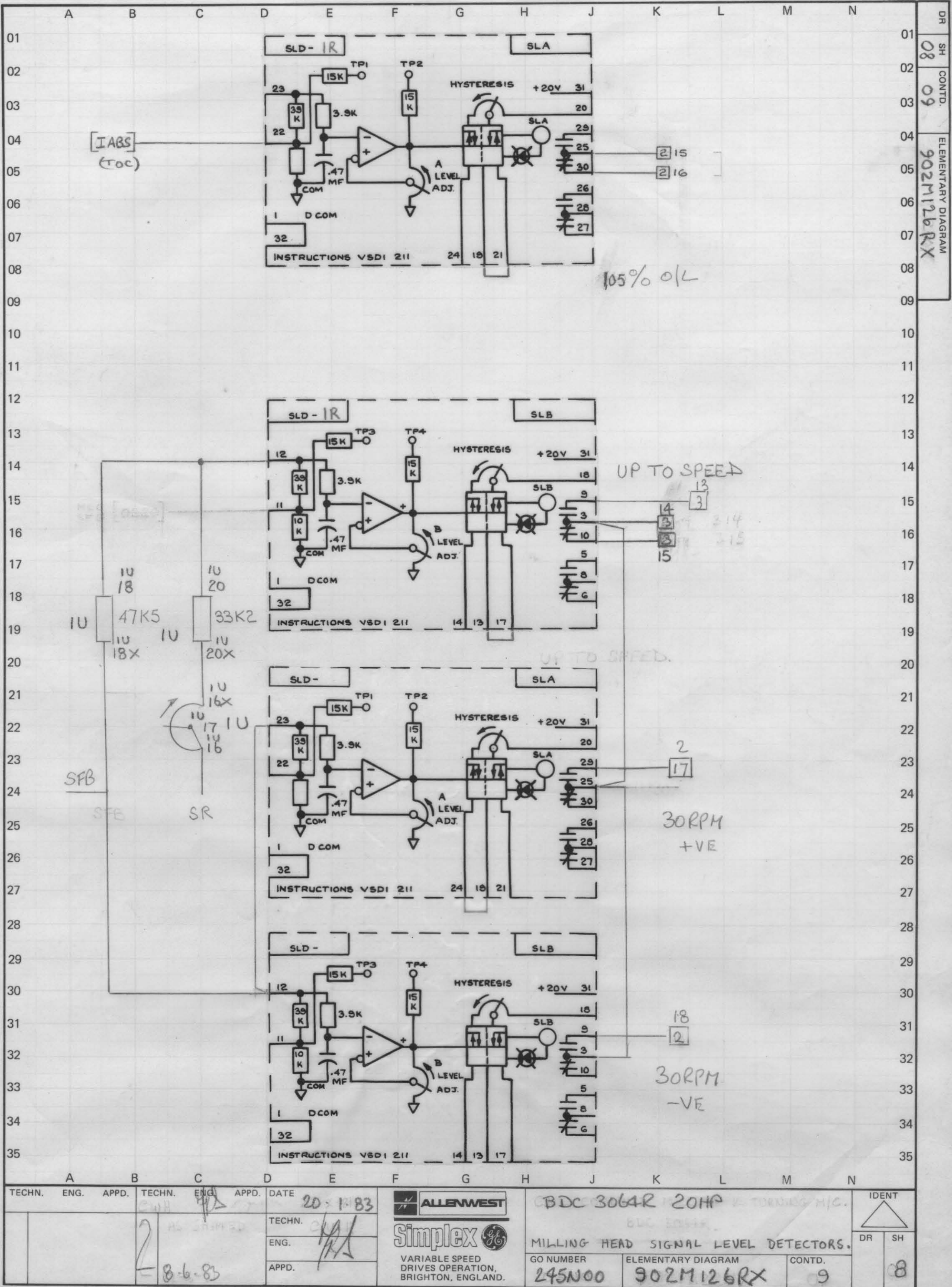
MAPPING SYSTEM

(NS/PS/TS) PS - PAST SHEET
 NS - NEXT SHEET
 TS - THIS SHEET

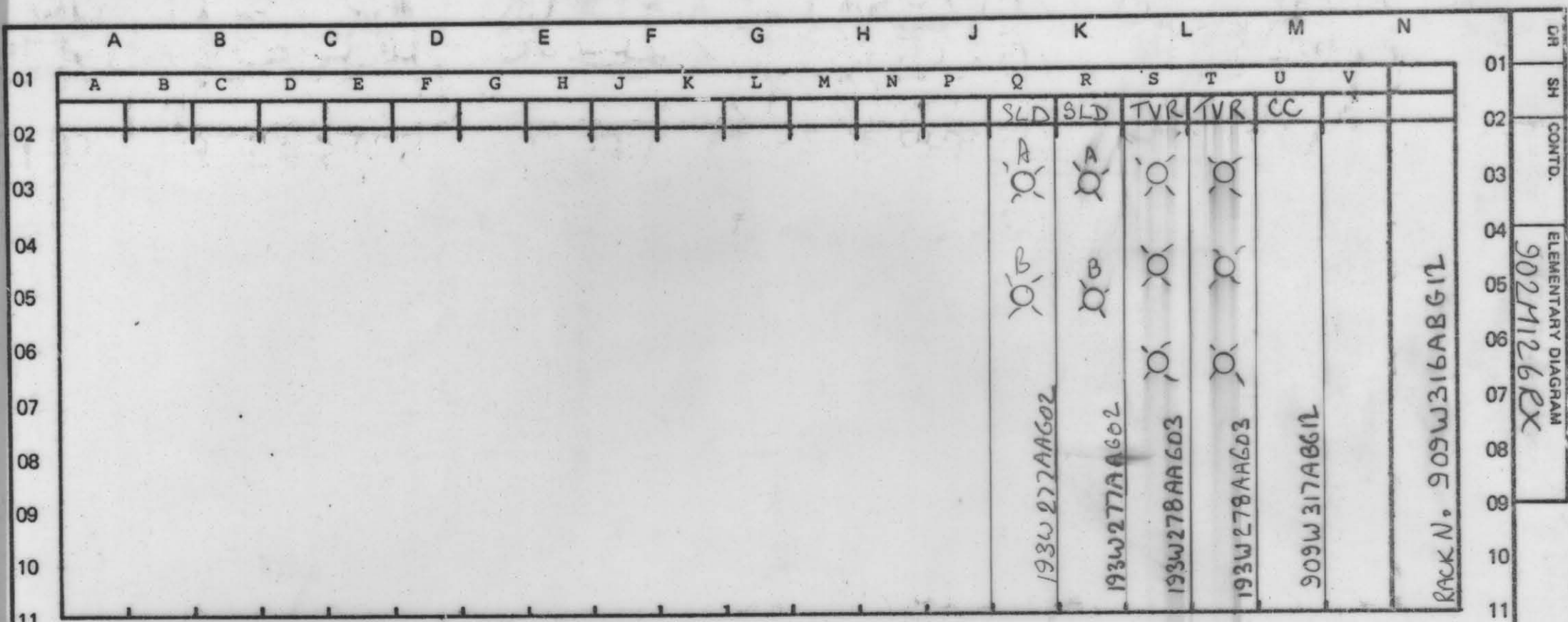
HENCE (PS - 12) DENOTES LOCATION ON PAST SHEET LINE 12. OTHER LOCATIONS ARE
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 1A, LINE 16 ETC.

NOTE: FIELD EFFECT TRANSISTOR: THE
 CLOSED/OPEN (I/O) STATE OF THESE
 SWITCHED FOR "PRECONDITION" - "RUN"
 OR JOG - "DIAGNOSTIC STATIC" -
 "DIAGNOSTIC RUN" IS SHOWN BY A
 FOUR DIGIT WORD WITH STATE SEQUENCE.

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	20.1.83	ALLENWEST	BDC 3064R. 20HP	IDENT	DR	SH
						TECHN.		Simplex	MILLING SPINDLE - FOR 1060MC			
						ENG.		VARIABLE SPEED	LATE C SWIFT			
						APPD.		DRIVES OPERATION,	GO NUMBER	ELEMENTARY DIAGRAM	CONTD.	
								BRIGHTON, ENGLAND.	245N00	902M126EX	2	1



TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	ALLENWEST	Simplex	GO NUMBER	ELEMENTARY DIAGRAM	CONTD.	IDENT
						20-1-83			245N00	902M126RX	9	8
							MILLING HEAD SIGNAL LEVEL DETECTORS.					
							BDC 3064R 20HP					
							VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.					



ON PRINTED CIRCUIT CARDS USED IN THIS RACK THE LETTERS 'AA' AFTER BASIC CATALOGUE NUMBER INDICATES ORIGINAL DESIGN. SUBSEQUENT DESIGNS WITH THE SAME BASIC NUMBERS AND GROUP NUMBER WITH THE SECOND LETTER CHANGED, SUCH AS: AB, AC, AD, ETC., ARE DIRECTLY INTERCHANGEABLE AND MAY BE SUPPLIED IN PLACE OF THE 'AA' CARDS.

THE PRINTED CIRCUIT CARD SHOULD ALWAYS BE REMOVED WITH THE CARD EXTRACTOR WHICH IS ATTACHED ON TOP OF THE CARD RACK. SOME CARDS CONTAIN PARTS WHICH WILL BE THERMALLY HOT AFTER BEING IN OPERATION. CARE SHOULD BE EXERCISED IN HANDLING ALL CARDS AFTER REMOVAL UNTIL THESE PARTS HAVE COOLED. DO NOT REMOVE OR INSERT CARDS WITH POWER APPLIED.

FRONT VIEW OF 64 PIN RECEPTACLE AS SEEN IN RACK CLOSED POSITION.

SYMBOLS:



TEST POST



POT ADJUSTMENT



INDICATING LIGHT

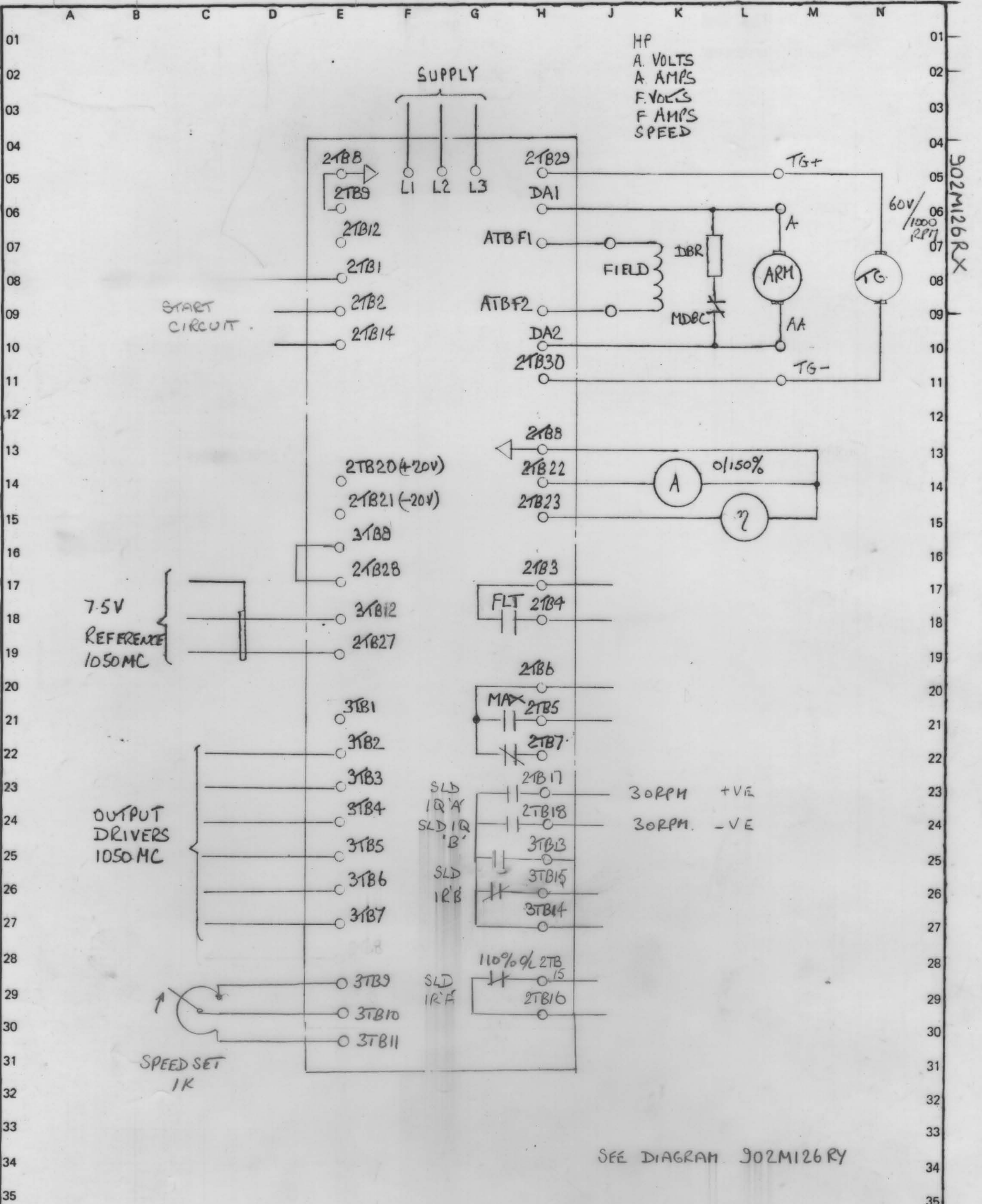
32 - 64	32 - 32X
31 - 63	31 - 31X
30 - 62	30 - 30X
29 - 61	29 - 29X
28 - 60	28 - 28X
27 - 59	27 - 27X
26 - 58	26 - 26X
25 - 57	25 - 25X
24 - 56	24 - 24X
23 - 55	23 - 23X
22 - 54	22 - 22X
21 - 53	21 - 21X
20 - 52	20 - 20X
19 - 51	19 - 19X
18 - 50	18 - 18X
17 - 49	17 - 17X
16 - 48	16 - 16X
15 - 47	15 - 15X
14 - 46	14 - 14X
13 - 45	13 - 13X
12 - 44	12 - 12X
11 - 43	11 - 11X
10 - 42	10 - 10X
9 - 41	9 - 9X
8 - 40	8 - 8X
7 - 39	7 - 7X
6 - 38	6 - 6X
5 - 37	5 - 5X
4 - 36	4 - 4X
3 - 35	3 - 3X
2 - 34	2 - 2X
1 - 33	1 - 1X

CARD RACK WIRE JUMPER TABLE

R/B+20-1031	SP23 3TB3-1R9	1029-1031	MCC SFB-1018X
R/B-20-102	SP24 3TB14-1R3	1029X-1T17	1018-1020
R/B COM-1015	SP25 3TB15-1R10	102X-1T8	1020-1R12
1R15-1R15	SP2(2TB15)-1R25	1T11-1T20	1020X-1016X
1031-1R31	SP3(2TB16)-1R30	1T20-1T25	1017-1016
102-1R2	SP4(2TB17)	1T25-1032X	1016-MCCSR
1015-1R15	SP5(2TB18)	1032-1030X	1R13-1R17
1R31-1Q31		1027X-1030	1R22-1ABS (Toc)
1R2-1Q2		1T28-1028	1R12-1R21
SP11 3TB1-1013		1028X-1025	
SP12 3TB2-1012		1025X-1T29	1018X-1Q23
SP13 3TB3-1010	1S27-1013X	1T24-1S18	1Q23-1Q12
SP14 3TB4-109	1S19-1012X	1S18-1S11	1R3-1Q3
SP15 3TB5-107	1010X-1S10		1Q3-1Q25
SP16 3TB6-105	109X-1T27	1027-1022	1Q29-SP4(2TB17)
SP17 3TB7-1T5	107X-1T19	1022-1015	1Q9-SP5(2TB18)
SP18 3TB8-1S20	105X-1T10		1Q19-1Q24
SP19 3TB9-1030X	1T5-1T14		
SP20 3TB10-1024	1T14-1T23		
SP21 3TB11-1027X	1T23-1S23		
SP22 3TB12-1S17	1S23-1S14	1S14-1S5	LINK 3TB8-2TB28

NOTE: RECEPTACLE PINS MAY BE NUMBERED AS SHOWN IN EITHER SKETCH. (PIN 33 CORRESPONDS TO PIN 1X, 34 TO 2X, ETC.)

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	20.1.83	ALLENWEST	BDC 3064R 20 HP	IDENT	DR	SH
						TECHN.		Simplex				
						ENG.		VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.	GO NUMBER	ELEMENTARY DIAGRAM	CONTD.	
						APPD.			245N00	902M126RX	10	9



SEE DIAGRAM 902M126RY

TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	TECHN.	ENG.	APPD.	GO NUMBER	ELEMENTARY DIAGRAM	CONTO.	IDENT
						20.1.83				245N00	902M126RX	11	10
							Simplex			BDC 306AR 20HP			
							VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.						

Disclaimor Statement The trade mark is the trade mark of General Electric Company of U.S.A., which is not connected with the English Company of a similar name.

VOLTAGE POLARITIES SHOWN ARE FOR MOTORING DA1(+)

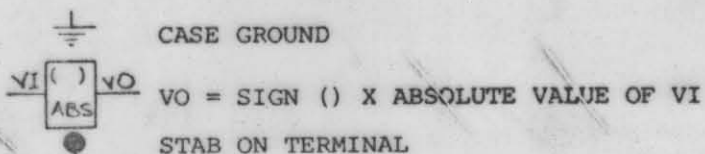
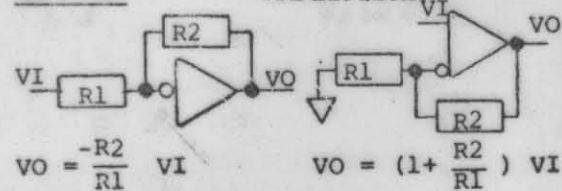
SIGNAL DEFINITIONS AND LOCATIONS

HARDWARE ABBREVIATIONS

MCC	MAIN CONTROL CARD
IFC	INTERFACE CARD
PSC	POWER SUPPLY CARD
SCR	THYRISTOR ASSEMBLY
DGC	DIAGNOSTIC CARD
MFC	MOTOR FIELD CONTROL
MFE	MOTOR FIELD EXCITER
MDR	MODIFICATION RACK
ACC	AUXILIARY CONTROL CARD

SYMBOLS

AMPLIFIERS



□ TERMINAL AT 2TB, 3TB, 4TB, RTB.
 EX: 9 [2] - 2TB9; X2 [2] - RTB2

○ TERMINAL AT T.B.'s

POTENTIOMETER ARROWS ON THE CARD
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▲ THESE RESISTORS ARE CRIMPED IN WIRE
 HARNESS.

FUNCTION	USE	LOC	JUMPERS
60HZ		MFC	ZA-ZB (IF USED)
50HZ	✓	MCC	HZA - PHA
IOC-400%			(NONE)
-500%		IFC	I - IHI
-300%		IFC	I - ILO
SR5 - 9v			(NONE)
9 - 20v	✓	MCC	SRH - COM
JOGR 10v			(NONE)
20v	✓	MCC	JH - COM
LT. 3-7sec.			(NONE)
2 - 60sec	✓		332Ω FROM LTI TO COM
VREG			NT-CEMF CC-COM
DC TACHO	✓		(NONE)
AC TACHO		MCC	AT1 - AT2
TACHO FILT		IFC	TC - TC
TACHO V.			
24-64vdc		IFC	NT-NT1 PT - PT1
27-71vac		IFC	NT-NT1 PT - PT1
60-160vdc	✓	IFC	NT-NT2 PT - PT2
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L/R < .25S		MFC	QA - QB
INH RUN		DGC	D1-D2 (IF USED)
INH DRV CL		MCC	DC1 - COM
FUSELESS		ACC	CFY - CFX
	✓		DCX - DCY

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CRM	CROSSOVER MODIFY (11)
DFP	DELAYED FIRING POWER (25)
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* EAO	ERROR AMP OUTPUT (33)
EST	EXTERNAL FLT STOP INPUT (14)
FALT	FAULT (14)
* FC	FIELD CURRENT (NS26)
FDR	FIELD DIAGNOSTIC REFERENCE (08)
FEA	FIELD ECONOMY ADJUST (25)
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IABS	MOTOR CURRENT ABSOLUTE (09)
ILA	CURRENT LIMIT ADJUST (23)
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(* - TEST POINT ON DOOR FRONT)

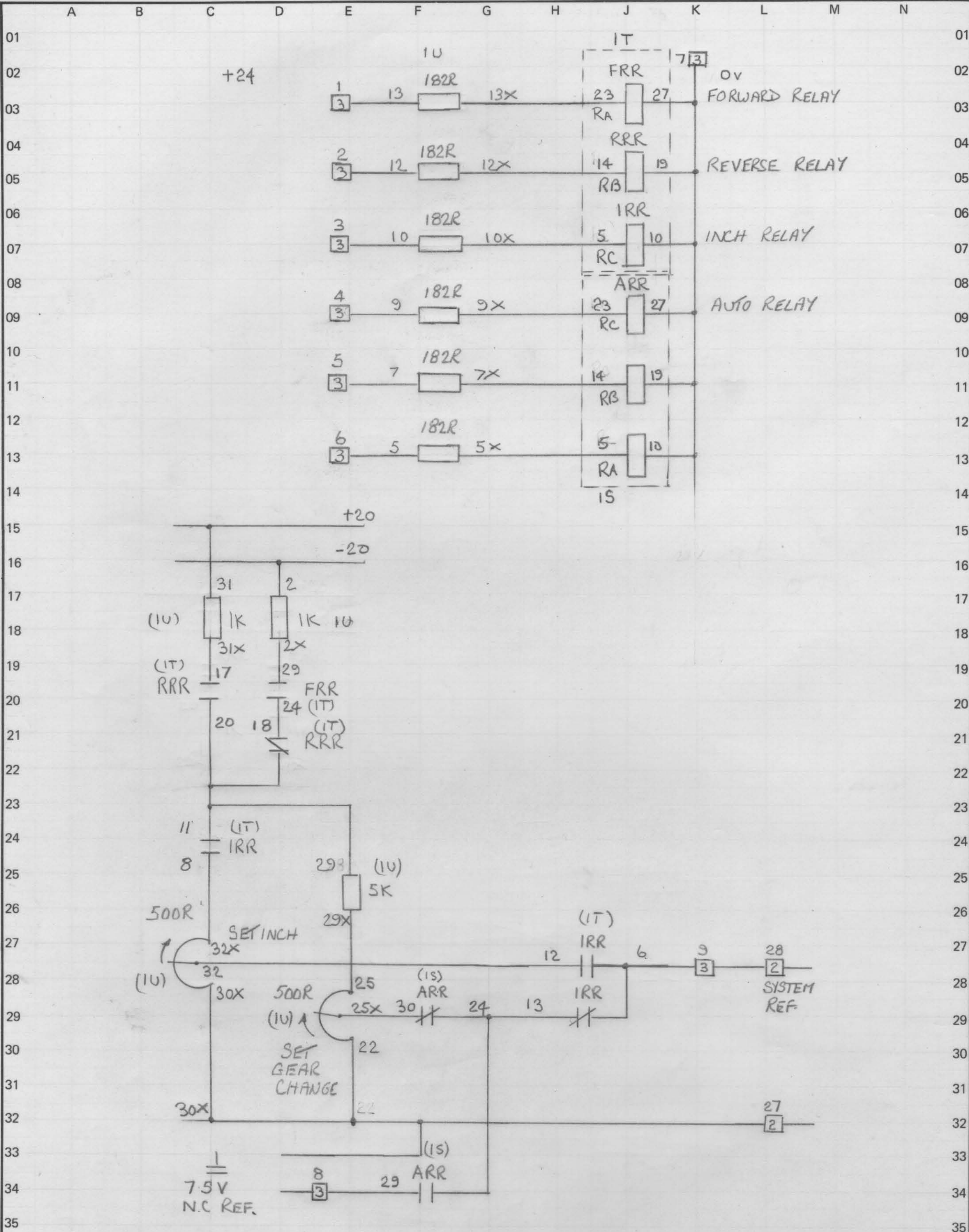
MAPPING SYSTEM

(NS/PS/TS) PS - PAST SHEET
 NS - NEXT SHEET
 TS - THIS SHEET

HENCE (PS - 12) DENOTES LOCATION ON PAST SHEET LINE 12. OTHER LOCATIONS ARE
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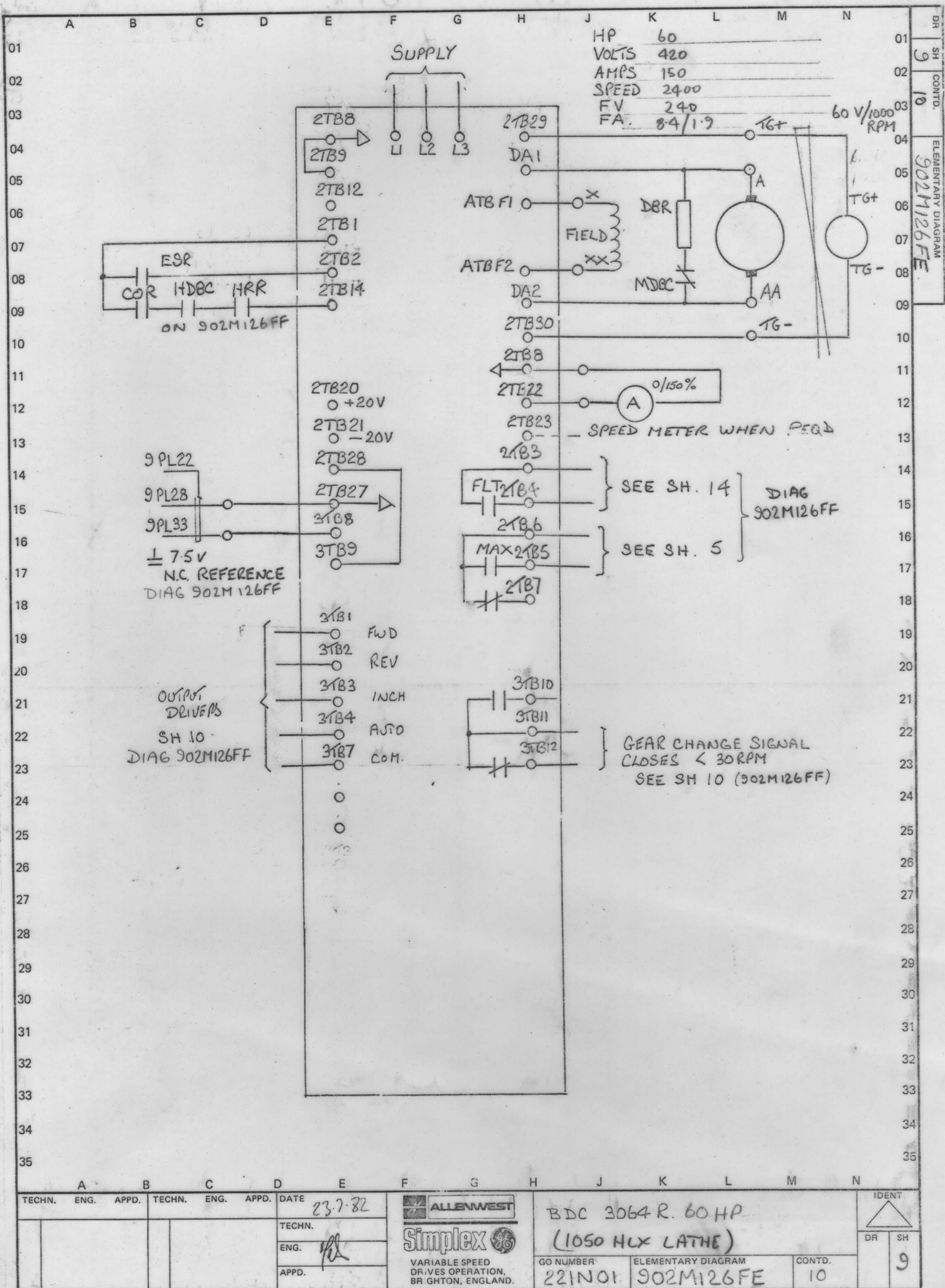
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TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	23-7-82	 VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.	BDC 3064R. 60 HP			IDENT DR SH 1
							TECHN.		1050 HLX LAIHE			
							ENG.		(CRAWFORD SLIDFT)			
							APPD.		GO NUMBER	ELEMENTARY DIAGRAM	CONTD.	
								22IN01	902M126FE	2		



TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	ALLENWEST Simplex VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.		BDC 3064 R 50 HP REFERENCE CIRCUITS		IDENT DR SH 5	
						23.7.82			GO NUMBER	ELEMENTARY DIAGRAM	CONTD.	
									221N01	902M126FE	6	

Disclaimer Statement The trade mark is the trade mark of General Electric Company of U.S.A.



TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE	23-7-82			BDC 3064 R. 60 HP (1050 HLX LATHE)			IDENT	
						TECHN.							DR	
						ENG.							SH	
						APPD.							9	
							Allenwest		Simplex		GO NUMBER		ELEMENTARY DIAGRAM	
							VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.		221N01		902M126FE		CONTD. 10	

A	B	C	D	E	F	G	H	J	K	L	M	N
---	---	---	---	---	---	---	---	---	---	---	---	---

01	DR	1
02	SH	
03	CONTD.	2
04		
05	ELEMENTARY DIAGRAM	
06	902M126AD	
07		
08		

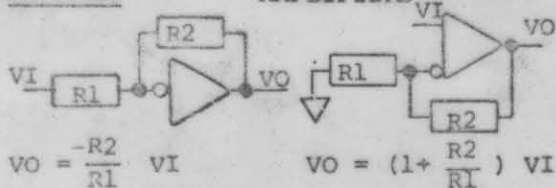
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MFE	MOTOR FIELD EXCITER
MDR	MODIFICATION RACK
ACC	AUXILIARY CONTROL CARD

SYMBOLS

AMPLIFIERS



 CASE GROUND




$$VO = \text{SIGN} () \times \text{ABSOLUTE VALUE OF } VI$$

STAB ON TERMINAL

STAB ON TERMINAL

TERMINAL AT 2TB, 3TB, 4TB, RTB.
EX: 9 [2] - 2TB9; X2 [R] - RTBX2

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JOGR 10v			(NONE)
20v		MCC	JH - COM
LT. 3-7sec.	X		(NONE)
2 - 60sec			332Ω FROM LTI TO COM
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AC TACHO		MCC	AT1 - AT2
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GL34 G256		IFC	MFC OR MFE
1.7		ME	NONE
1.3		ME	YB - YD
2.4		ME	YA - YB
4.0		ME	YA-YB, YC-YD
7.0		ME	YA - YC
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L/R < .25S		MFC	QA - QB
INH RUN		DGC	D1-D2 (IF USED)
INH DRV CL		MCC	DC1 - COM
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(* - TEST POINT ON DOOR FRONT)

MAPPING SYSTEM

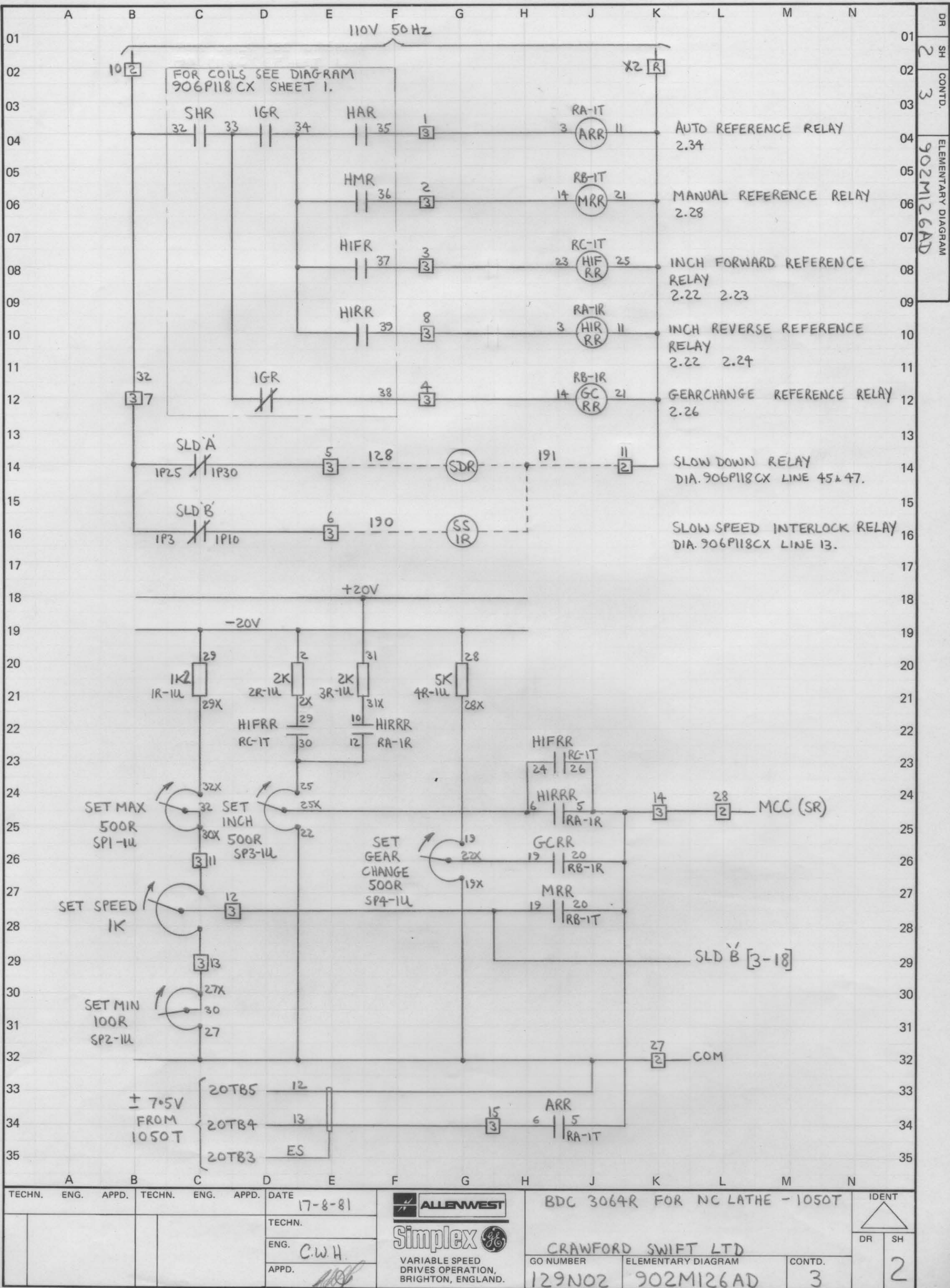
(NS/PS/TS) PS - PAST SHEET
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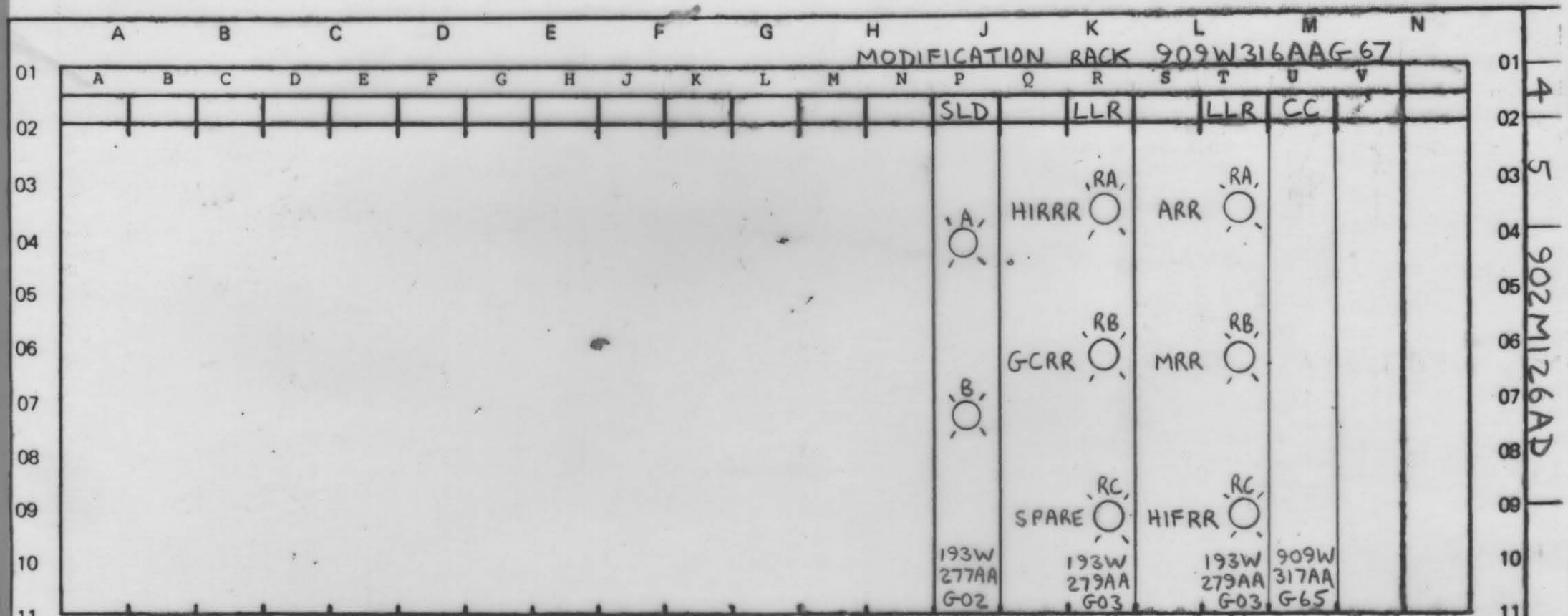
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NOTE: FIELD EFFECT TRANSISTOR: THE CLOSED/OPEN (I/O) STATE OF THESE SWITCHED FOR "PRECONDITION" - "RUN" OR JOG" - "DIAGNOSTIC STATIC" - "DIAGNOSTIC RUN" IS SHOWN BY A FOUR DIGIT WORD WITH STATE SEQUENCE.

TO BE READ IN CONJUNCTION WITH
BDC 3064R SCHEMATIC 906P118CD

A			B			C			D			E			F			G			H			J			K			L			M			N		
TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE				BDC 3064R FOR NC LATHE - 1050T.																												
						17-8-81				CRAWFORD SWIFT LTD.																												
						TECHN.				GO NUMBER									ELEMENTARY DIAGRAM			CONTO																
						ENG. CW.H				129N02									902M126AD			2																
						APPD. 	VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.																															





ON PRINTED CIRCUIT CARDS USED IN THIS RACK THE LETTERS 'AA' AFTER BASIC CATALOGUE NUMBER INDICATES ORIGINAL DESIGN. SUBSEQUENT DESIGNS WITH THE SAME BASIC NUMBERS AND GROUP NUMBER WITH THE SECOND LETTER CHANGED, SUCH AS: AB, AC, AD, ETC., ARE DIRECTLY INTERCHANGEABLE AND MAY BE SUPPLIED IN PLACE OF THE 'AA' CARDS.

THE PRINTED CIRCUIT CARD SHOULD ALWAYS BE REMOVED WITH THE CARD EXTRACTOR WHICH IS ATTACHED ON TOP OF THE CARD RACK. SOME CARDS CONTAIN PARTS WHICH WILL BE THERMALLY HOT AFTER BEING IN OPERATION, CARE SHOULD BE EXERCISED IN HANDLING ALL CARDS AFTER REMOVAL UNTIL THESE PARTS HAVE COOLED. DO NOT REMOVE OR INSERT CARDS WITH POWER APPLIED.

FRONT VIEW OF 64 PIN RECEPTACLE AS SEEN IN RACK CLOSED POSITION.

SYMBOLS:



TEST POST



POT ADJUSTMENT



INDICATING LIGHT

32	-	64	32	-	32X
31	-	63	31	-	31X
30	-	62	30	-	30X
29	-	61	29	-	29X
28	-	60	28	-	28X
27	-	59	27	-	27X
26	-	58	26	-	26X
25	-	57	25	-	25X
24	-	56	24	-	24X
23	-	55	23	-	23X
22	-	54	22	-	22X
21	-	53	21	-	21X
20	-	52	20	-	20X
19	-	51	19	-	19X
18	-	50	18	-	18X
17	-	49	17	-	17X
16	-	48	16	-	16X
15	-	47	15	-	15X
14	-	46	14	-	14X
13	-	45	13	-	13X
12	-	44	12	-	12X
11	-	43	11	-	11X
10	-	42	10	-	10X
9	-	41	9	-	9X
8	-	40	8	-	8X
7	-	39	7	-	7X
6	-	38	6	-	6X
5	-	37	5	-	5X
4	-	36	4	-	4X
3	-	35	3	-	3X
2	-	34	2	-	2X
1	-	33	1	-	1X

NOTE: RECEPTACLE PINS MAY BE NUMBERED AS SHOWN IN EITHER SKETCH. (PIN 33 CORRESPONDS TO PIN 1X, 34 TO 2X, ETC.)

CARD RACK WIRE JUMPER TABLE

RTB(X2) - IT11	RTB(+20V) - 1U31	1U29X - 1U32X	IT6 - SP25
IT11 - IT21	1U31 - 1P31	1U32 - 1U30X	MCC(SFB) - 1P22
IT21 - IT25	RTB(-20V) - 1U29	1U30X - SP21	1P19 - 1P21
IT25 - IR21	1U29 - 1U28	1U30 - 1U27X	1P13 - 1P17
IR21 - IR11	1U28 - 1U2	1U27X - SP23	
IT3 - SP11	1U2 - 1P2	1U2X - IT29	
IT14 - SP12	RTB(com) - 1U27	1U31X - IR10	
IT23 - SP13	1U27 - 1U22	IR12 - IT30	
IR3 - SP18	1U22 - 1U19X	IT30 - 1U25	
IR14 - SP14	1U19X - 1U15	1U25X - IT24	
2TB10 - 3TB7	1U15 - 1P15	IT24 - IR6	
IP3 - IP25		1U28X - 1U19	
IP25 - SP17		1U22X - IR19	
IP10 - SP16		SP22 - IT19	
IP30 - SP15		IT19 - 1P11	
		IT5 - IT20	
		IT20 - IT26	
		IT26 - IR20	
		IR20 - IR5	
		IR5 - SP24	
		3TB14 - 2TB28	

A	B	C	D	E	F	G	H	J	K	L	M	N		
TECHN.	ENG.	APPD.	TECHN.	ENG.	APPD.	DATE								
						17-8-81								
						TECHN.								
						ENG.								
						APPD.								
									BDC 3064R FOR NC LATHE - 1050T					
									CRAWFORD SWIFT LTD					
							VARIABLE SPEED DRIVES OPERATION, BRIGHTON, ENGLAND.		GO NUMBER		ELEMENTARY DIAGRAM		CONTO.	
							129N02		902M126AD		5		4	

