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It should be noted that most of the pages are identifiable as having been processed by me.

I put a lot of time into producing these files which is why you are met with this page when you open the file.

In order to generate this file, I need to scan the pages, split the double pages and remove any edge marks such as punch holes, clean up the pages, set the relevant pages to be all the same size and alignment. I then run Omnipage (OCR) to generate the searchable text and then generate the pdf file.

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It is my hope that you find the file of use to you personally – I know that I would have liked to have found some of these files years ago – they would have saved me a lot of time !

Colin Hinson

In the village of Blunham, Bedfordshire.

TRAINEE NOTE

TURNING GEARS PART II DIAGRAMS

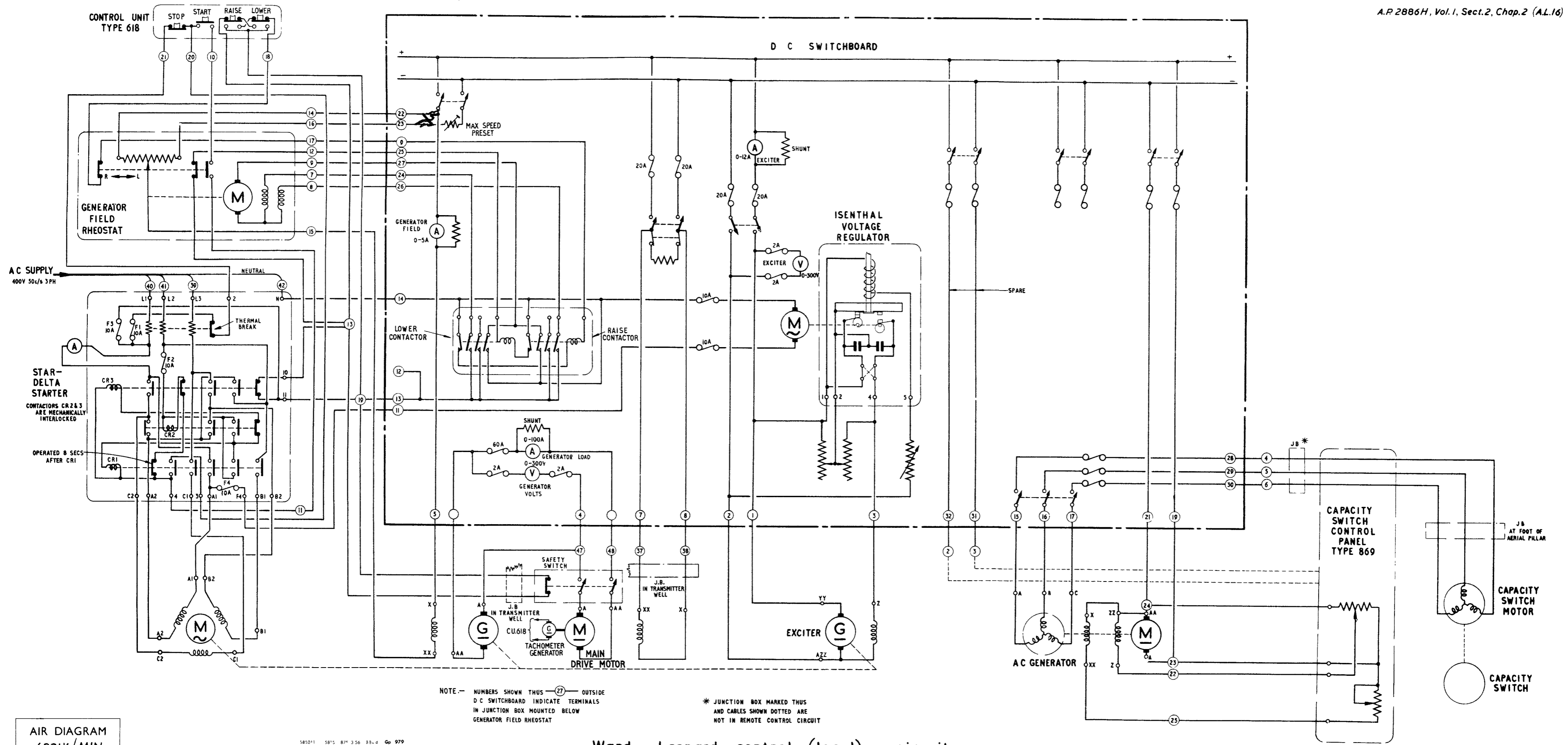
This training note is issued for the guidance of trainees during training at R.A.F. Locking. No amendments will be issued in respect of modifications introduced to the equipment referred to in this note.

This note is not intended as a substitute for the relevant Air Publication and must not be regarded as authority for modifications, servicing procedures, etc.

TURNING GEARS PART II

INDEX TO DIAGRAMS

FIG.	TITLE
40	Ward-Leonard Control (Local) - circuit
41	Ward-Leonard Control Gear - circuit
42	Turning Gear Type 21 - circuit
43	Amplidyne Turning Gear (static) - simplified circuit
44	Servo Amplifiers Types 278 and 297 - circuit
45	Amplidyne Turning Gear (mobile) - simplified circuit
46	Interconnections for Speed Control of a Radar Type 13 Head
47	Control Unit (training) Type 619 - circuit
48	Heading Unit - General Assembly
49	Gear Assembly (Hand Turning) Type 122
50	Gearbox Type 50 - General Assembly
51	Pivot Mount - General Assembly
52	Pivot Mount - Lubrication



NOTE.— NUMBERS SHOWN THUS $\text{---}27\text{---}$ OUTSIDE D.C. SWITCHBOARD INDICATE TERMINALS IN JUNCTION BOX MOUNTED BELOW GENERATOR FIELD RHEOSTAT

* JUNCTION BOX MARKED THUS AND CABLES SHOWN DOTTED ARE NOT IN REMOTE CONTROL CIRCUIT

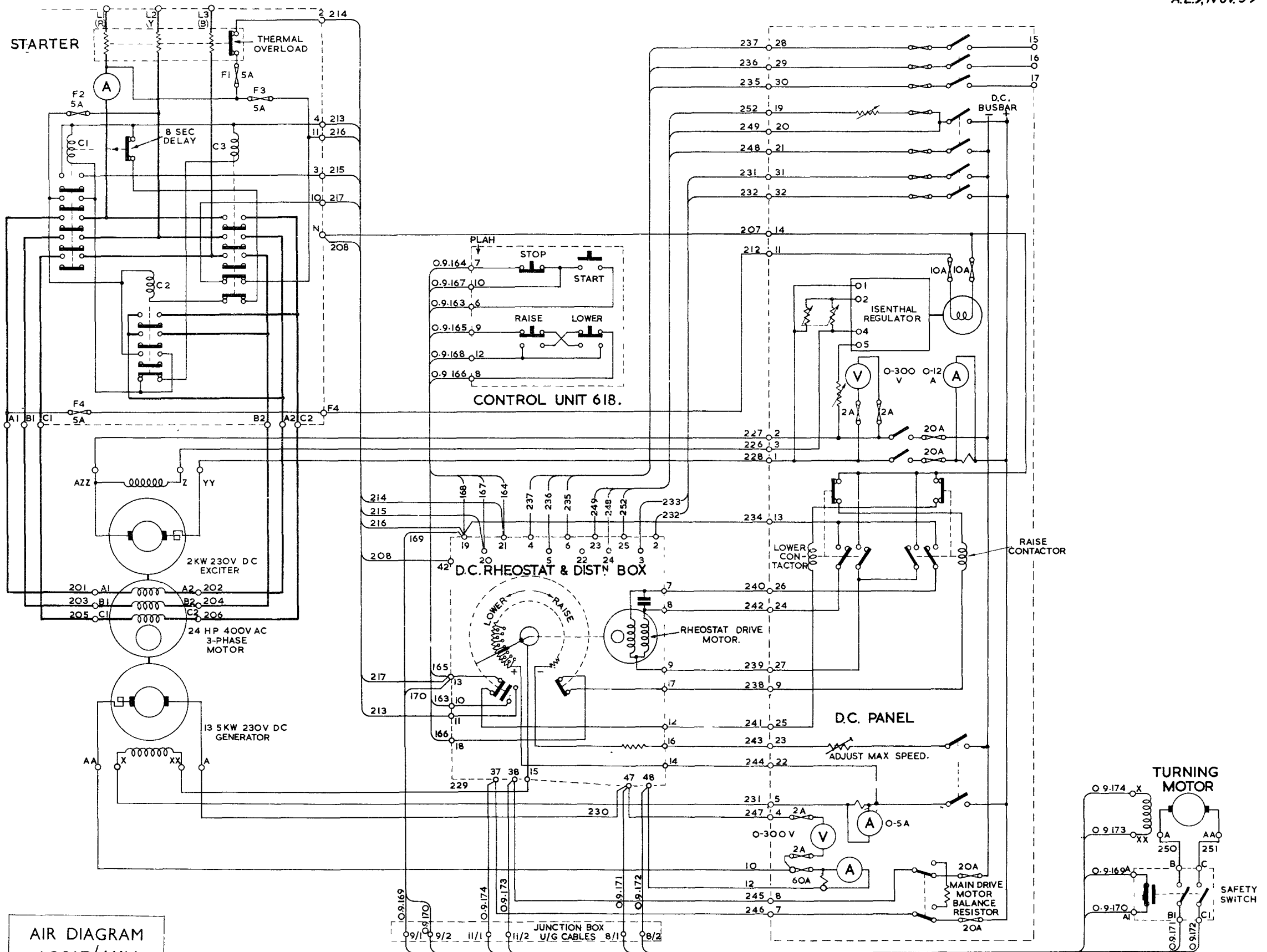
Ward - Leonard control (local) - circuit

AIR DIAGRAM
6221K/MIN.
ISSUE 1 PREPARED BY MINISTRY OF SUPPLY FOR PROMULGATION BY AIR MINISTRY

585011 5815 87* 356 88. d Gp 979

Fig. 40

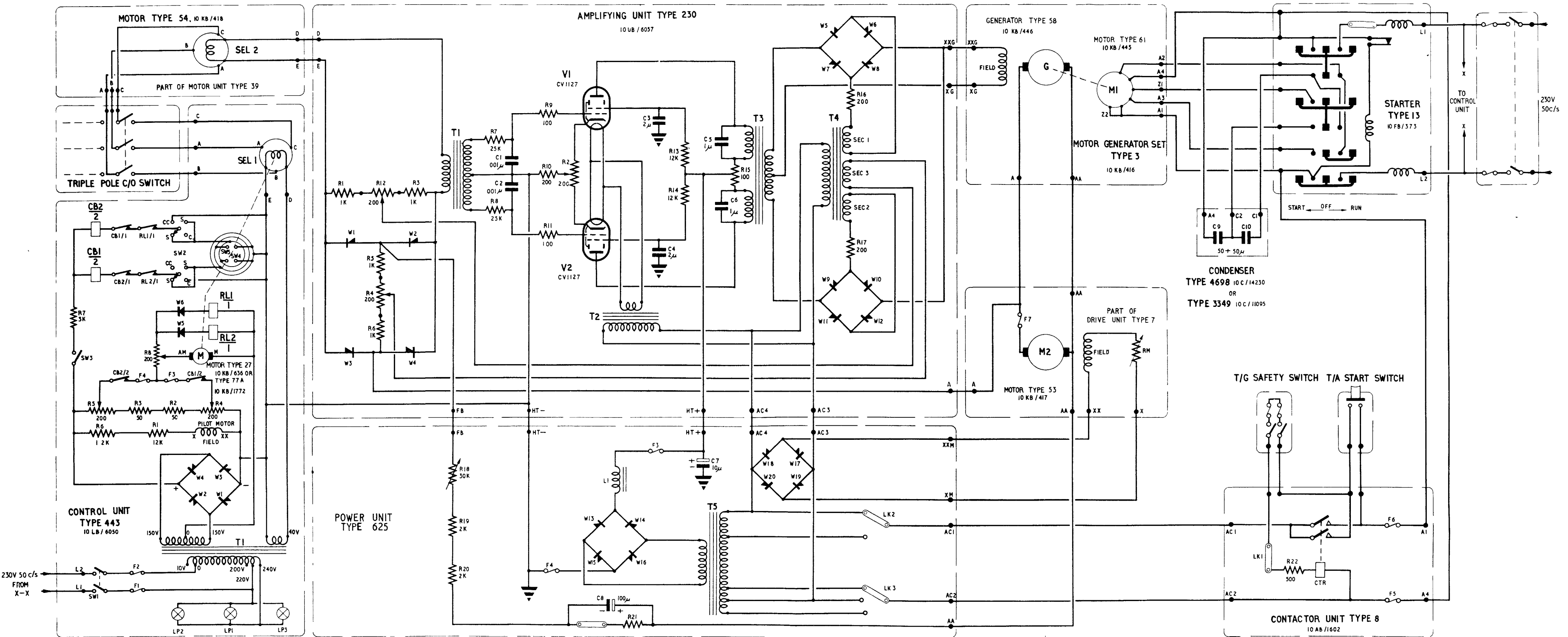
(A.L.16, Feb.56)



AIR DIAGRAM
6291F/MIN.
ISSUE I PREPARED BY MINISTRY OF SUPPLY
FOR PROMULGATION BY AIR FORCE

Ward-Leonard control gear circuit.

Fig. 41

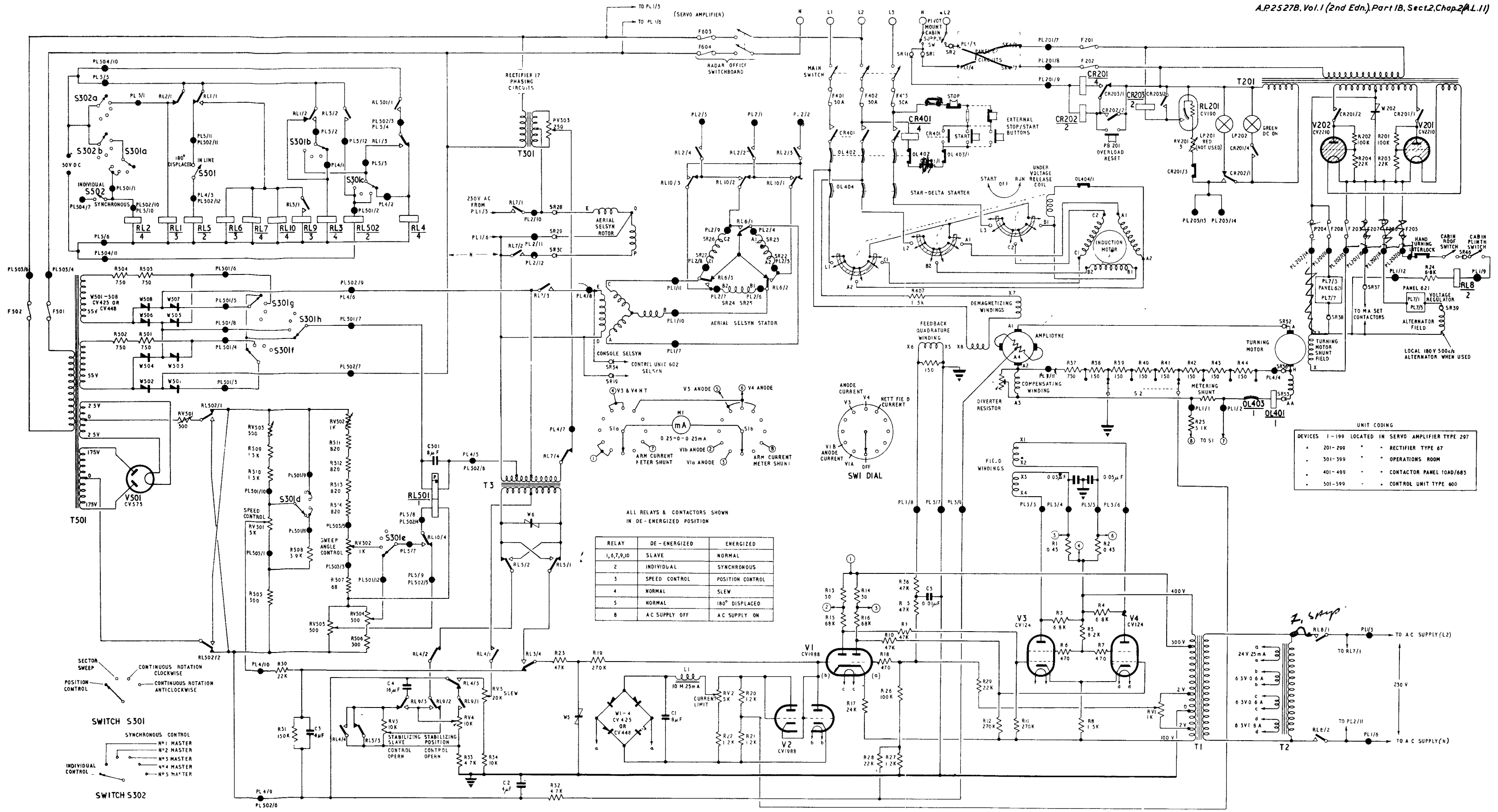


AIR DIAGRAM
6221A/MIN.

ISSUE 1 PREPARED BY MINISTRY OF SUPPLY FOR PROMULGATION BY AIR MINISTRY

Turning gear Type 21-circuit

Fig. 42
 (A.L.12, Nov. 55)



ALL RELAYS & CONTACTORS SHOWN IN DE-ENERGIZED POSITION

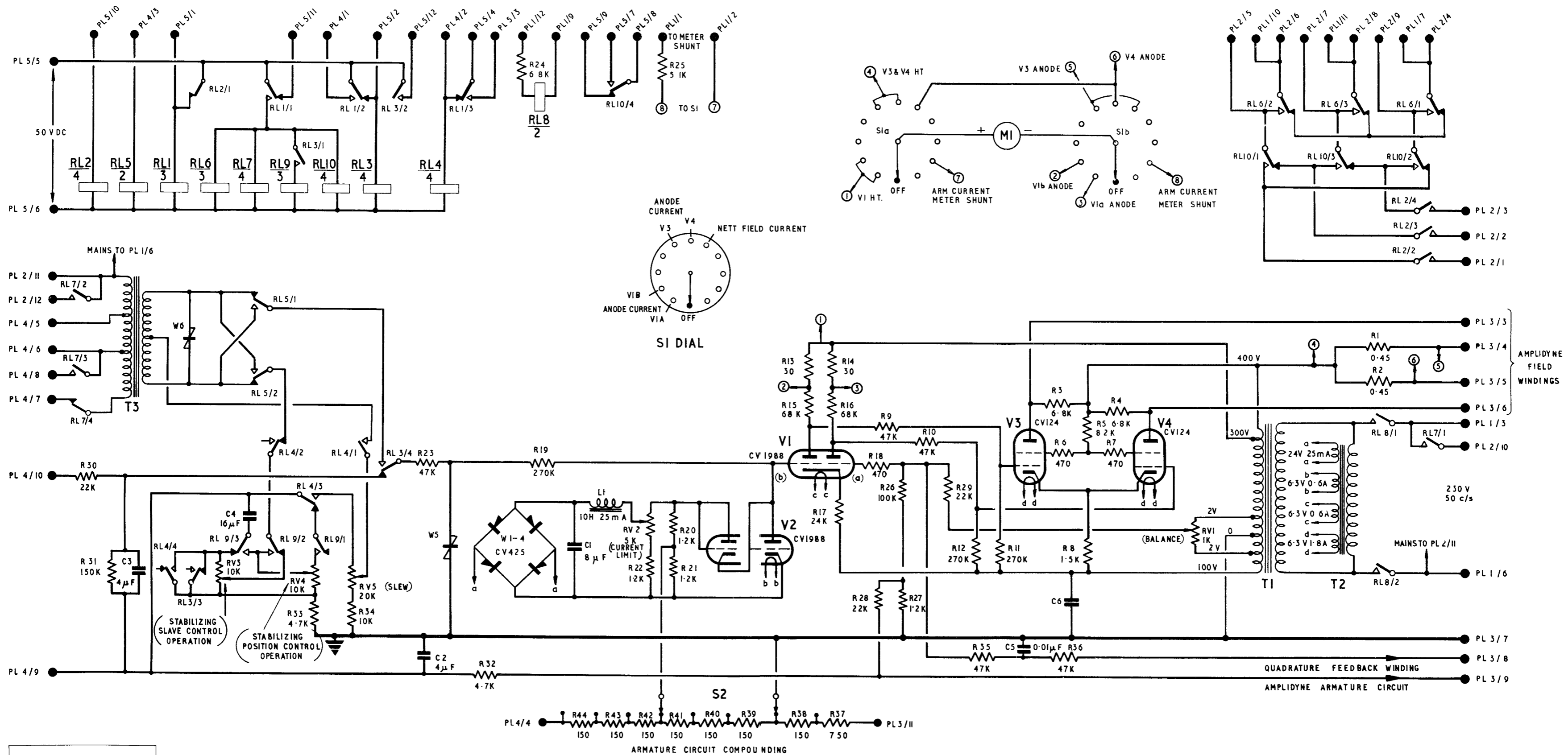
RELAY	DE-ENERGIZED	ENERGIZED
1, 6, 7, 9, 10	SLAVE	NORMAL
2	INDIVIDUAL	SYNCHRONOUS
3	SPEED CONTROL	POSITION CONTROL
4	NORMAL	SLEW
5	NORMAL	180° DISPLACED
B	AC SUPPLY OFF	AC SUPPLY ON

UNIT CODING

DEVICES 1-199	LOCATED IN SERVO AMPLIFIER TYPE 297
201-299	RECTIFIER TYPE 67
301-399	OPERATIONS ROOM
401-499	CONTACTOR PANEL 10AD/685
501-599	CONTROL UNIT TYPE 600

AIR DIAGRAM
6229Y/MIN.
ISSUE 1

Amplidyne turning gear (static) simplified circuit



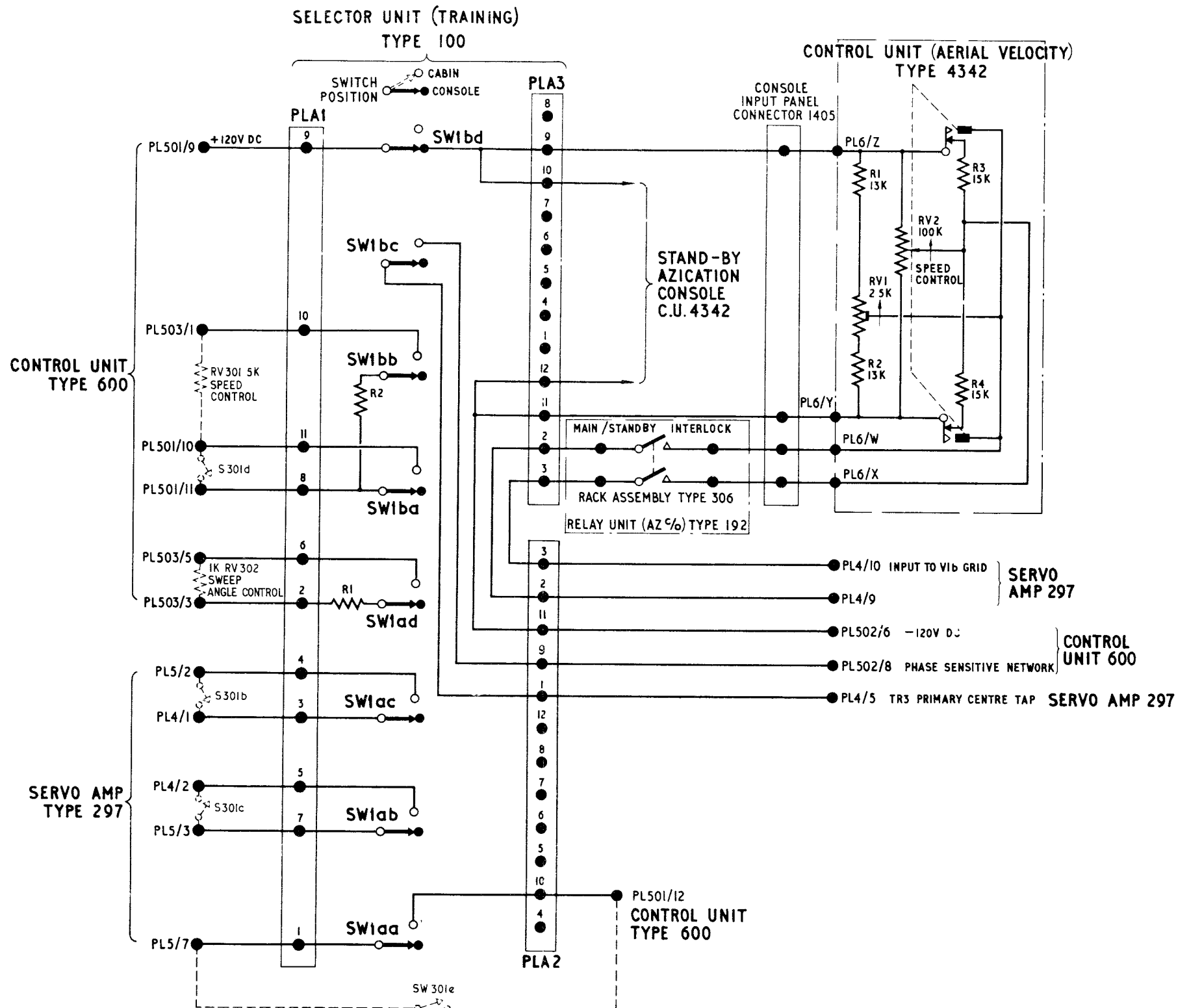
Servo amplifiers Types 278 & 297: circuit

(A.L.11, Oct. 55)

Fig. 44

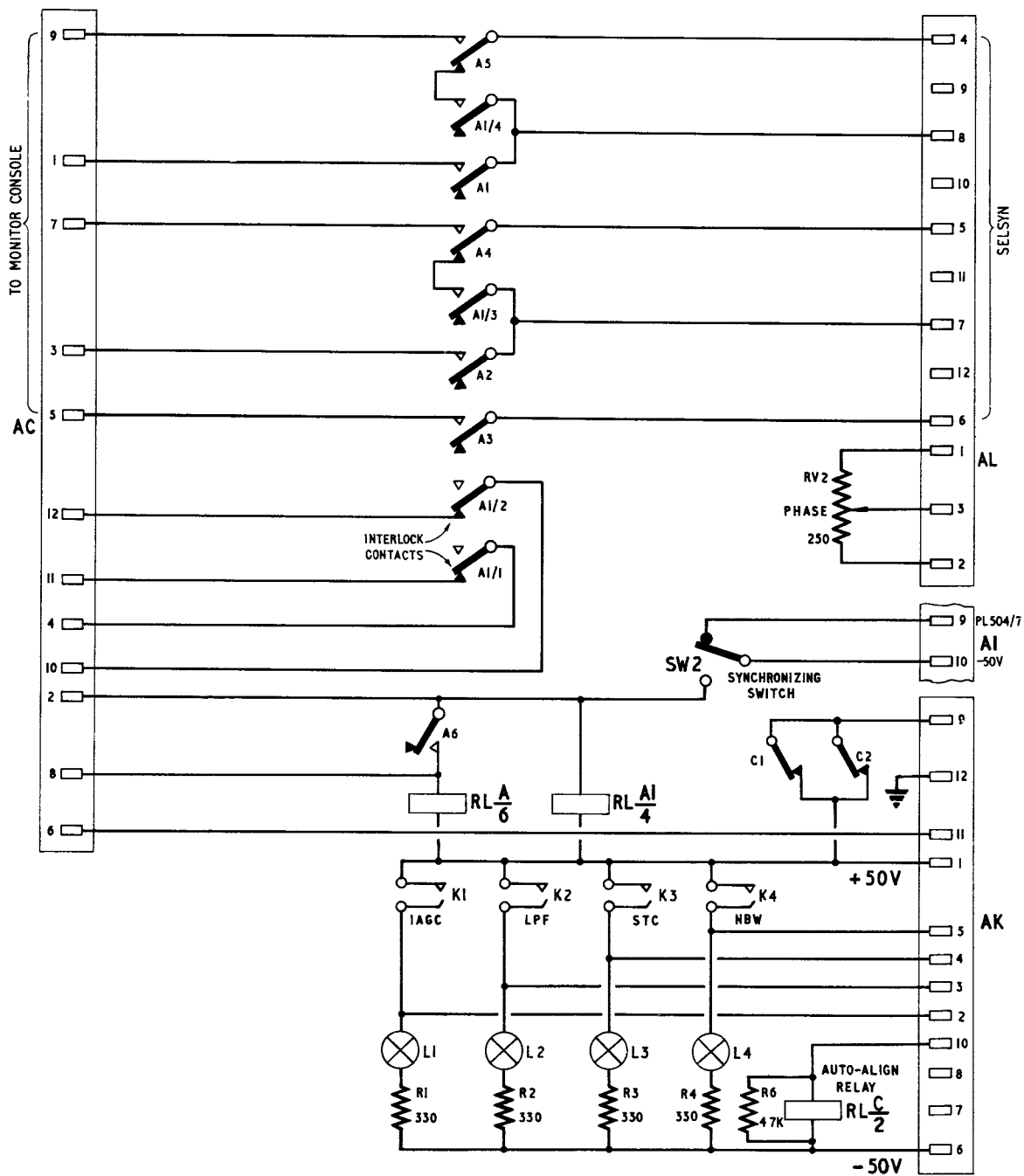
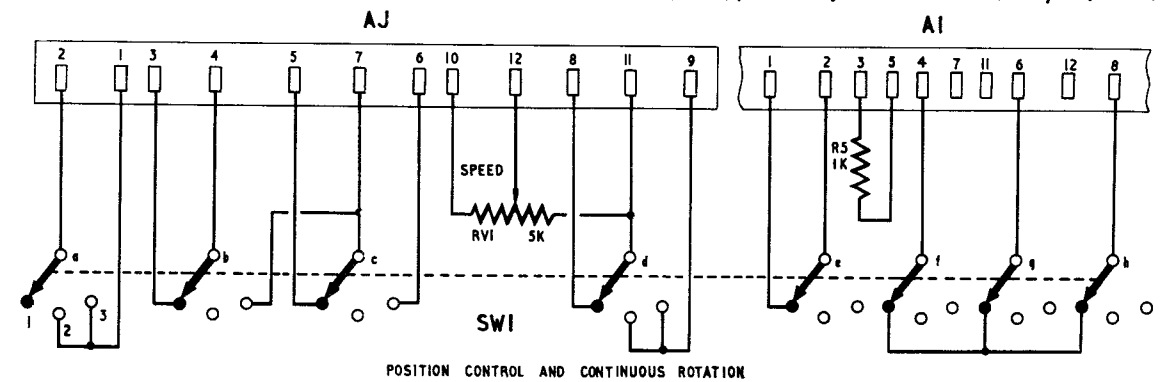
AIR DIAGRAM
6221 B/MIN.

ISSUE 1 PREPARED BY MINISTRY OF SUPPLY
FOR PROMULGATION BY AIR MINISTRY



Interconnections for speed control of a radar Type 13 head

AIR DIAGRAM
6222W/MIN.
ISSUE 1 PREPARED BY MINISTRY OF SUPPLY
FOR PROMULGATION BY AIR MINISTRY



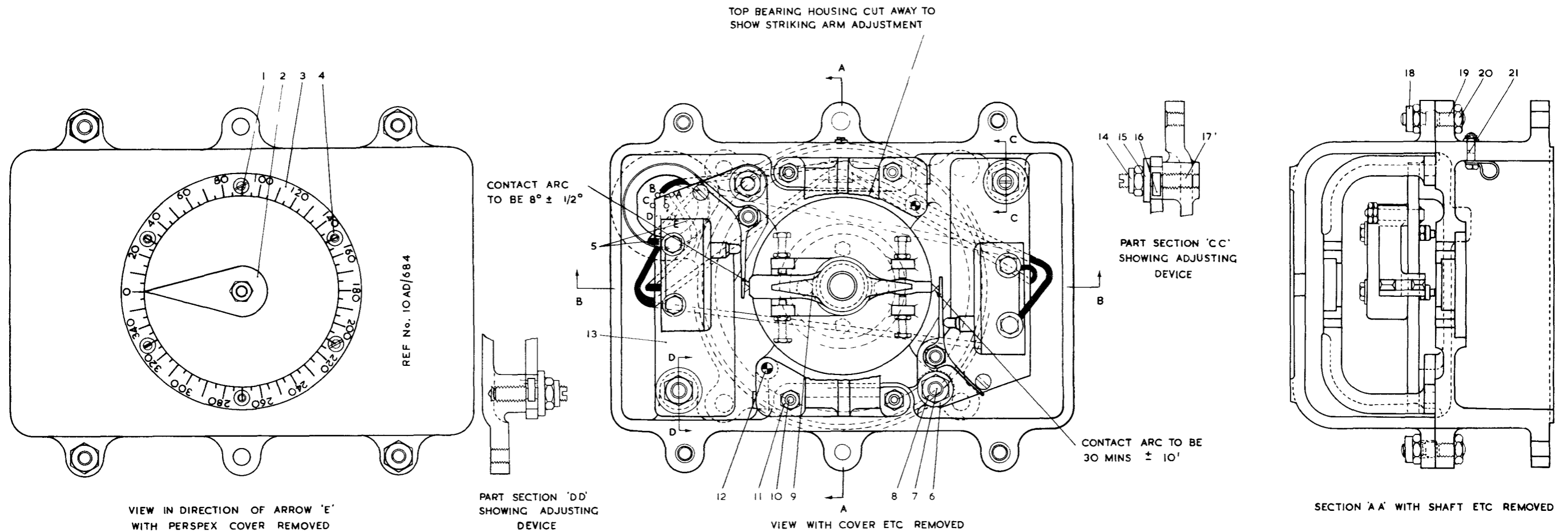
Control unit (training) Type 619 - circuit

RESTRICTED

(A.L.27, Aug. 57)

Fig. 47

AIR DIAGRAM
6233D/MIN
ISSUE 2
PREPARED BY MINISTRY OF SUPPLY
FOR PROMULGATION BY A.A. MINISTRY



KEY

- | | |
|---|--|
| 1 SCREW, 4BA $\frac{3}{8}$ IN COUNTERSUNK HEAD | 22 COVER CASTING |
| 2 POINTER | 23 WING NUT |
| 3 GRADUATED RING | 24 BOLT, 4BA 0.55 IN HEX HD |
| 4 SCREW, 4BA $\frac{7}{16}$ IN CHEESE HEAD | 25 CLAMPING PLATE |
| 5 CABLE, UNIVIN 4, $3\frac{1}{2}$ IN, LONG | 26 STIFFNUT, THIN, 4BA |
| 6 PLAIN WASHER $\frac{1}{4}$ IN. | 27 SHAFT ASSEMBLY |
| 7 STUD | 28 PERSPEX COVER, TYPE 932 (10AP 649) |
| 8 STIFFNUT, THIN, $\frac{1}{4}$ BSF | 29 STIFFNUT, THIN, 2BA |
| 9 STRIKER ADJUSTMENT ASSEMBLY | 30 RIGID BALL JOURNAL, BRE $\frac{3}{8}$ IN. |
| 10 STUD | 31 TOP BEARING HOUSING |
| 11 STIFFNUT, THIN, 2BA and WASHER | 32 WASHER |
| 12 DOWEL | 33 RIGID BALL JOURNAL, BRE $\frac{3}{8}$ IN. |
| 13 L.H. SWITCH MOUNTING ASSEMBLY | 34 WOODRUFF KEY |
| 14 STIFFNUT, THIN, $\frac{1}{4}$ BSF | 35 PLAIN WASHER, 2BA |
| 15 WASHER | 36 SCREW, 2BA $\frac{3}{8}$ IN. CHEESE HEAD |
| 16 CAM ON ADJUSTING NUT | 37 BOLT, 4BA 0.55 IN HEX. HD |
| 17 ADJUSTING NUT | 38 STIFFNUT, THIN, 4BA |
| 18 STIFFNUT, THIN, $\frac{1}{4}$ BSF | 39 CLAMPING PLATE |
| 19 STUD | 40 COUPLING, UPPER HALF |
| 20 NUT, THIN, $\frac{1}{4}$ BSF | 41 PLESSEY PLUG (Ref. Z560140) |
| 21 CABLE CLEAT, BOLT 6BA $\frac{3}{8}$ IN. (HEX. HD) AND STIFFNUT 6BA | 42 BODY CASTING |

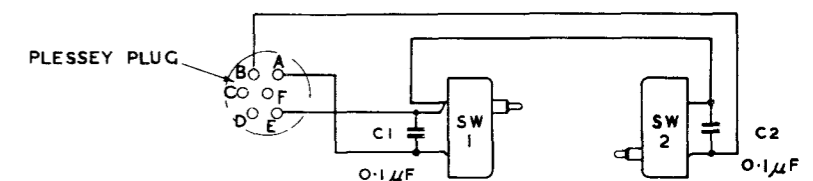
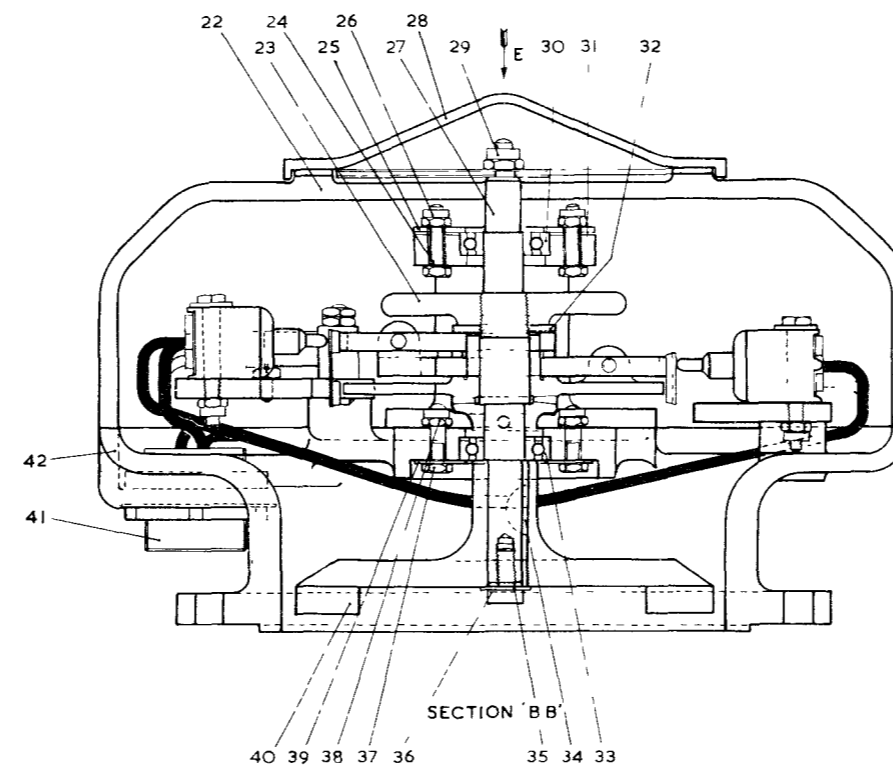


DIAGRAM OF CONNECTIONS
NOTE:- SWITCHES ARE TO BE NORMALLY OFF
C1 AND C2 - MODIFICATION CA 665/1

NOTE.
SWITCHES TO BE FINELY ADJUSTED SO THAT STRIKER JUST DEPRESSES PLUNGER TO POINT OF OPERATION (I.E) NO OVERTRAVEL
CONTACT SURFACES OF STRIKER ENDS TO BE LIGHTLY SMEARED WITH GREASE TO DTD 585

Heading unit - general assembly

RESTRICTED

Fig. 48

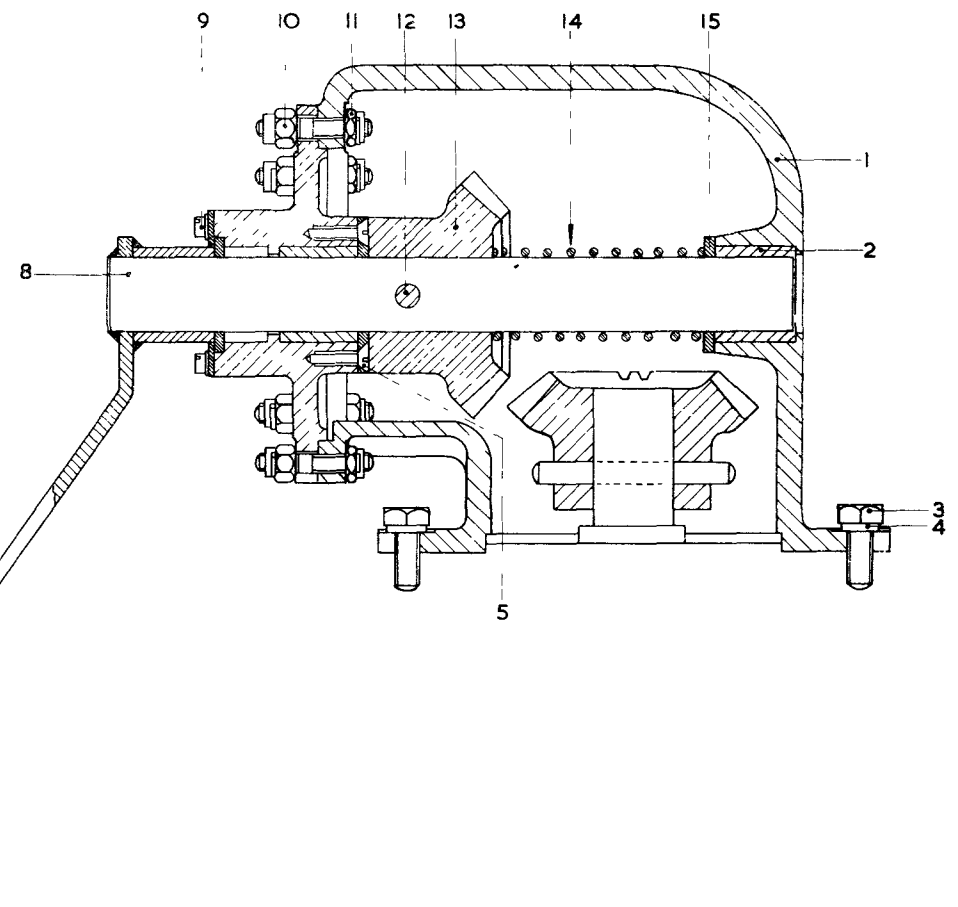
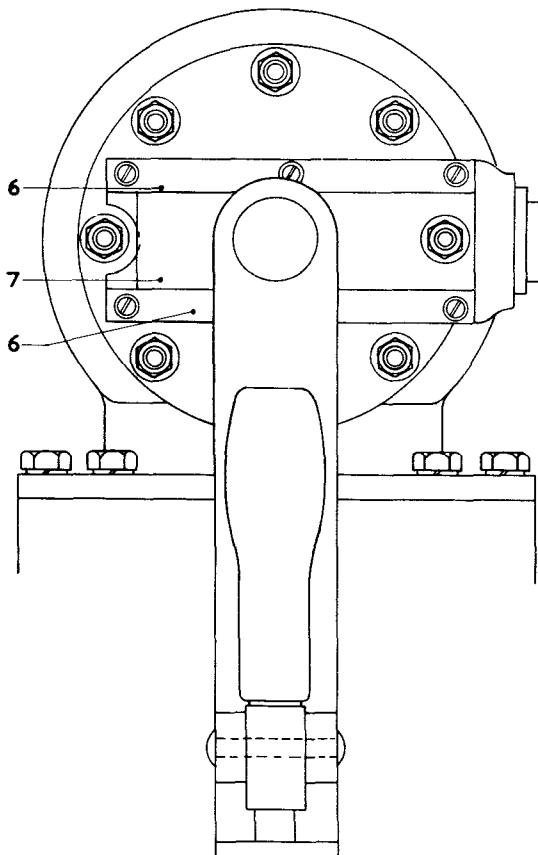
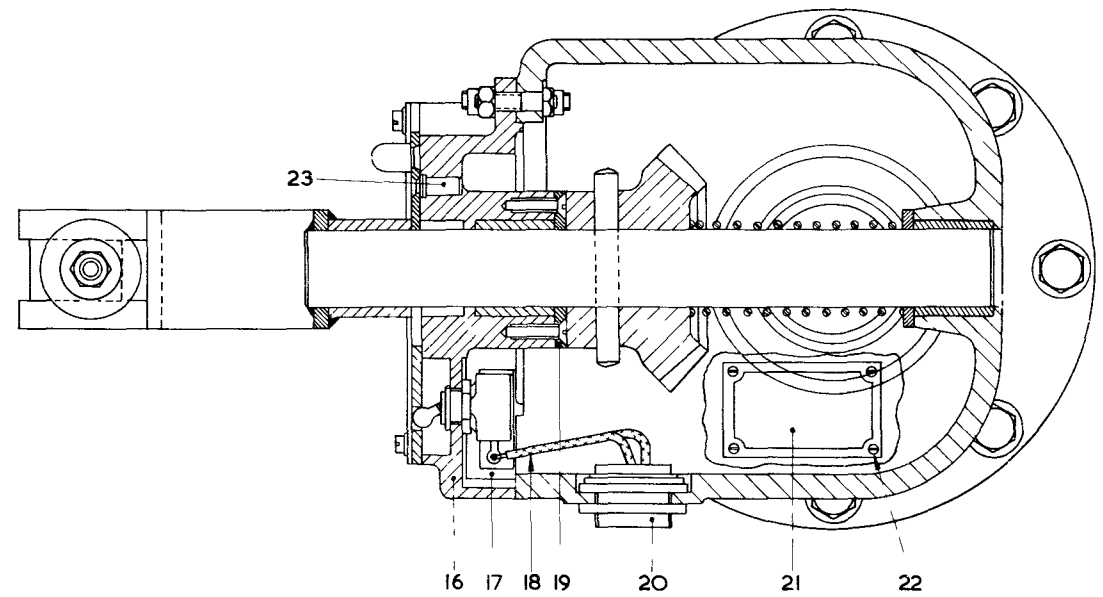
(A.L.8, July, 58)

AIR DIAGRAM
6229W/MIN.

ISSUE 1 PREPARED BY MINISTRY OF SUPPLY FOR PROMULGATION BY AIR MINISTRY

KEY

- 1 MAIN CASTING
- 2 "OILITE" BUSH
- 3 SCREW, $\frac{5}{16}$ IN. BSF $\cdot \frac{3}{4}$ IN.
- 4 LOCKWASHER $\frac{5}{16}$ IN. GROVER
- 5 SCREW, 2BA $\cdot \frac{5}{8}$ IN. COUNTERSUNK
- 6 SLIDE BAR KEEPS
- 7 SLIDE BAR
- 8 HANDLE AND SHAFT
- 9 SCREW, 4BA $\frac{1}{2}$ IN CHEESE HEAD and SPRING WASHER
- 10 NUT, $\frac{1}{4}$ BSF
- 11 STUD and STIFFNUT, $\frac{1}{4}$ BSF
- 12 TAPER PIN, $\frac{5}{16}$ IN. DIAM. $2\frac{1}{2}$ IN.
- 13 MITRE WHEEL
- 14 SPRING TYPE 316 (Stores Ref. 10AS,1866)
- 15 RETAINING PLATE
- 16 COVER
- 17 SWITCH S.P. (Bulgin S259)
- 18 CABLE, UNIVIN 4, 16/012, LENGTH 6 IN.
- 19 RETAINING PLATE
- 20 BREEZE PLUG (Ref. Z560140)
- 21 LABEL
- 22 SCREW, 6BA $\frac{1}{2}$ IN. CHEESE HEAD
- 23 BALL CATCH $\frac{1}{4}$ IN.



AIR DIAGRAM
6229U/MIN.

ISSUE 1

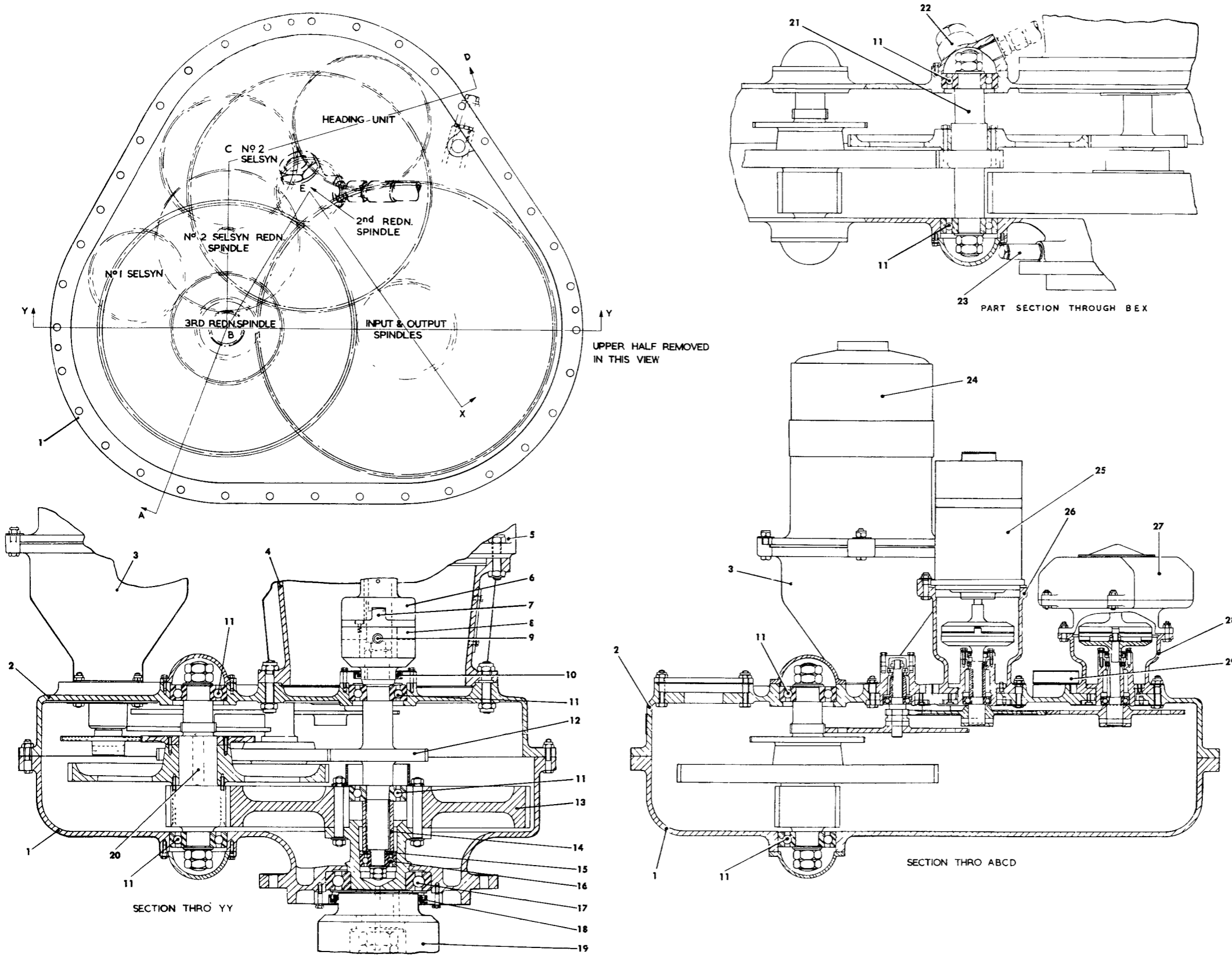
PREPARED BY MINISTRY OF SUPPLY
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Gear assembly (hand turning) Type 122

RESTRICTED

Fig. 49

(A.L.8, July, 58)



KEY		Stores Ref
Nomenclature		
1	GEAR BOX—LOWER HALF	
2	GEAR BOX—UPPER HALF	
3	NO 1 SELSYN BRACKET	
4	AERIAL TURNING MOTOR BRACKET	
5	PART OF TURNING MOTOR	
6	INPUT COUPLING—TOP HALF	
7	INPUT COUPLING—CENTRE	
8	INPUT COUPLING—BOTTOM HALF	
9	GREASE NIPPLE (1/4 in B S F)	
10	SEAL, OIL (MIS 114)	10AS, 948
11	BEARING, B R M 1 1/2 in	10AR 1907
12	INPUT SPINDLE	
13	OUTPUT SPINDLE	
14	DISTANCE PIECE	
15	WASHER FOR DISTANCE PIECE	
16	BEARING, B R M 1/2 in	10AR 1906
17	BEARING B R L 3 in	10AR 1904
18	SEAL, OIL (MIS 46)	10AS 947
19	OUTPUT COUPLING—TOP HALF	
20	3rd REDUCTION SPINDLE	
21	2nd REDUCTION, SPINDLE	
22	"WINDONUT" 1 in B S P	
23	DRAIN ASSEMBLY	
24	NO 1 SELSYN (S2615 B8)	5P 2950
25	NO 2 SELSYN (S1608 L8)	5P 2926
26	NO 2 SELSYN BRACKET	
27	HEADING UNIT	10AD 664
28	HEADING UNIT BRACKET	
29	PLUG, FILLER, SPECIAL (WITH WASHER, THIN, FIBRE)	10AS 1893

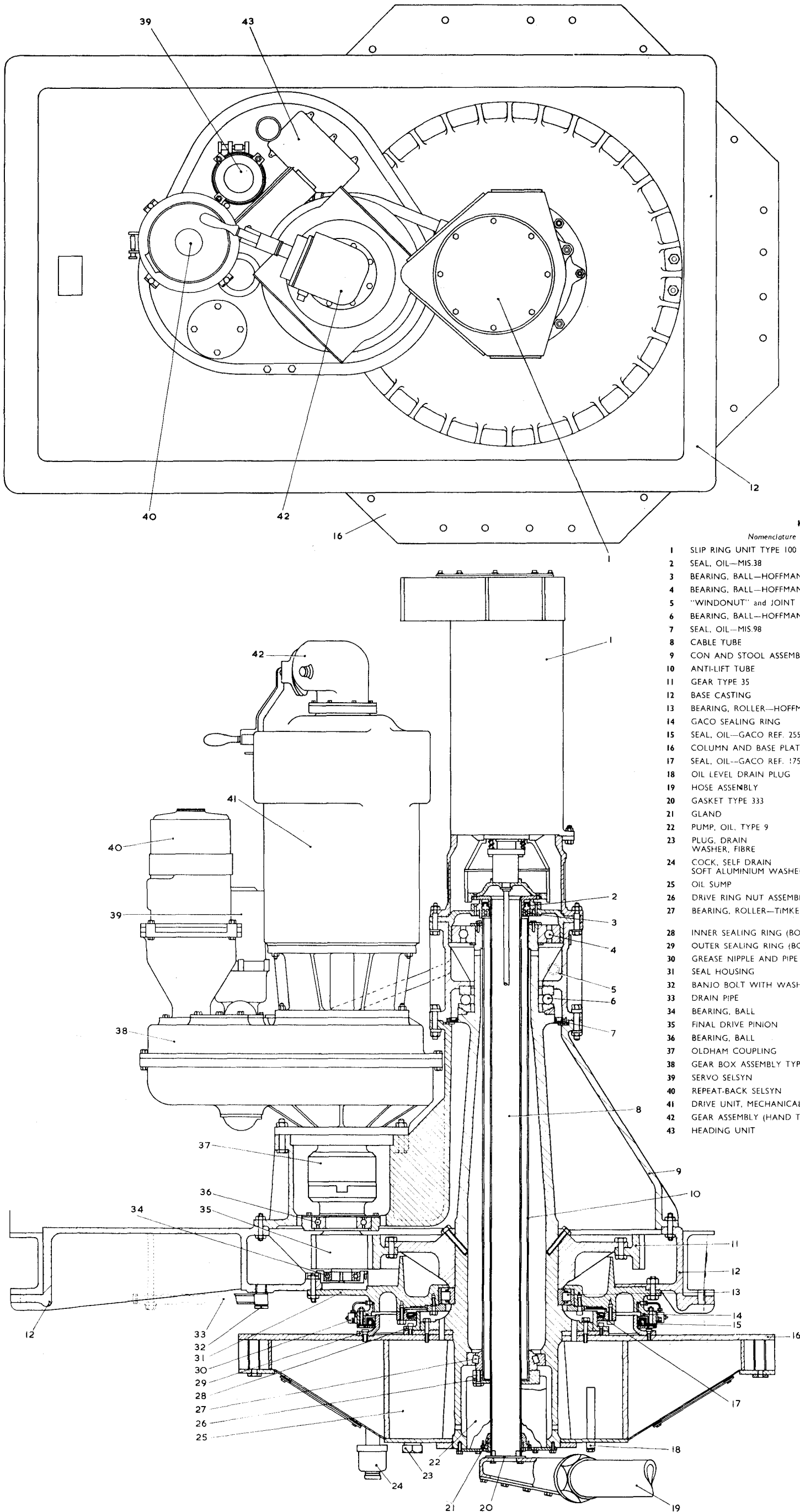
Gearbox Type 50 - general assembly

RESTRICTED

Fig 50

(A.L.B. July. 58)

AIR DIAGRAM
6229X/MIN.
ISSUE 1 PREPARED BY MINISTRY OF SUPPLY
FOR PROMULGATION BY AIR MINISTRY



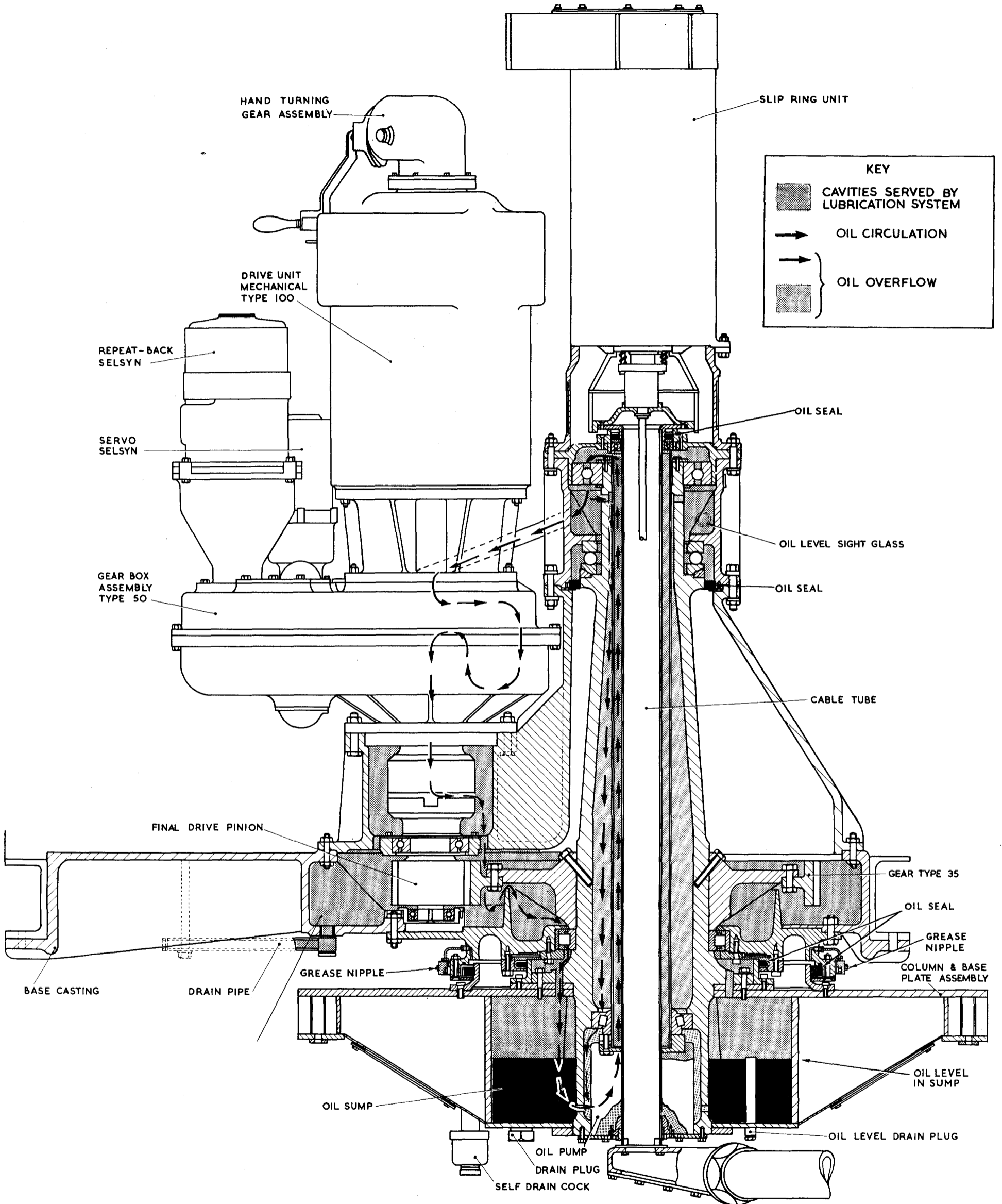
KEY

Nomenclature		Stores Ref.
1	SLIP RING UNIT TYPE 100	10AE 636
2	SEAL, OIL—MIS.38	10AS 851
3	BEARING, BALL—HOFFMAN XLS.31	10AR 1908
4	BEARING, BALL—HOFFMAN LSN.24	10AR 1911
5	"WINDONUT" and JOINT	
6	BEARING, BALL—HOFFMAN E.1103	10AR 2037
7	SEAL, OIL—MIS.98	10AS 950
8	CABLE TUBE	
9	CON AND STOOL ASSEMBLY	
10	ANTI-LIFT TUBE	
11	GEAR TYPE 35	
12	BASE CASTING	
13	BEARING, ROLLER—HOFFMAN RXLS.10	10AR 1909
14	GACO SEALING RING	
15	SEAL, OIL—GACO REF. 25502750 ; SMK TYPE A3	10AS 953
16	COLUMN AND BASE PLATE ASSEMBLY	
17	SEAL, OIL—GACO REF. 17501900 ; TYPE A2	10AS 952
18	OIL LEVEL DRAIN PLUG	28R 1398
19	HOSE ASSEMBLY	
20	GASKET TYPE 333	10AL 638
21	GLAND	
22	PUMP, OIL, TYPE 9	10AS 345
23	PLUG, DRAIN WASHER, FIBRE	10AS 1894 28W 1150
24	COCK, SELF DRAIN SOFT ALUMINIUM WASHER	10AR 2079
25	OIL SUMP	
26	DRIVE RING NUT ASSEMBLY	
27	BEARING, ROLLER—TIMKEN 71450 71750	10AR 1912
28	INNER SEALING RING (BOTTOM)	
29	OUTER SEALING RING (BOTTOM)	
30	GREASE NIPPLE AND PIPE ASSEMBLY	
31	SEAL HOUSING	
32	BANJO BOLT WITH WASHER	
33	DRAIN PIPE	
34	BEARING, BALL	
35	FINAL DRIVE PINION	
36	BEARING, BALL	
37	OLDHAM COUPLING	
38	GEAR BOX ASSEMBLY TYPE 50	10K 16650
39	SERVO SELSYN	
40	REPEAT-BACK SELSYN	
41	DRIVE UNIT, MECHANICAL, TYPE 100	10AR 2036
42	GEAR ASSEMBLY (HAND TURNING) TYPE 122	10AR 2035
43	HEADING UNIT	10AD 684

AIR DIAGRAM
6229 V/MIN.
ISSUE 1 PREPARED BY MINISTRY OF SUPPLY FOR PROMULGATION BY AIR MINISTRY

Pivot mount - general assembly

Fig. 51



Pivot mount — lubrication

Fig. 52