



SCRLogic Drawing Book



These drawings are a re-drawn sub-set of Hill Graham Controls project number 6070,
which was a a land rig built for the Forasol drilling company in the early 1980's.

Most of the detail is an exact representation of the original project, however some details
have been amended to fit the SCRLogic simulation model.

Contrelec

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SCHMATICS

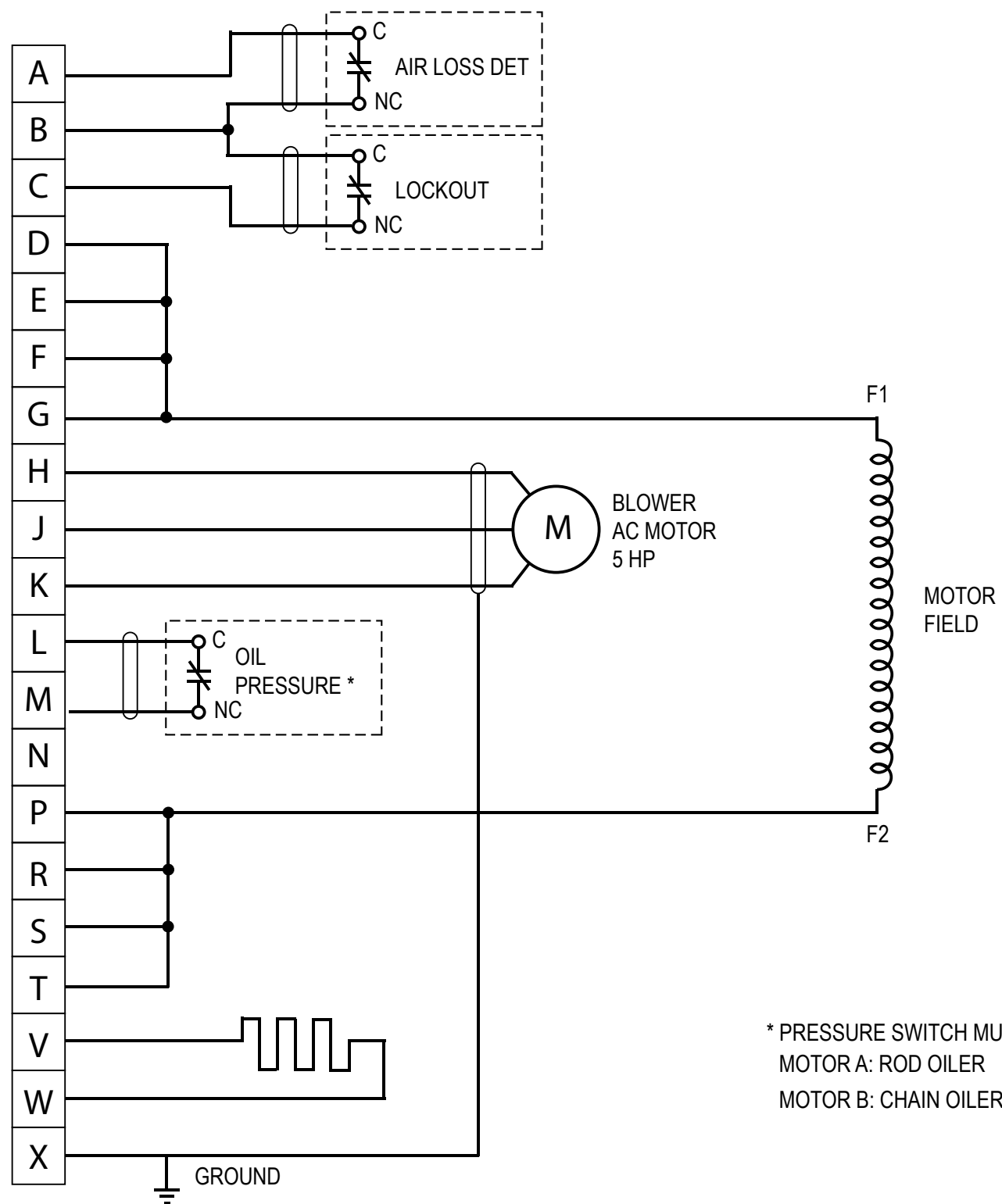
- D027MOTOR PLUG CONNECTIONS
- D042SCR SCHEMATIC
- D044DRAWWORKS CONTROL SCHEMATIC
- D045ROTARY TABLE CONTROL SCHEMATIC
- D046MUD PUMPS 1 & 2 CONTROL SCHEMATIC
- D048 Sht 1DC CONTROL LOGIC SCHEMATIC
- D048 Sht 2DC CONTROL LOGIC & AUXILIARY MOTOR STARTING SCHEMATIC
- D048 Sht 3DC CONTROL LOGIC & AUXILIARY MOTOR STARTING SCHEMATIC
- D051 Sht 1ROTARY TABLE FIELD SUPPLY
- D051 Sht 2DRAWWORKS FIELD SUPPLY
- D051 Sht 3MUD PUMP 1 FIELD SUPPLY
- D051 Sht 4MUD PUMP 2 FIELD SUPPLY
- D069MOTOR STARTER SCHEMATIC

FORASOL
N110-9
6070


PRINTED CIRCUIT BOARDS

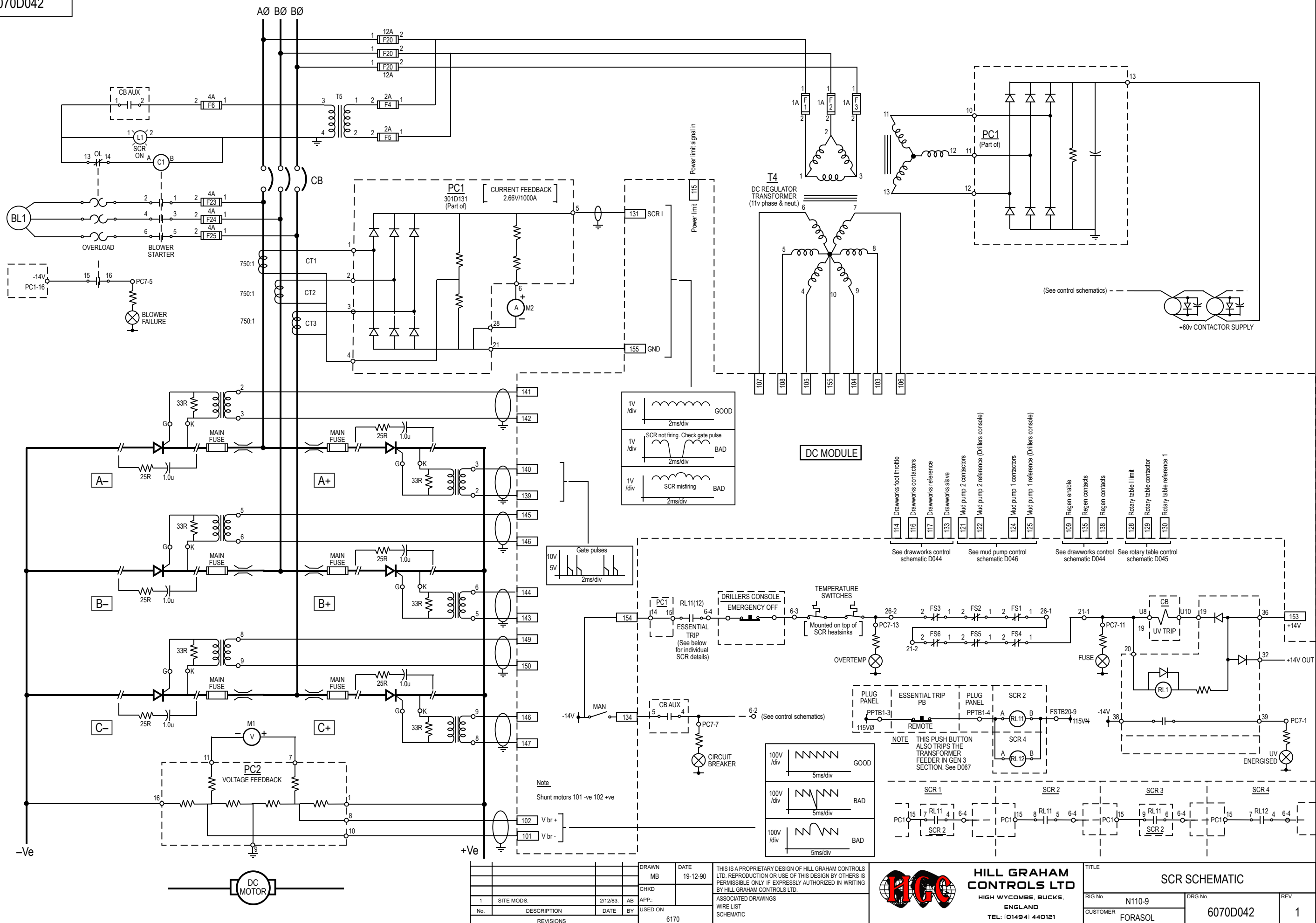
- 301C062CONTACTOR AUCTIONEERING PCB
- 301D009DRILLERS CONSOLE PCB
- 301D099ALARM PCB
- 301D131SCR AUXILIARY PCB

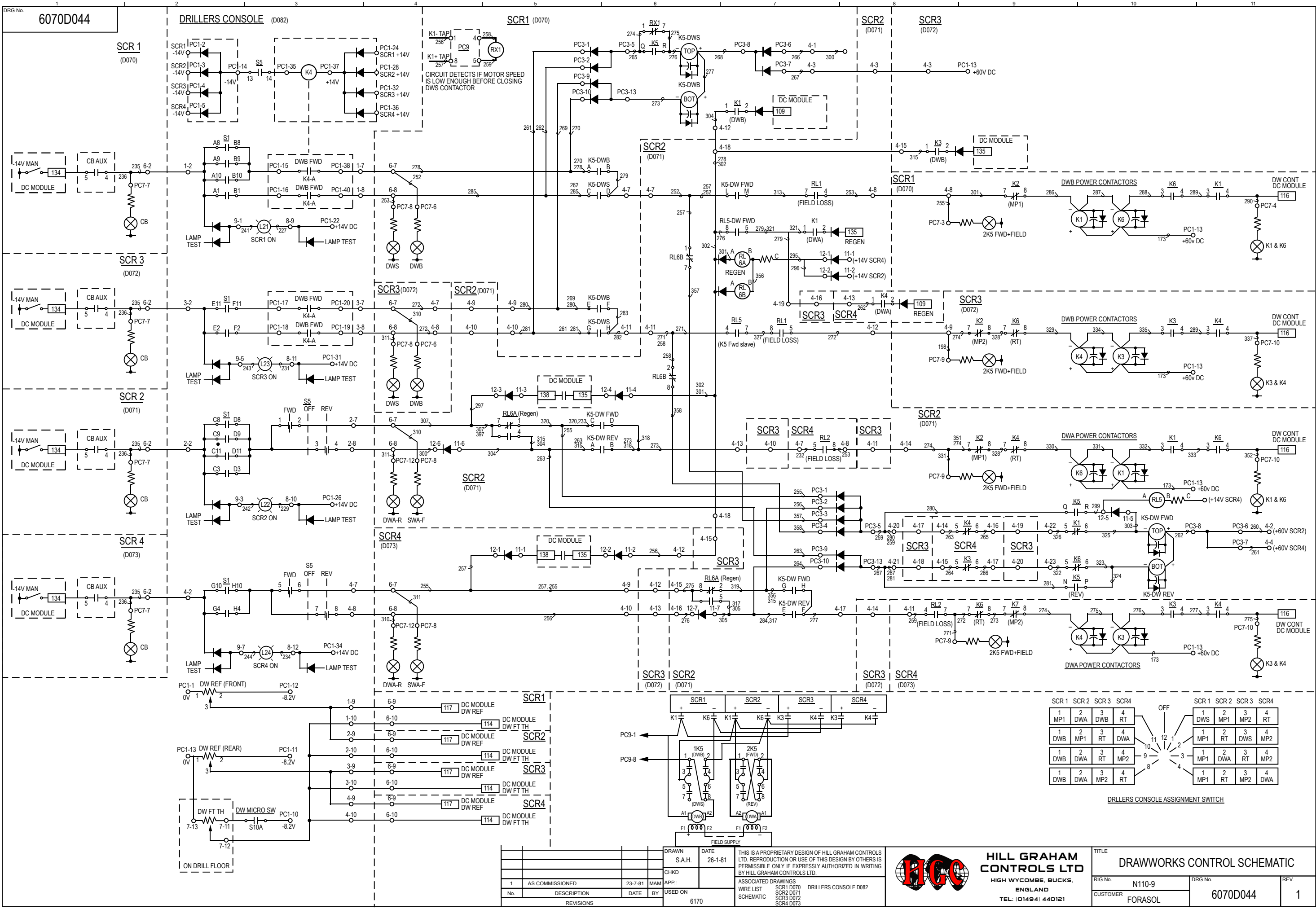
6070D027

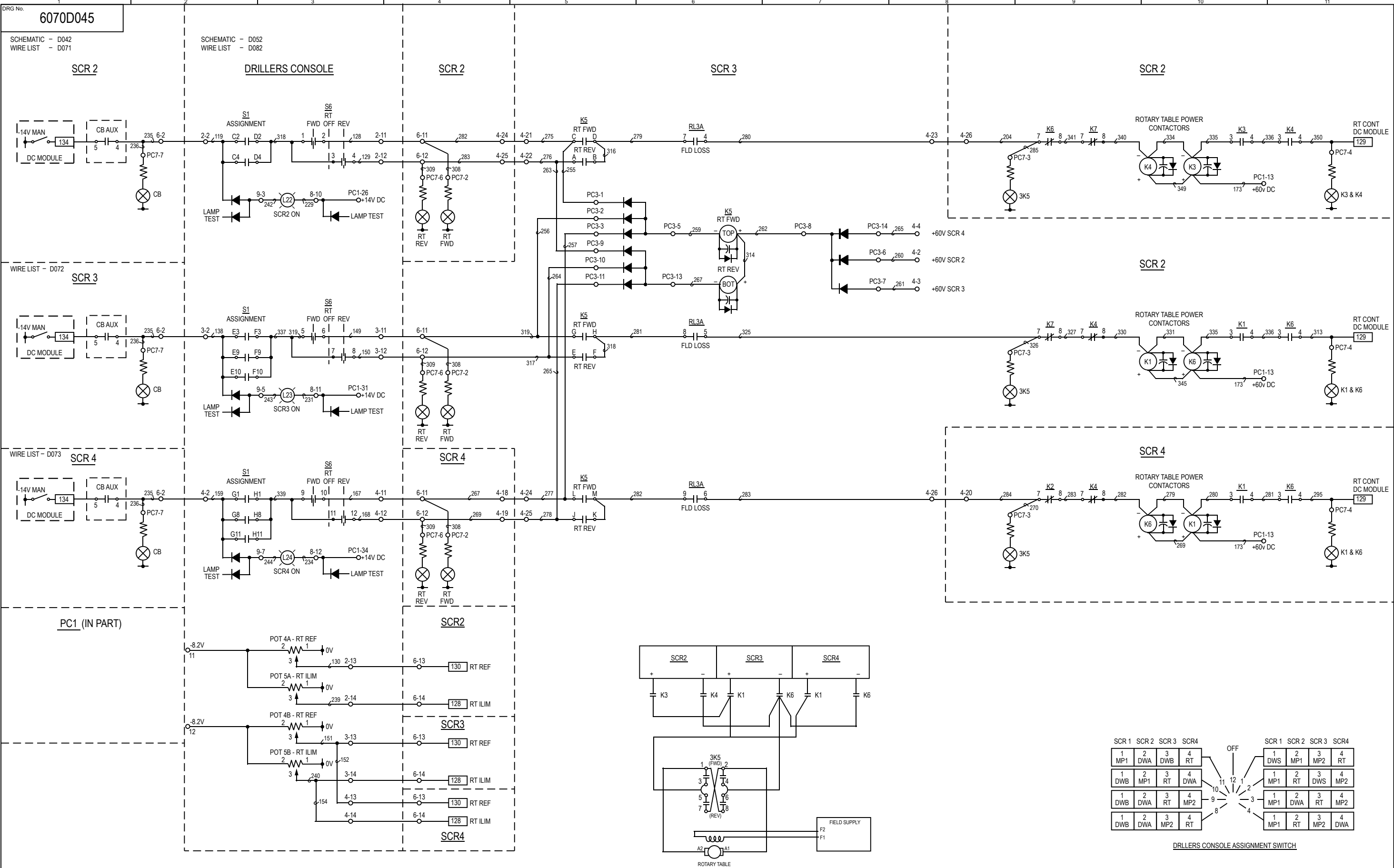


* PRESSURE SWITCH MUD PUMPS ONLY.
MOTOR A: ROD OILER
MOTOR B: CHAIN OILER

				DRAWN A V M		DATE 19-12-80		<div>THIS IS A PROPRIETARY DESIGN OF HILL GRAHAM CONTROLS LTD. REPRODUCTION OR USE OF THIS DESIGN BY OTHERS IS PERMISSIBLE ONLY IF EXPRESSLY AUTHORIZED IN WRITING BY HILL GRAHAM CONTROLS LTD.</div> <div>ASSOCIATED DRAWINGS WIRE LIST SCHEMATIC</div>		<div></div> <div>HILL GRAHAM CONTROLS LTD HIGH WYCOMBE, BUCKS. ENGLAND TEL: 01494 440121</div>		TITLE MOTOR PLUG CONNECTIONS					
				CHKD APP.:								RIG No. N110-9		DRG No.		REV.	
				USED ON								CUSTOMER FORASOL		6070D027			
No. DESCRIPTION DATE BY																	
REVISIONS																	







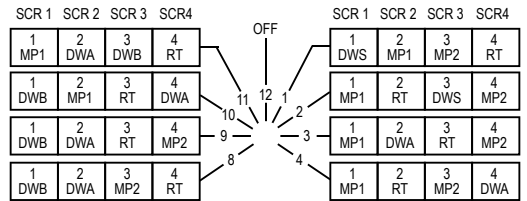
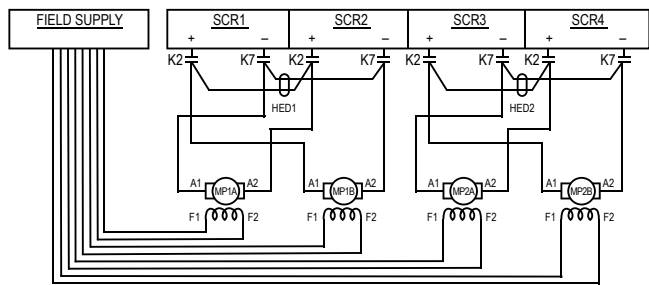
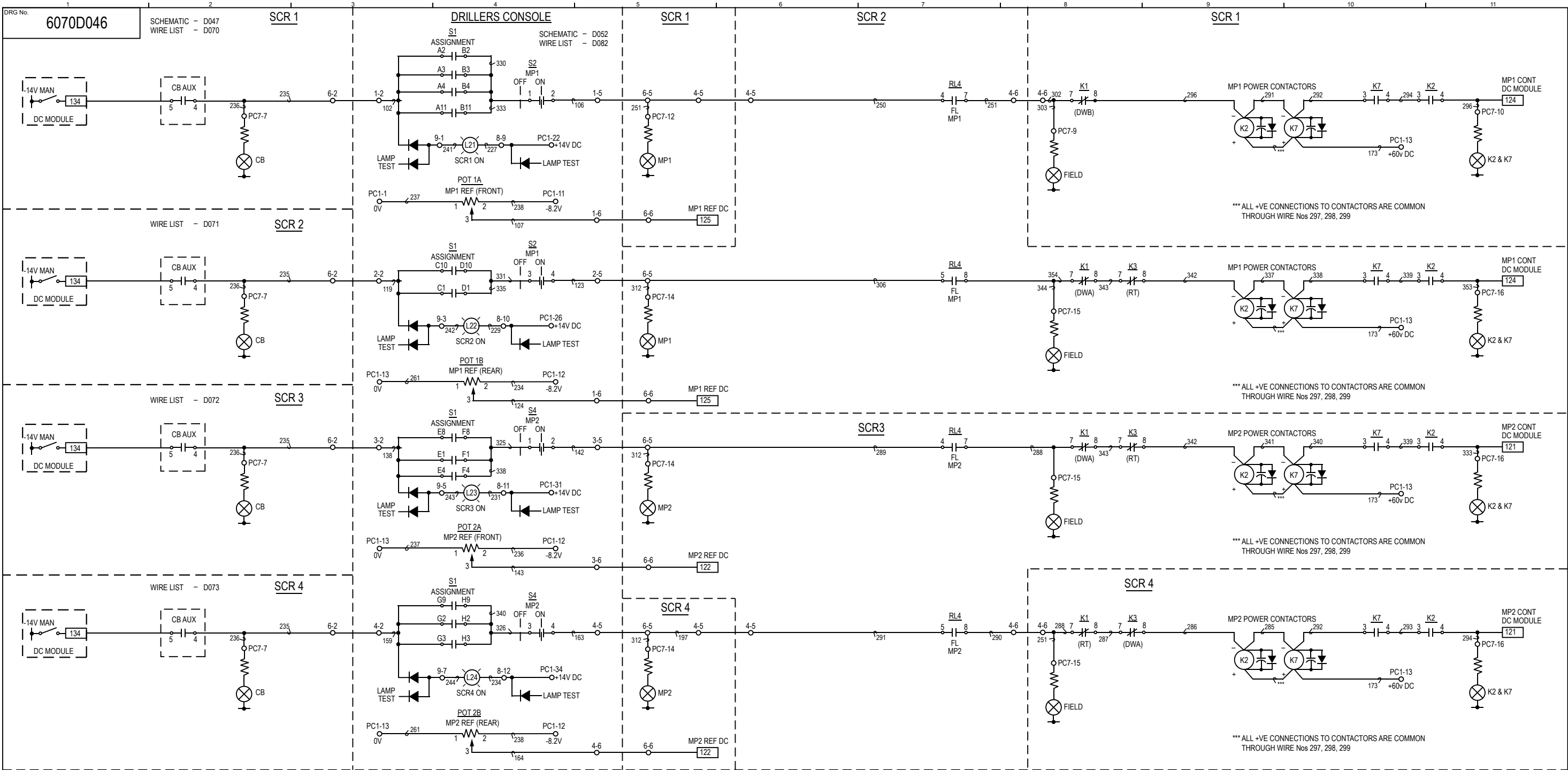
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No.	DESCRIPTION	DATE	BY	USED ON	
REVISIONS					

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CHKD			
APP.			
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ASSOCIATED DRAWINGS			
WIRE LIST	SCR1 D070	DRILLERS CONSOLE D082	
SCHEMATIC	SCR2 D071		
	SCR3 D072		
	SCR4 D073		



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TITLE ROTARY TABLE CONTROL SCHEMATIC			
RIG No.	N110-9	DRG No.	6070D045
CUSTOMER	FORASOL	REV.	1



DRILLERS CONSOLE ASSIGNMENT SWITCH

1	UPDATED	2-4-81	R/JN	APP.	
No.	DESCRIPTION	DATE	BY	USED ON	
REVISIONS					

DRAWN	A.B.	DATE	5-3-81
CHKD			
APP.			
USED ON			

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ASSOCIATED DRAWINGS

WIRE LIST

SCHEMATIC

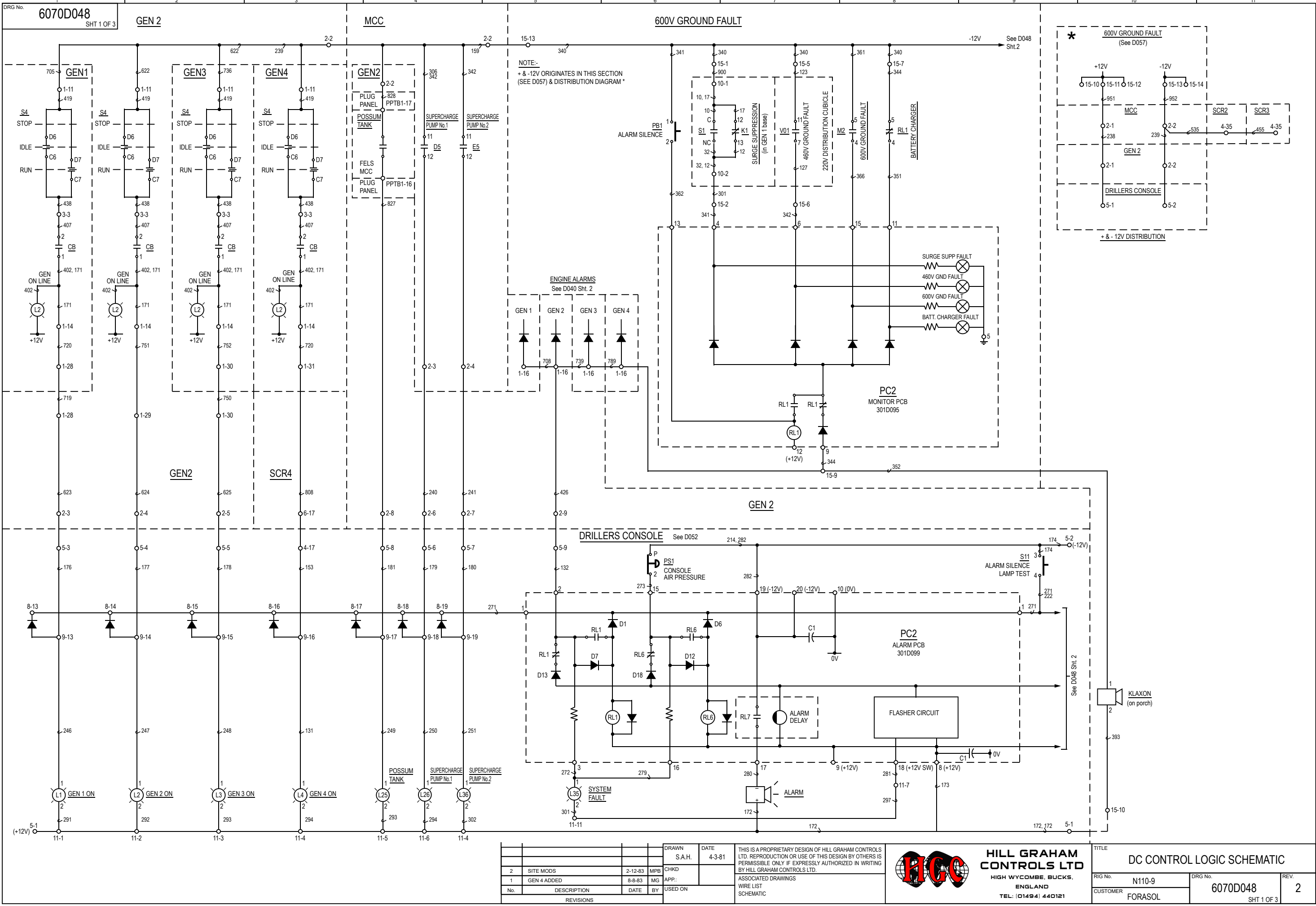


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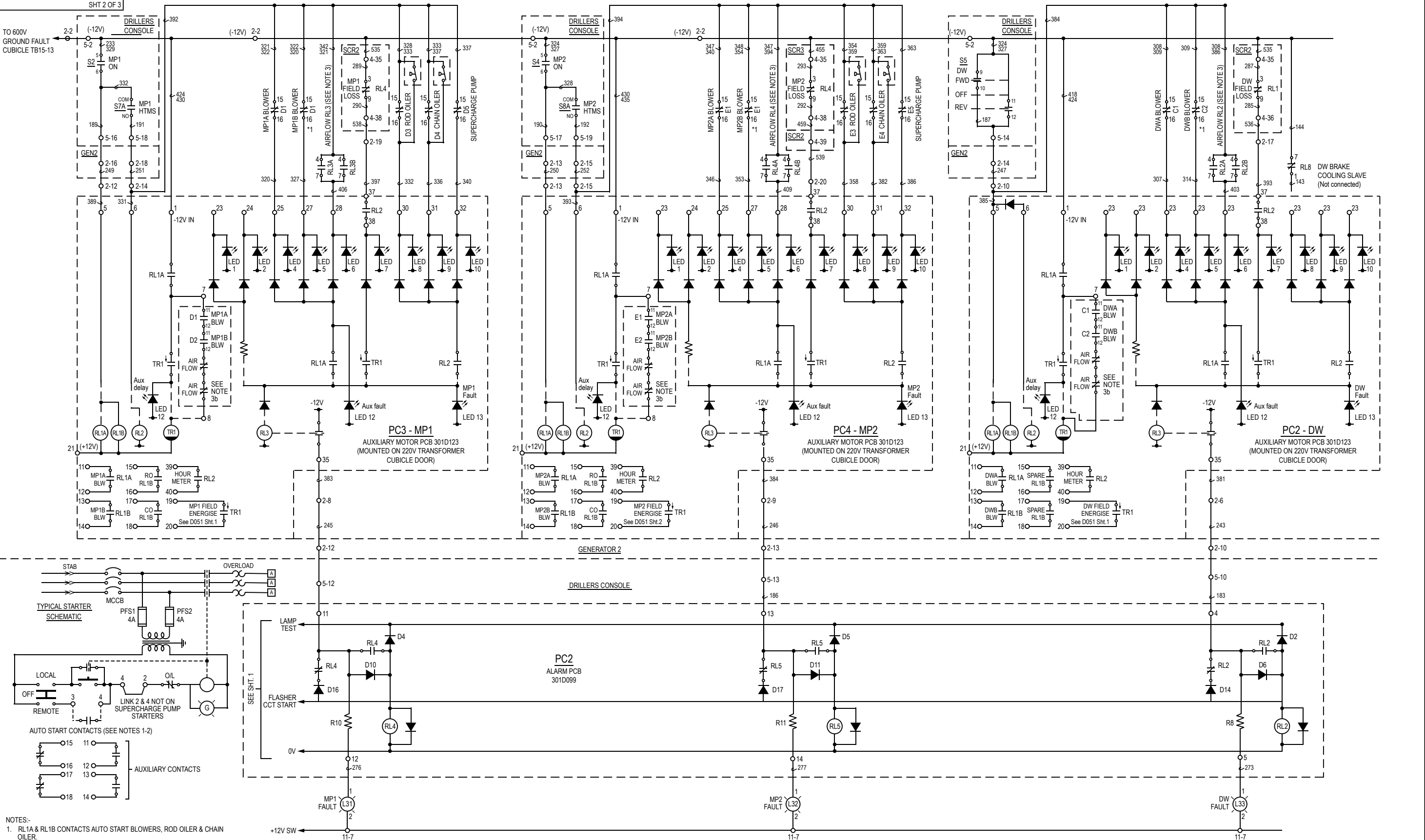
TITLE				MUD PUMPS 1 & 2 CONTROL SCHEMATIC	
RIG No.	N110-9		DRG No.	6070D046	
CUSTOMER	FORASOL				
REV.	1				



6070D048

SHT 2 OF 3

TO 600V
GROUND FAULT
CUBICLE TB15-13



- NOTES:-
1. RL1A & RL1B CONTACTS AUTO START BLOWERS, ROD OILER & CHAIN OILER.
 2. MP1 & MP2 SUPERCHARGE PUMPS ARE PUSH-BUTTON STARTED FROM DRILLERS CONSOLE
 - 3a AIRFLOW RELAYS 1-4 WILL BE ENERGISED UNDER 'NO AIRFLOW' CONDITIONS & CONTACTS 7 & 4 WILL GIVE RISE TO AN ALARM.
 - 3b ONCE AIRFLOW HAS BEEN ESTABLISHED CONTACTS 2 & 3 WILL CLOSE THUS ENABLING THE FIELDS TO BE ENERGISED.
 - *1 DISCONNECTED FOR SINGLE MOTOR MUD PUMP.

				DRAWN	DATE
				S.A.H.	6-3-81
2	SITE MODS	2-12-83	MPB	CHKD	
1	GEN 4 ADDED	8-8-83	MG	APP:	
No.	DESCRIPTION	DATE	BY	USED ON	
	REVISIONS			6070	

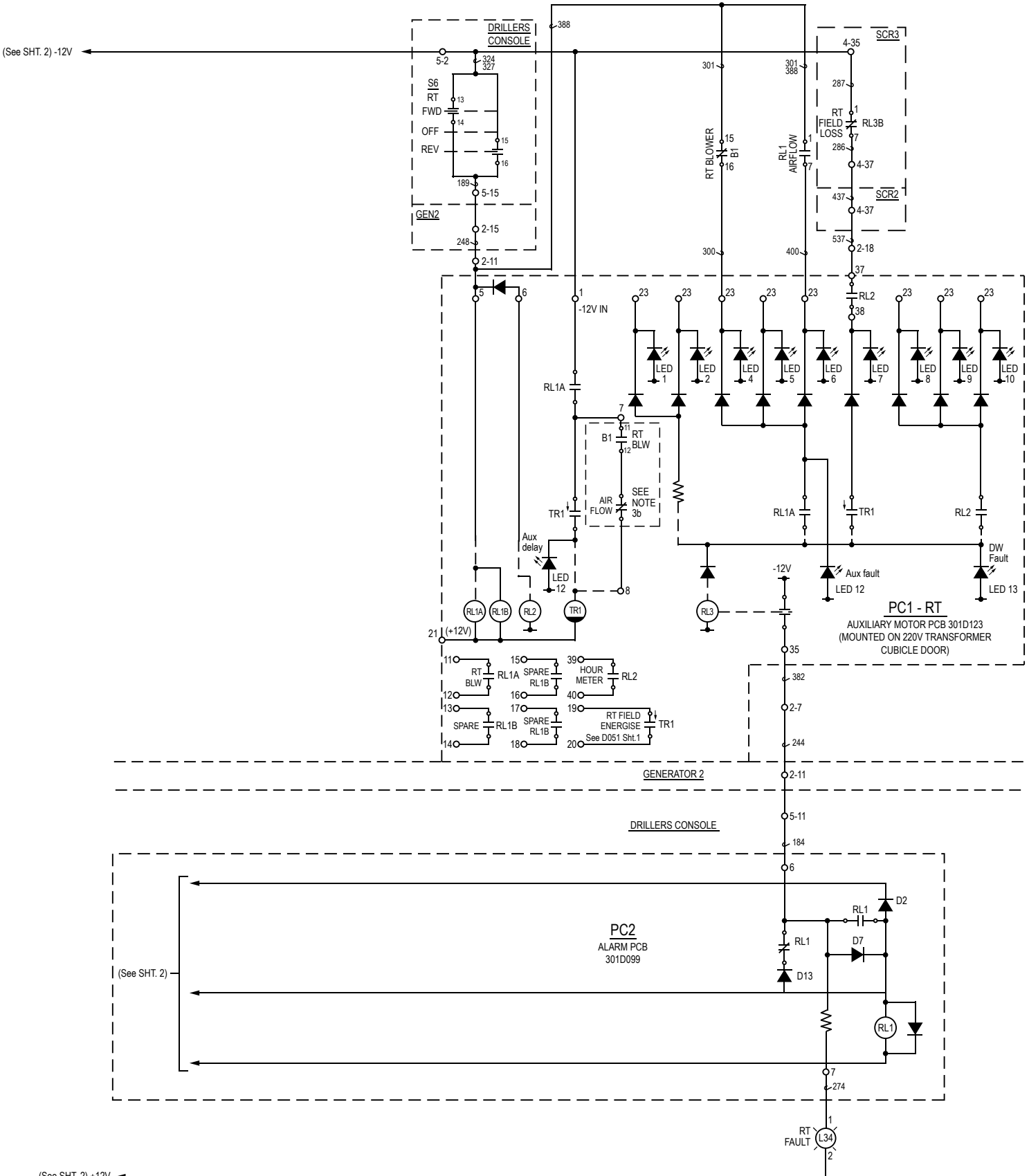
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ASSOCIATED DRAWINGS
WIRE LIST D093, D081, D082.
SCHEMATIC



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TITLE DC CONTROL LOGIC & AUXILIARY MOTOR STARTING SCHEMATIC			
RIG No.	N110-9	DRG No.	6070D048
CUSTOMER	FORASOL		
			REV. 2
SHT 2 OF 3			



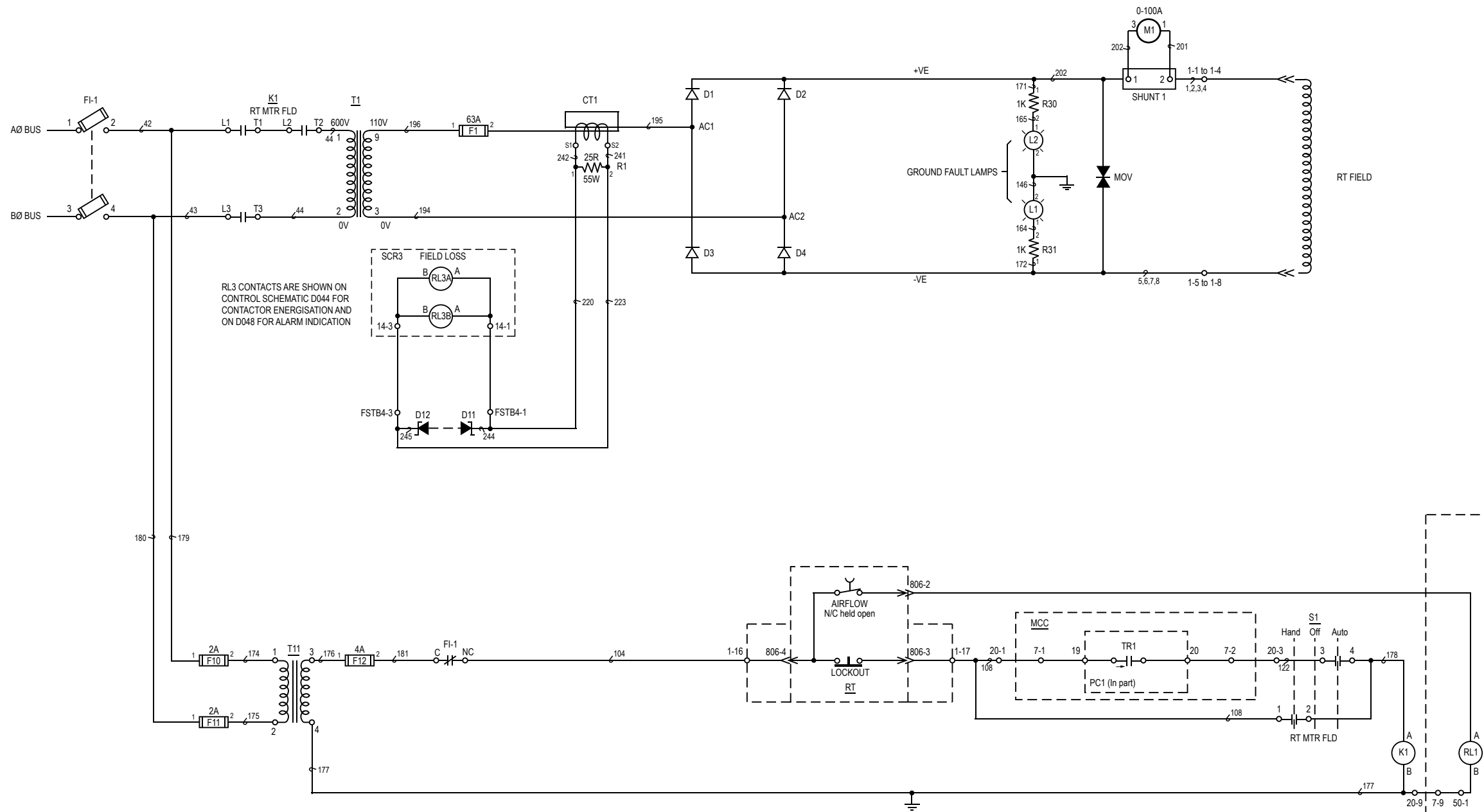
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REVISIONS					

DRAWN	S.A.H.	DATE	9-3-81
CHKD			
APP.			
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ASSOCIATED DRAWINGS			
WIRE LIST			
SCHEMATIC			



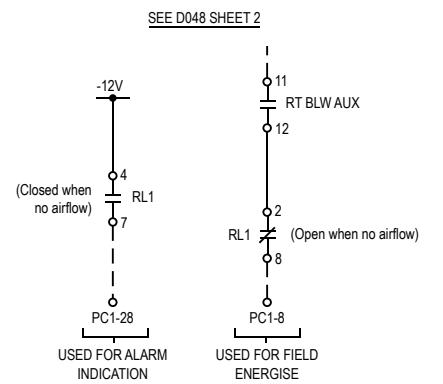
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TITLE DC CONTROL LOGIC & AUXILIARY MOTOR STARTING SCHEMATIC			
RIG No.	N110-9	DRG No.	6070D048
CUSTOMER	FORASOL	REV.	
SHT 3 OF 3			



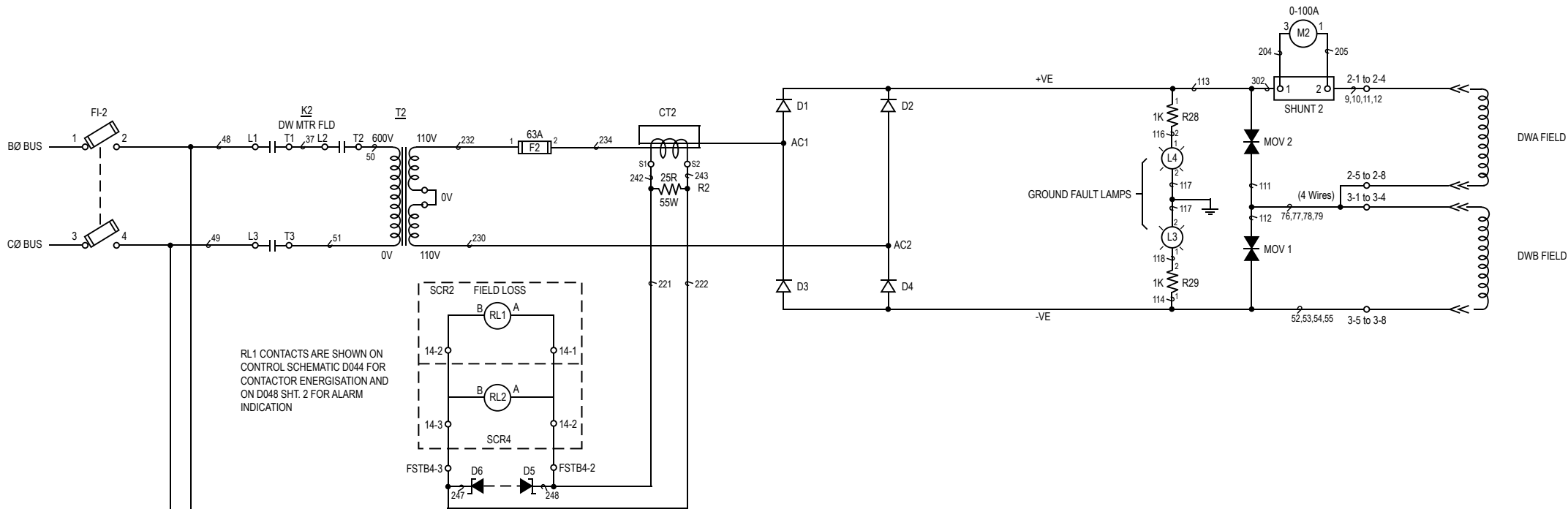
FIELD ENERGISING SEQUENCE

1. DRILLERS CONSOLE - RT SWITCH (S6) TO FORWARD OR REVERSE
2. RELAY RL1 ON AUXILIARY MOTOR BOARD (PC1) ARE ENERGISED, AUTO STARTING RT BLOWERS (REF D048 SHT 2)
3. ONCE THE AIRFLOW HAS BEEN ESTABLISHED TR1 ON PC1 IS ENERGISED. 7 SECOND DELAY THUS ENERGISING FIELD

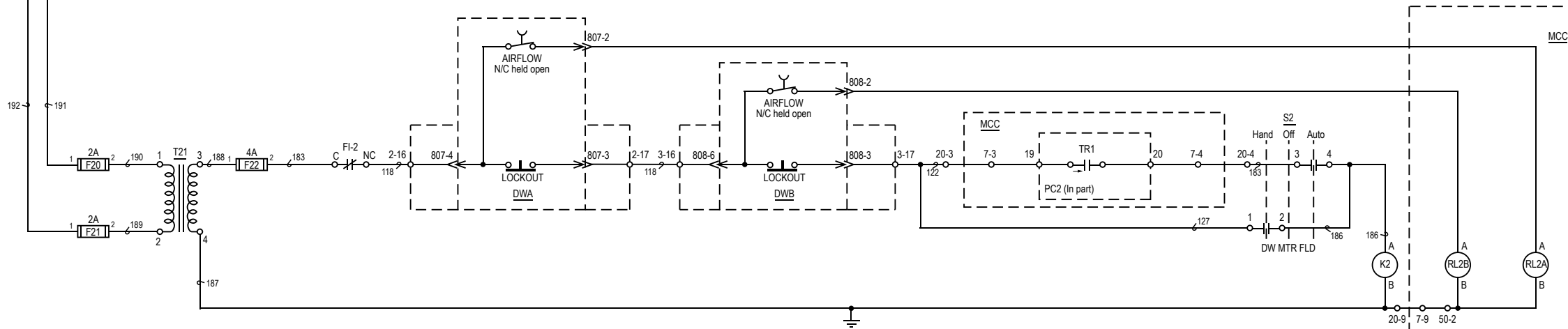


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				A.B.	6-3-81				ROTARY TABLE FIELD SUPPLY				
				CHKD					RIG No.	N110-9	DRG No.		REV.
				APP.:					CUSTOMER		6070D051 SHT 1 OF 4		
No.	DESCRIPTION	DATE	BY	USED ON	ASSOCIATED DRAWINGS								
REVISIONS					WIRE LIST SCHEMATIC								

DRG No. 6070D051
SHT 2 OF 4

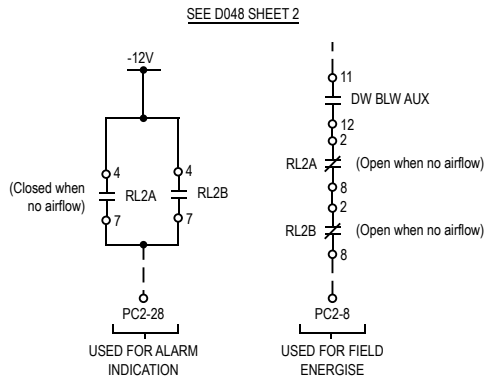


RL1 CONTACTS ARE SHOWN ON
CONTROL SCHEMATIC D044 FOR
CONTACTOR ENERGISATION AND
ON D048 SHT. 2 FOR ALARM
INDICATION



FIELD ENERGISING SEQUENCE

1. DRILLERS CONSOLE - DW SWITCH (S5) TO FORWARD OR REVERSE
2. RELAYS RL1A & RL1B ON AUXILIARY MOTOR BOARD (PC2) ARE ENERGISED, AUTO STARTING DWA & DWB BLOWERS (REF D048 SHT 2)
3. ONCE THE AIRFLOW HAS BEEN ESTABLISHED TR1 ON PC2 IS ENERGISED, 7 SECOND DELAY THUS ENERGISING FIELD



No.	DESCRIPTION	DATE	BY
1	AS COMMISSIONED	24-7-81	MSM
REVISIONS			

DRAWN A.B.	DATE 6-3-81
CHKD	
APP.	
USED ON	

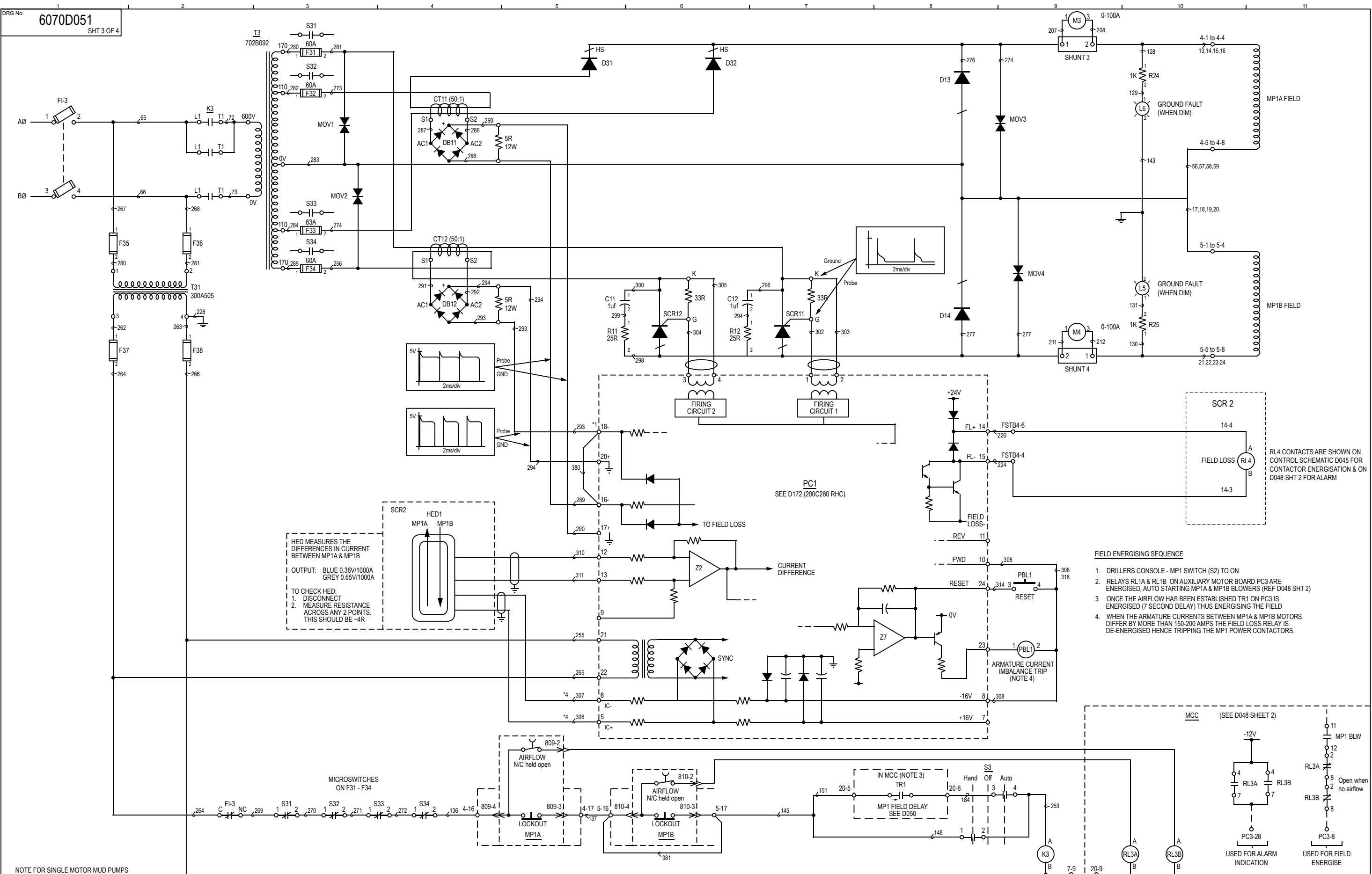
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ASSOCIATED DRAWINGS
WIRE LIST
SCHEMATIC



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TITLE DRAWWORKS FIELD SUPPLY			
RIG No.	N110-9	DRG No.	6070D051
CUSTOMER	FORASOL	REV.	1
SHT 2 OF 4			



NOTE FOR SINGLE MOTOR MUD PUMPS

1. DISCONNECT WIRE No 293 FROM PC1-18
2. ADD LINK No 380 BETWEEN PC1-18 & 16
3. ADD LINK No 381 BETWEEN TB5-16 & 17
4. DISCONNECT WIRES 307 & 306 FROM PC1-6 & 5

				DRAWN A.B.	DATE 9-3-81
1	AS COMMISSIONED	24-7-81	MSM	CHKD	
1	GROUND FAULT LAMPS ADDED	24-4-81	RJM	APP.:	
No.	DESCRIPTION	DATE	BY	USED ON	
REVISIONS					

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ASSOCIATED DRAWINGS

WIRE LIST

SCHEMATIC

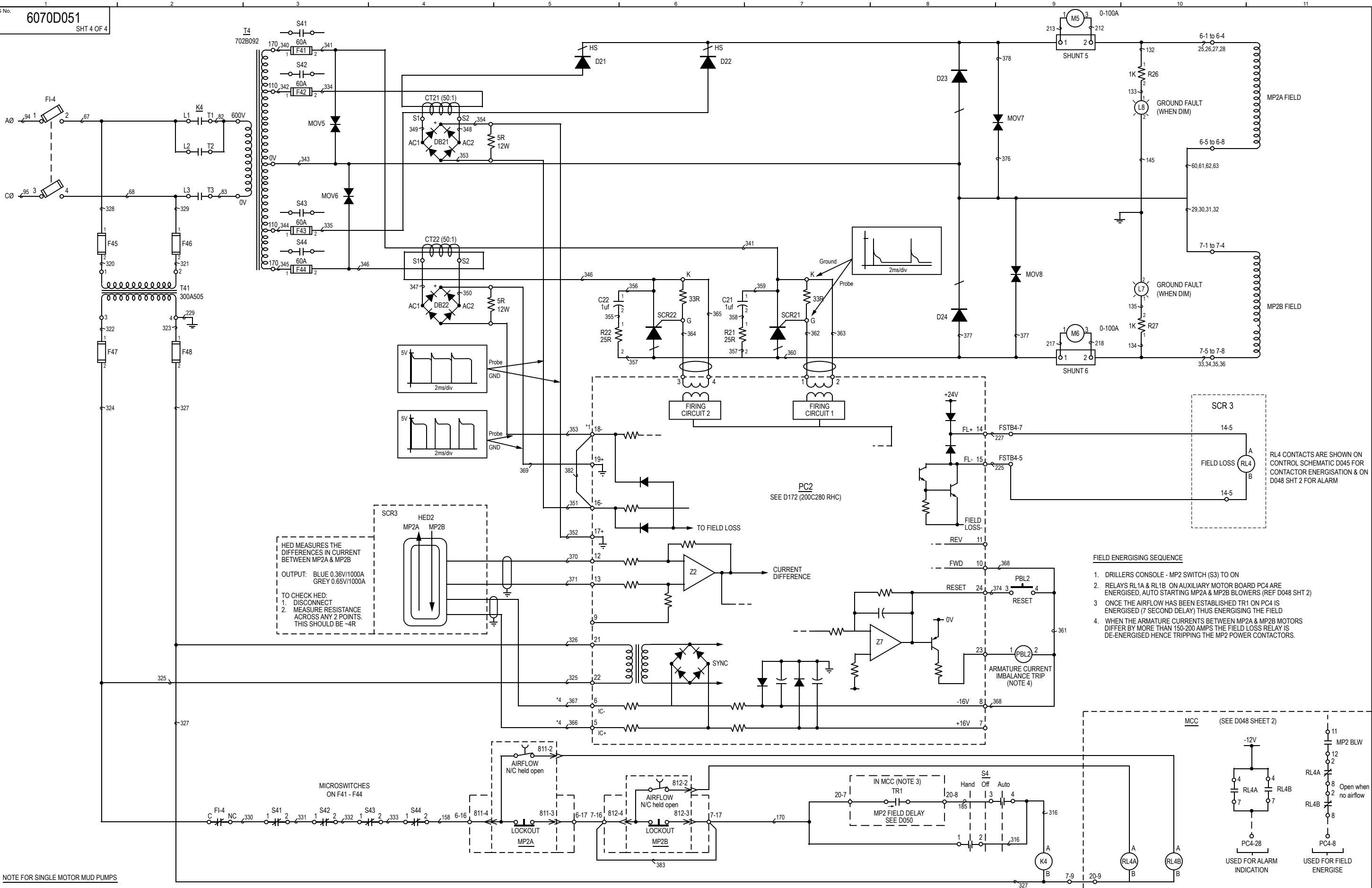


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TITLE			
MUD PUMP 1 FIELD SUPPLY			
RIG No.	N110-9	DRG No.	6070D051
CUSTOMER	FORASOL	SHT 3 OF 4	REV. 2

6070D051

SHT 4 OF 4



NOTE FOR SINGLE MOTOR MUD PUMPS

1. DISCONNECT WIRE No 353 FROM PC2-18
2. ADD LINK No 382 BETWEEN PC2-18 & 16
3. ADD LINK No 383 BETWEEN TB7-16 & 17
4. DISCONNECT WIRES 366 & 367 FROM PC2-6 & 5

No.	DESCRIPTION	DATE	BY
1	AS COMMISSIONED	24-7-81	MSM
1	GROUND FAULT LAMPS ADDED	24-4-81	RJM
	REVISIONS		

DRAWN	A.B.	DATE	9-3-81
CHKD			
APP.			
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ASSOCIATED DRAWINGS

WIRE LIST

SCHEMATIC

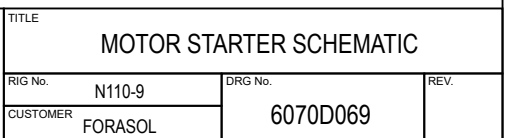


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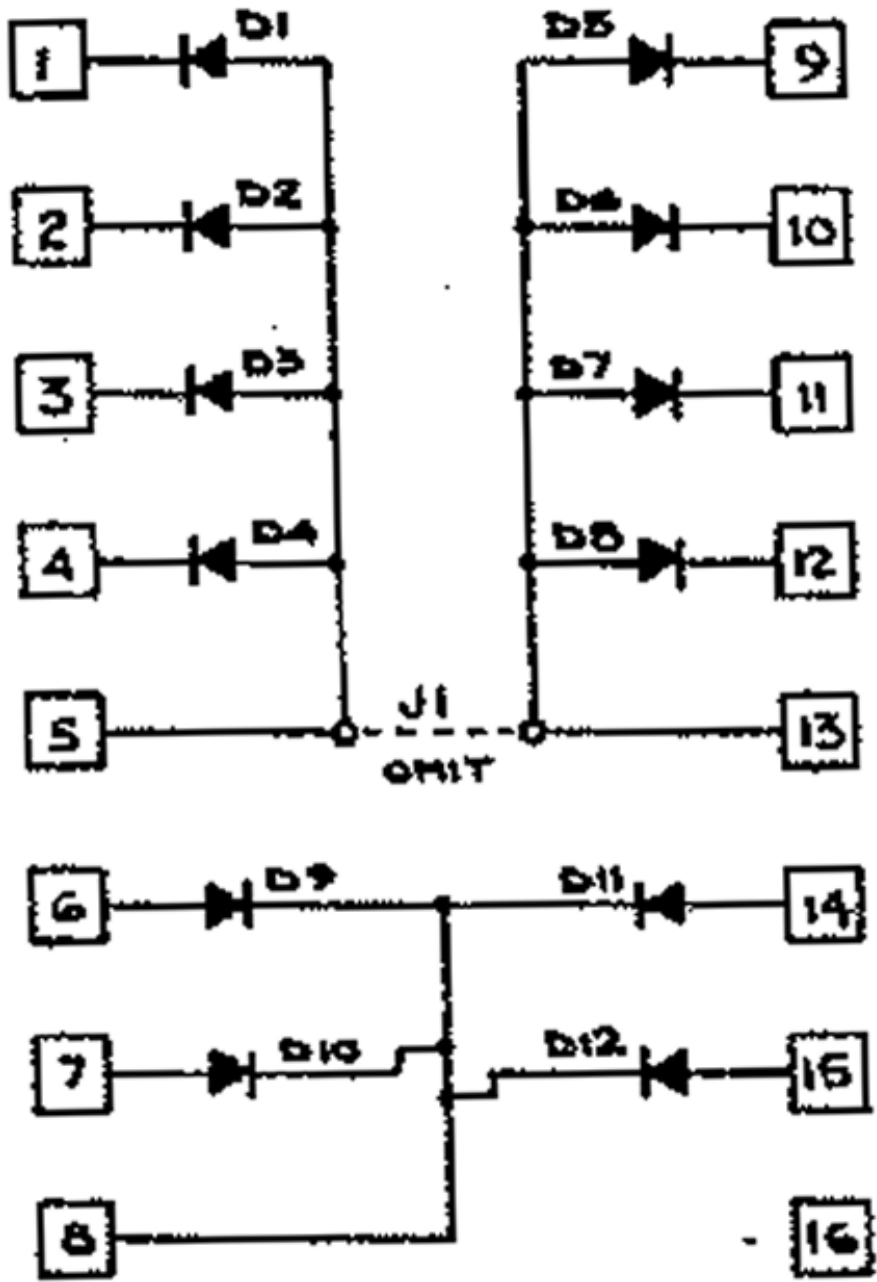
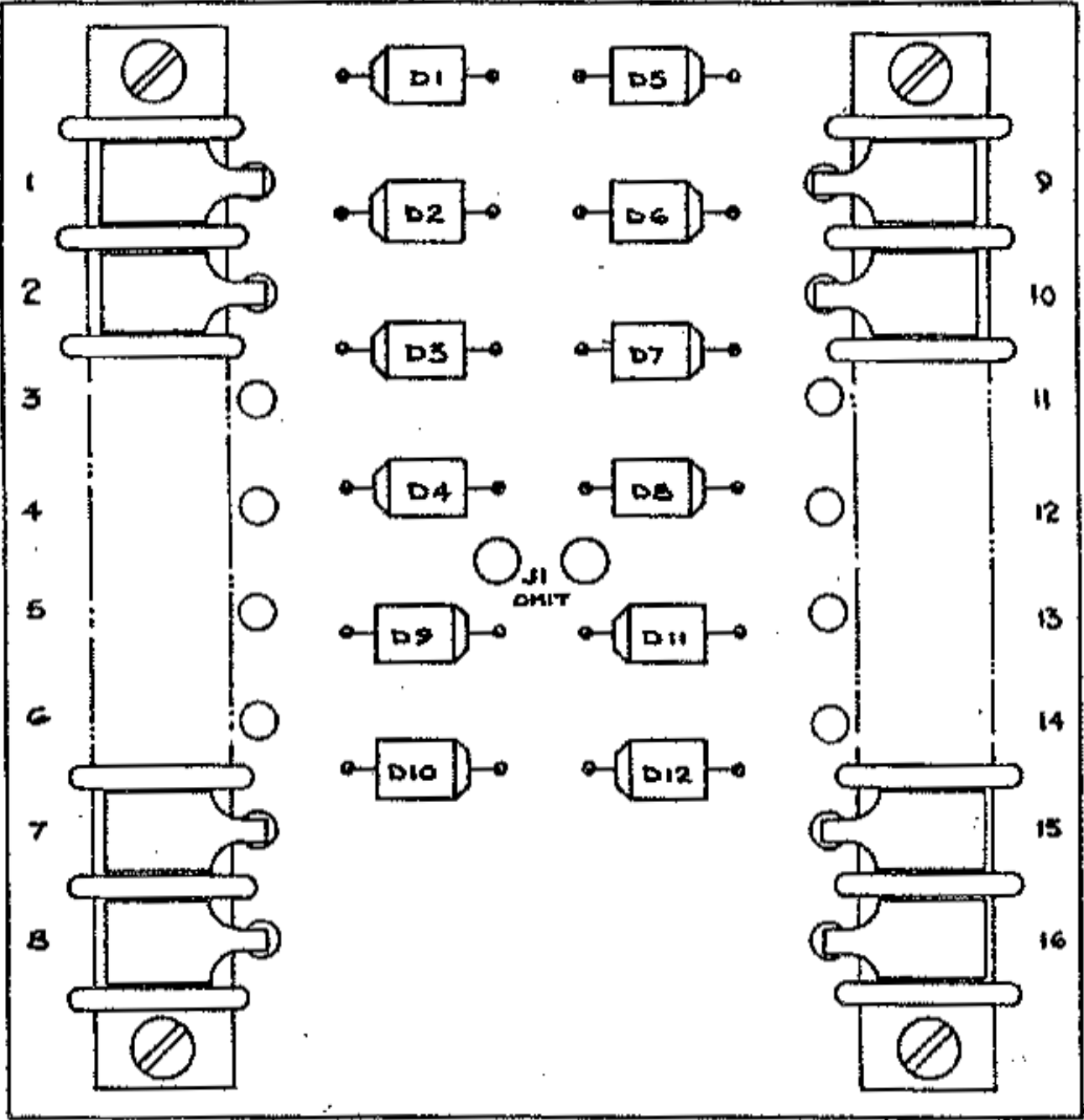
TITLE	MUD PUMP 2 FIELD SUPPLY		
RIG No.	N110-9	DRG No.	6070D051
CUSTOMER	FORASOL		
REV.			2
			SHT 4 OF 4



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ASSOCIATED DRAWINGS
WIRE LIST
SCHEMATIC



DRG No. 301C062
SHT 1 OF 1



No.	DESCRIPTION	DATE	BY	USED ON	
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DRAWN	S.A.H.	DATE	6-3-81
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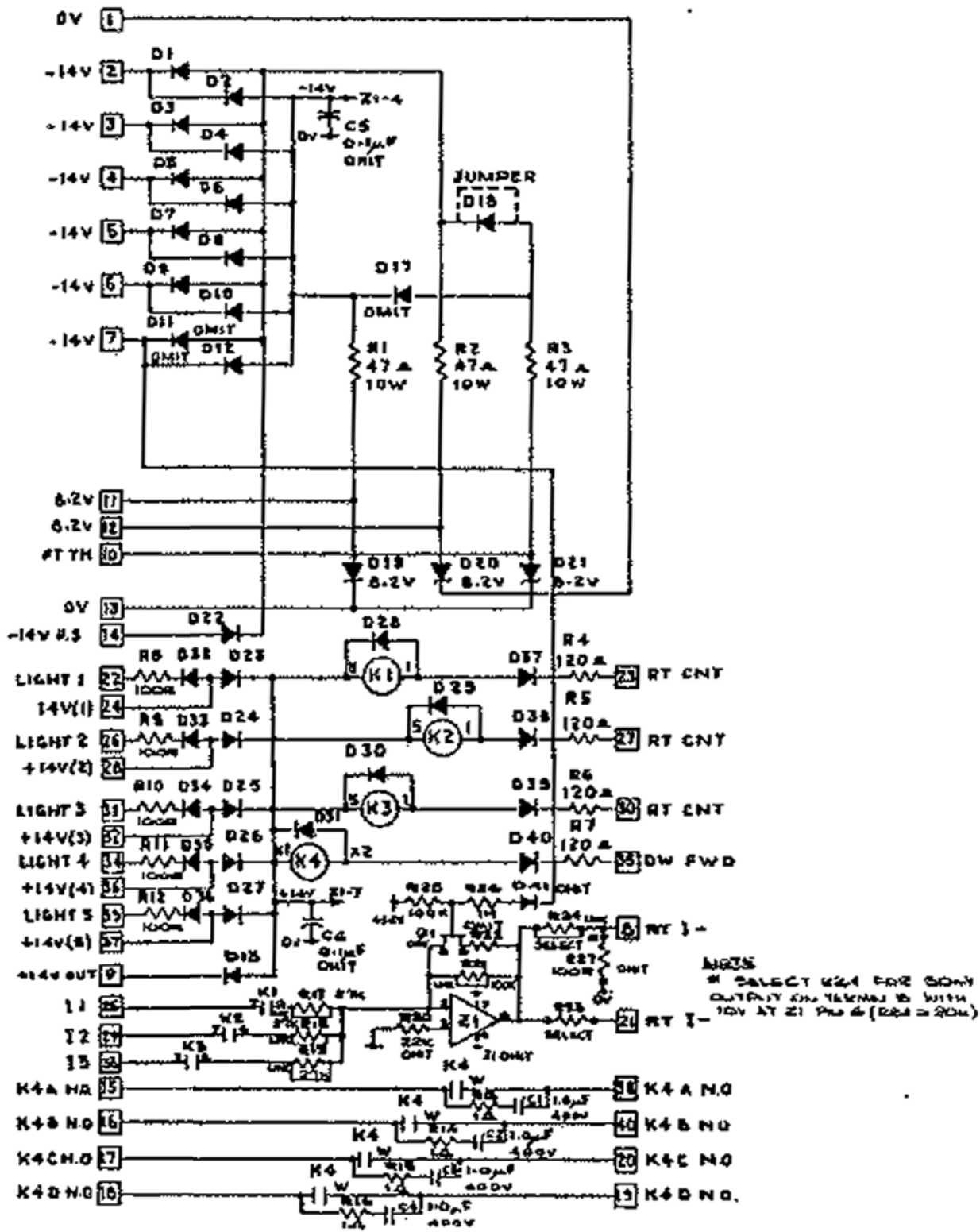
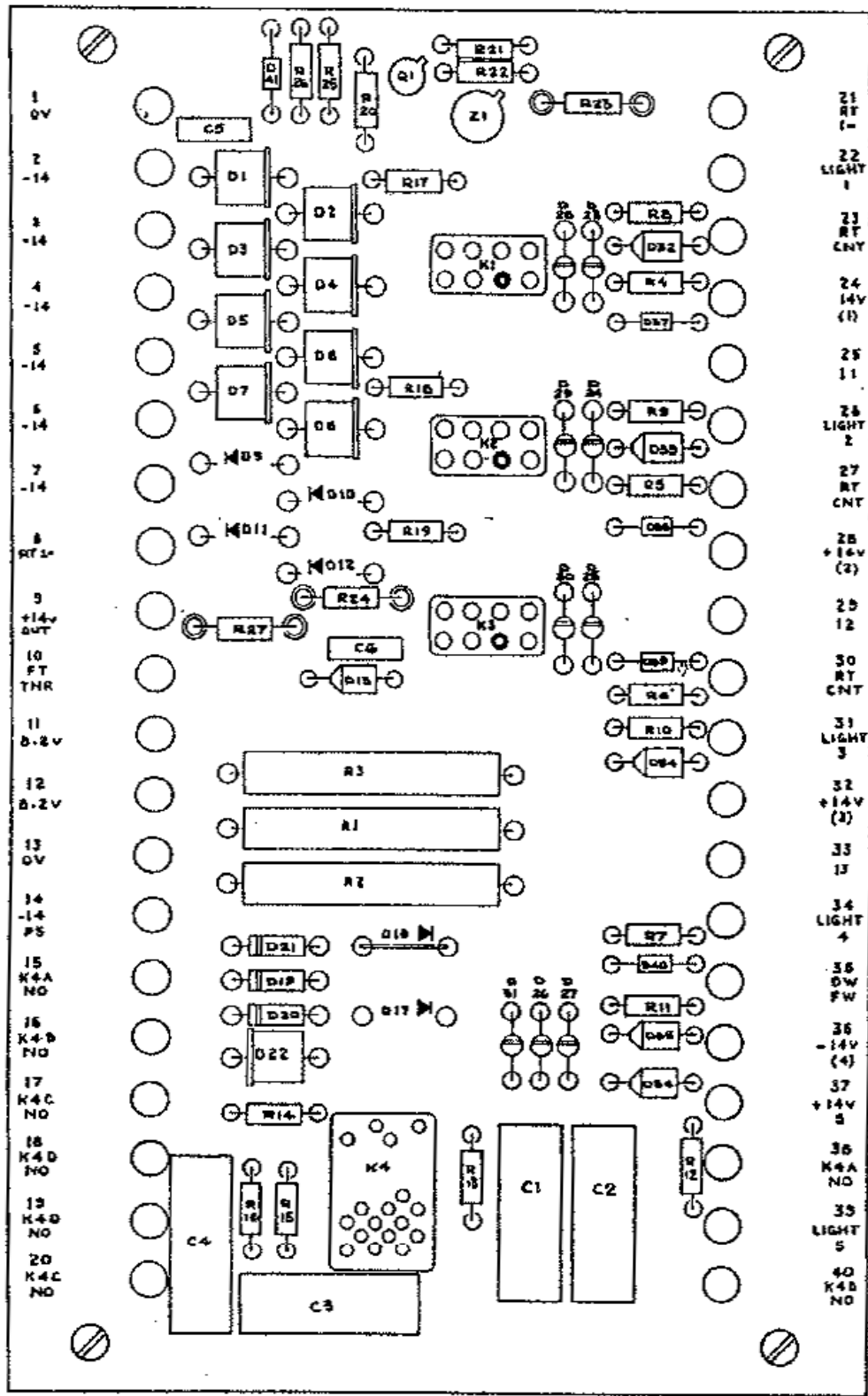
ASSOCIATED DRAWINGS
WIRE LIST
SCHEMATIC

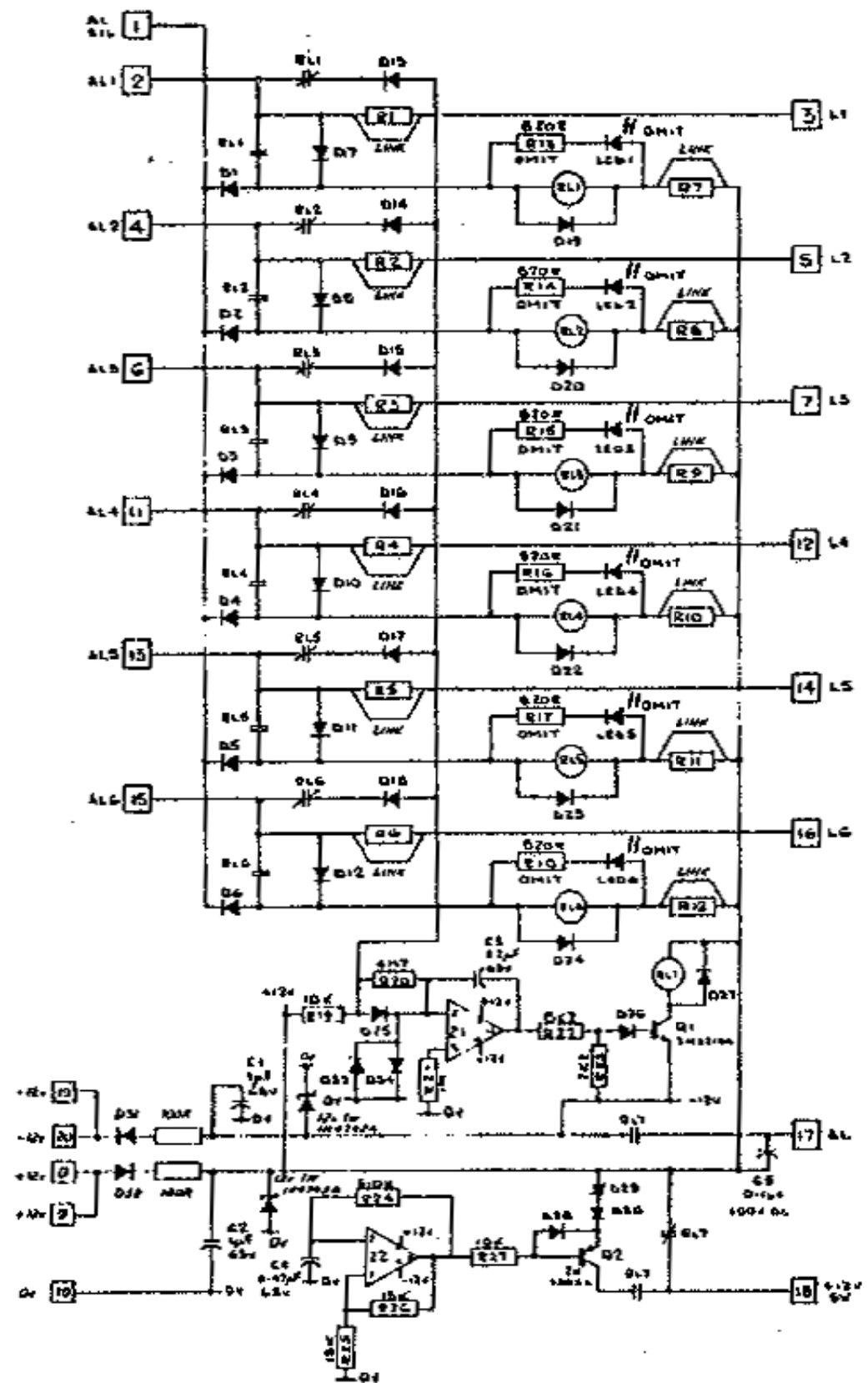
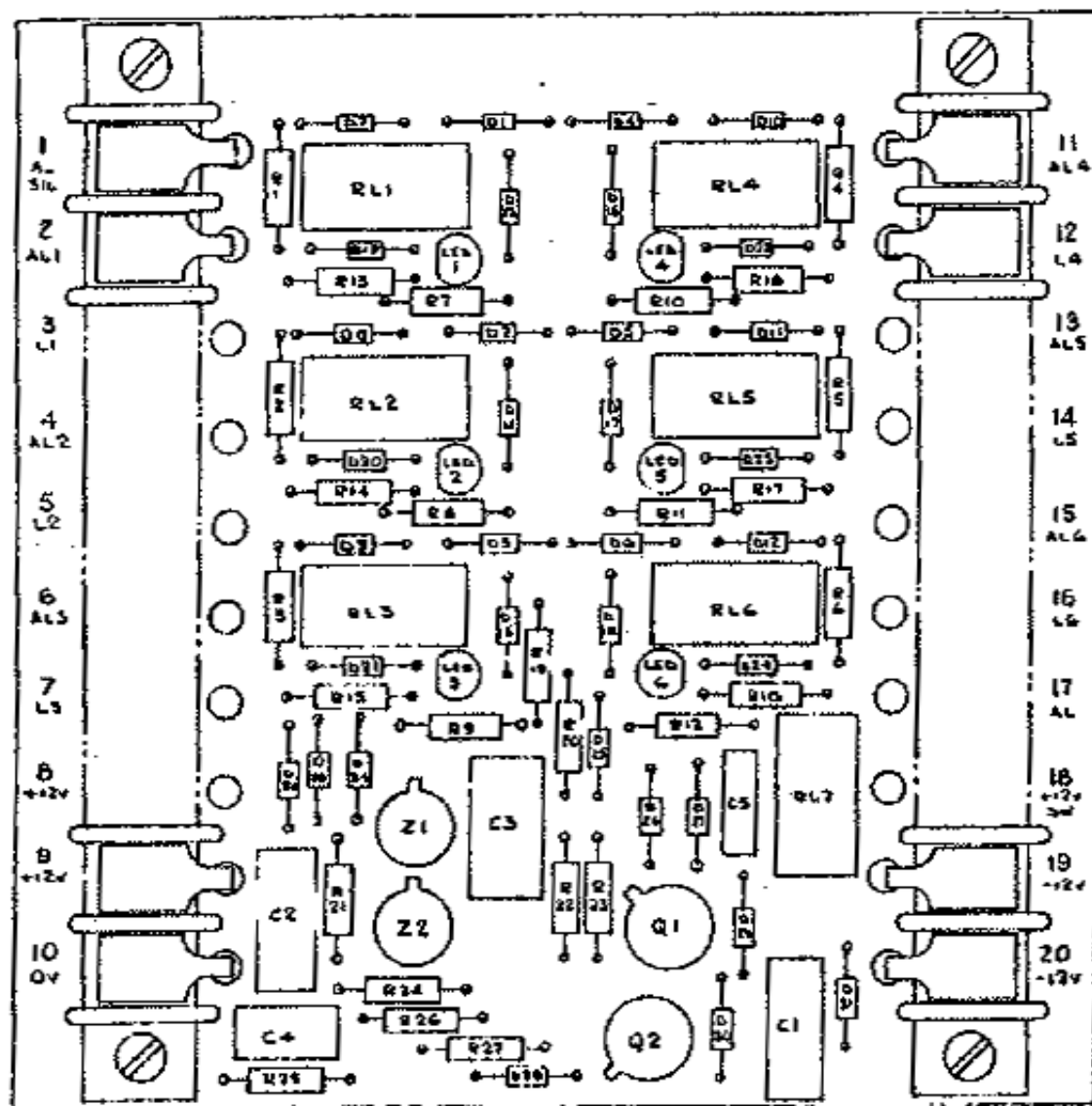


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TITLE CCT DIAGRAM AND ASSY. CONTACTOR AUCTIONEERING PCB			
RIG No.	DRG No.	REV.	
CUSTOMER	301C062	0	
SHT 1 OF 1			

301D009
SHT 1 OF 1





						DRAWN	DATE
						S.A.H.	6-3-81
						CHKD	
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WIRE LIST

SCHEMATIC



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TITLE	CCT DIAGRAM AND ASSY. ALARM PCB
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RIG No.	DRG No.	REV.
CUSTOMER	301D099 SHT 1 OF 1	0

DRG No. 301D131
SHT 1 OF 1

