

RESTRICTED

December, 1947

Amendment List No. 31

to .

AIR MINISTRY

Air Publication 1464C
Volume I

R.A.F. ENGINEERING - AERO-ENGINES AND POWER PLANTS

PART 2
Sect. 3

- (1) List of Chapters. Delete the title of Chap. 8 and write "A.L.31" in the outer margin of the page opposite the amendment.
- (2) Chap. 8. Remove and dispose of the entire chapter.

Sect. 5

- (3) List of Chapters. Delete the title of Chap. 5 and write "A.L.31" in the outer margin of the page opposite the amendment.
- (4) Chap. 5. Remove and dispose of the entire chapter.

When you have done this make an entry in the Amendment Record Sheet at the beginning of the book.

ENGINEER

RTP3278/4500/12/47



AIR
MINISTRY
May, 1944

R.A.F. ENGINEERING—GENERAL ENGINEERING
This is A.L. No. 1 to A.P.1464B, Vol. 1

Insert these leaves.

RESTRICTED
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only)

THE "1464" SERIES

1. The Engineering Manual of the Royal Air Force, A.P.1464A and 1464B, has been divided into seven Air Publications, as follows:—

1464A—R.A.F. Engineering—organisation and administration—principles and regulations

1464B—R.A.F. Engineering—general engineering

1464C—R.A.F. Engineering—aero-engines and power plants

1464D—R.A.F. Engineering—aircraft

1464E—R.A.F. Engineering—mechanical transport

1464F—R.A.F. Engineering—marine craft and marine engines

1464G—R.A.F. Engineering—ground equipment

2. The layout of the seven publications has been standardised and each Vol. I is divided into three parts, as follows:—

(i) Part 1 gives broad principles which govern the subject, and will be useful to the trainee and the experienced engineer as a reference book.

(ii) Part 2 houses information on a miscellany of stores which are within the scope of the title but which do not yet justify the existence of an independent publication. Part 2 will contain the description, instructions for use, and servicing information on these stores and will be divided into convenient sections which may, when considerations of bulk and distribution make it desirable, be extracted to form the basis of an independent specialist publication.

(iii) Part 3 is a list of specialist and associated publications.

3. Each Vol. I of the new series has a corresponding Vol. II, consisting of Part I (Leaflets) only.

4. A complete list of the original references and the location of the information is given at the beginning of each Vol. I in the "1464" series.

5. Chapters which have not been revised are printed in the old style in which the descriptive matter is set the full width of the page.

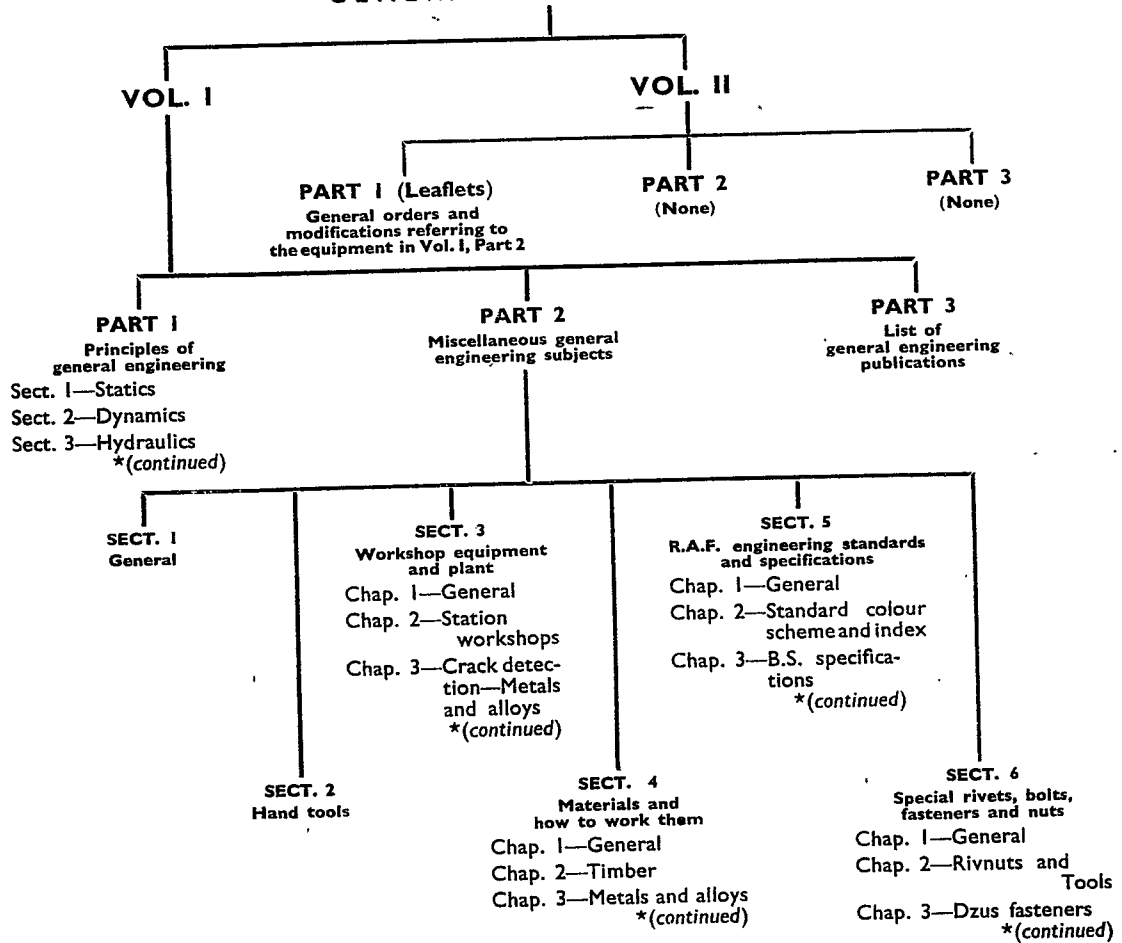
6. New chapters and chapters which have been revised are printed in a new style in which the descriptive matter is usually set in two columns to a page.

7. The above plan is shown pictorially in A.D.4162, "Engineer Publications and their Relation to the New 1464 Series".

LAYOUT TREE

A.P. 1464B—R.A.F. ENGINEERING

GENERAL ENGINEERING



**This Layout Tree shows the basic arrangement of the Volumes, Parts, Sections, and Chapters of this publication. See the Lists of Sections and Lists of Chapters for the complete contents.*

LIST OF CHAPTER REFERENCES

This is a complete list of chapters contained in the 1464 Old Series. The left-hand reference gives the position of the chapter in the Old Series (1464A and B). The right-hand reference gives the position of the chapter in the New Series (1464A to G)

Old ref.				Chapter Titles	New ref.			
Vol. I	Part	Sect.	Chap.		Vol. I	Part	Sect.	Chap.
1464A	2	1	14	Parachute and dinghy maintenance organisation	1464A	1		12
1464A	3	1	2	Station workshops	1464B	2	3	2
1464A	3	3	1	Aeroplane radiators	1464C	2	5	5
1464A	3	3	2	Tank repairs	1464D	2	5	2
1464A	3	7	1	Sparking plugs—Routine maintenance and re-conditioning	Transferred to A.P. 1374,			
					Vol. I			
1464A	3	8	1	Timber	1464B	2	4	2
1464A	3	13	1	Metals and alloys	1464B	2	4	3
1464A	3	13	2	Crack detection—Metals and alloys	1464B	2	3	3
1464A	3	13	3	Marking of metals and alloys	1464B	2	4	4
1464A	3	14	1	Self-sealing protective covering (D.T.D.1074) for rigid fuel tanks	1464D	2	5	8
1464A	3	14	2	Self-sealing protective covering (D.T.D.1057) for rigid fuel tanks	1464D	2	5	9
1464A	3	14	3	Self-sealing protective covering (D.T.D.1047) for rigid fuel tanks	1464D	2	5	10
1464A	3	14	4	C.I.M.A. protection for aircraft fuel tanks	1464D	2	5	3
1464A	3	14	5	Linatex protection for aircraft fuel tanks	1464D	2	5	4
1464A	3	14	6	Semape protection for aircraft fuel tanks	1464D	2	5	5
1464A	3	14	7	Henderson protected fuel tanks for aircraft	1464D	2	5	7
1464A	3	14	8	Sorbo protection for aircraft fuel tanks	1464D	2	5	6
1464A	3	14	9	Self-sealing protective covering (D.T.D.1066) for rigid fuel tanks	1464D	2	5	11
1464A	3	14	10	Self-sealing protective covering (D.T.D.1070) for rigid fuel tanks	1464D	2	5	12
1464A	3	14	11	Protective covering for fuel pipes	1464D	2	3	7
1464A	3	14	12	Self-sealing protective covering (D.T.D.1048) for flexible fuel tanks	1464D	2	5	16
1464A	3	14	13	Self-sealing protective covering (D.T.D.1046) for rigid fuel tanks	1464D	2	5	13
1464A	3	14	14	Self-sealing protective covering (D.T.D.1049) for flexible fuel tanks	1464D	2	5	17
1464A	3	14	15	Crash-proof protective covering (D.T.D.1064) for rigid fuel tanks	1464D	2	5	14
1464A	3	14	16	Crash-proof protective covering (D.T.D.1072) for rigid fuel tanks	1464D	2	5	15
1464A	3	15	2	Working and repair of transparent plastics	1464B	2	4	5
1464A	3	16	1	Painting and doping of aircraft	1464D	2	1	1
1464A	3	16	2	Spraying equipment	1464B	2	3	4
1464A	3	16	3	Spraying technique	1464B	2	3	5
1464A	3	17	1	Glazing and sealing aircraft components	1464B	2	4	6
1464A	3	17	2	General adhesives and glazing and sealing compounds	1464B	2	4	7
1464A	4	1	1	Aero-engines—General	1464C	2	2	1
1464A	4	2	1	Aero-engines—Dismantling	1464C	2	2	2
1464A	4	2	1	Aero-engines—Cleaning	1464C	2	2	3
1464A	4	4	1	Aero-engines—Viewing	1464C	2	2	4
1464A	4	4	2	Aero-engines—Viewing procedure				

LIST OF CHAPTER REFERENCES—CONTD.

Old ref.				Chapter Titles	New ref.				
Vol. I	Part	Sect.	Chap.		Vol. I	Part	Sect.	Chap.	
1464A	4	4	3	Aero-engines—Alignment tests	1464C	2	2	5	
1464A	4	5	6	Carburettor maintenance (New title:—Aero-engines—Carburettor servicing)	1464C	2	2	6	
1464A	5	1	2	Aeroplane salvage	1464D	2	1	2	
1464A	5	8	1	Aero-engine oil systems (New title:—General)	1464C	2	3	1	
1464A	5	8	2	Aero-engine cooling systems—Maintenance (New title:—Aero-engine cooling systems—Servicing)	1464C	2	5	2	
1464A	5	8	5	Marking of piping on aircraft	1464D	2	3	2	
1464A	5	8	6	Metal tubing for aircraft pipelines	1464D	2	3	3	
1464A	5	8	7	Flexible tubing for aircraft pipelines	1464D	2	3	4	
1464A	5	8	8	Metal couplings for aircraft pipelines	1464D	2	3	5	
1464A	5	8	9	“Avimo” high pressure pipe couplings	1464D	2	3	6	
1464A	5	10	2	Bonding and screening	1464D	2	1	5	
1464A	5	12	1	Determination of the centre of gravity and the loading of aircraft	1464D	2	1	3	
1464A	8	1	2	Picketing of aircraft	1464G	2	5	2	
1464A	8	8	4	Installation of electrical power and lighting equipment for R.A.F. Units in the field	Transferred to A.P. 1095G, Vol. I				
1464A	Appendix A, Issue No. 1			Standard colour scheme	New titles:— Standard colour scheme and index B.S. specifications D.T.D. specifications	1464B	2	5	2
1464A	Appendix A, Issue No. 2			New standard system of fits and tolerances		1464B	2	5	3
1464B	3	1	6	Electric brushing machine, Type AI/MY		1464B	2	3	6
1464B	3	1	7	Tru-loc cable end-fitting swaging machine	1464B	2	3	7	
1464B	3	3	4	Tube bending machines	1464B	2	3	8	
1464B	3	3	5	Chobert riveting tool	1464B	2	3	9	
1464B	3	3	6	Dzus fasteners	1464B	2	6	3	
1464B	3	3	7	Rivnuts and tools	1464B	2	6	2	
1464B	3	3	8	Oddie fasteners	1464B	2	6	4	
1464B	3	12	1	Measuring instruments and appliances	1464B	2	3	10	
1464B	3	12	4	Jet calibrating machines	1464B	2	3	11	
1464B	5	1	1	Aeroplanes—Furniture and equipment for servicing	1464G	2	5	9	
1464B	5	5	14	Graviner automatic fire extinguisher equipment	1464D	2	1	4	
1464B	5	6	2	Exactor controls—Hydraulic and mechanical	1464D	2	2	4	
1464B	5	6	3	Bloctube control system	1464D	2	2	5	
1464B	5	6	5	Simmonds Corsey control	1464D	2	2	2	
1464B	5	6	6	Teleflex controls	1464D	2	2	3	
1464B	5	7	3	Fuel pressure reducing valve, Amal.	1464C	2	6	2	
1464B	5	7	4	Automatic pressure control valve for aircraft fuel tanks	1464D	2	6	2	
1464B	5	7	5	Automatic altitude control for aero-engine supercharger	1464C	2	7	5	
1464B	5	7	6	Vokes air filter	1464C	2	7	2	
1464B	5	7	7	Vokes dry-element air filters	1464C	2	7	3	
1464B	5	8	1	Oil coolers	1464C	2	3	6	
1464B	5	8	2	Oil cooler—Robertson	1464C	2	3	7	
1464B	5	8	2	Relief valves—Robertson	1464C	2	3	9	
1464B	5	8	3	Oil coolers—Serck types	1464C	2	3	8	
1464B	5	8	5	Viscosity valves	1464C	2	3	2	
1464B	5	8	6	Oil dilution system	1464C	2	3	5	
1464B	5	8	7	Oil cleaners—Vokes	1464C	2	3	3	
1464B	5	8	8	Oil cleaners—Tecalmit	1464C	2	3	4	
1464B	5	9	3	Hydraulic windscreen wiper	1464D	2	4	5	
1464B	5	10	1	Thermostatic header tank relief valve, Type D.S.	1464C	2	5	3	
1464B	5	10	2	Aero-engine liquid cooling system thermostat (New title:—Thermostat for liquid-cooled aero-engines)	1464C	2	5	4	
1464B	5	2	1	De-icing equipment and materials for aircraft	1464D	2	4	2	
1464B	5	2	2	Aerofoil de-icing equipment—Goodrich system	1464D	2	4	3	
1464B	5	2	3	De-icing equipment for airscrews (New title:—De-icing equipment for propellers)	1464C	2	4	1	

LIST OF CHAPTER REFERENCES—CONTD.

Old ref.				Chapter Titles	New ref.			
Vol. I	Part	Sect.	Chap.		Vol. I	Part	Sect.	Chap.
1464B	5	2	4	De-icing equipment for aero-engine induction systems (New title:—De-icing equipment for induction systems)	1464C	2	4	2
1464B	5	2	5	Windscreen wipers and de-icing equipment for pilot's windscreen and bomb-aimer's window	1464D	2	4	5
1464B	5	2	7	De-icing materials	1464D	2	4	4
1464B	5	12	1	Flotation gear	Cancelled			
1464B	5	12	2	Carbon dioxide cylinders	1464G	2	3	12
1464B	5	12	2	Operating heads	See A.P. 1182, Vol. I			
1464B	5	12	4	Youngman dinghy	Cancelled			
1464B	5	12	5	Inflatable wing bags	Cancelled			
1464B	5	12	6	Inflatable fuselage bags	Cancelled			
1464B	5	12	7	Non-inflatable flotation systems	Cancelled			
1464B	6	4	2	Auto-klean lubricating oil strainer	1464E & F	2	2	2
1464B	6	5	1	Tecalemit, Type D fuel pump	1464E & F	2	3	3
1464B	6	5	2	A.C. fuel pumps	1464E & F	2	3	2
1464B	6	5	3	Zenith carburettors	1464E & F	2	3	4
1464B	6	5	4	Zenith carburettors, Types 24-U and 24-U.H.	1464E & F	2	3	5
1464B	6	5	5	Solex carburettors, Types F.V. and F.H.	1464E & F	2	3	7
1464B	6	5	6	Solex carburettors, Types B.F.V. and B.F.H.	1464E & F	2	3	6
1464B	6	8	2	Borg and Beck clutch	1464E	2	4	2
1464B	6	12	1	Repairs to M.T. tyres (outer covers only) at Units	1464E	2	4	3
1464B	8	1	1	Ground equipment	Cancelled			
1464B	8	2	2	Aircraft concealment nets	1464G	2	5	3
1464B	8	7	1	(Old title) Fuel oil and water pumping equipment (New title) Replenishment equipment on air-fields—General	1464G	2	3	1
1464B	8	7	2	Delivery nozzles	1464G	2	3	6
1464B	8	7	3	Flexible hoses	1464G	2	3	7
1464B	8	7	4	Pumps for replenishing operations	1464G	2	3	8
1464B	8	7	5	Filters and strainers	1464G	2	3	9
1464B	8	7	7	Internal preservation of fuel storage tanks	1464G	2	3	10
1464B	8	7	8	Liquid measuring and recording meters	1464G	2	3	11
1464B	8	7	9	Portable fuel tanks	1464G	2	3	2
1464B	8	7	10	Portable oil tanks	1464G	2	3	3
1464B	8	7	12	Bulk installations on aerodromes	1464G	2	3	4
1464B	8	7	15	Oil cleaning plant	1464G	2	3	5
1464B	8	9	1	Flameless heater	1464G	2	5	4
1464B	8	9	2	Paraffin heaters	1464G	2	5	5
1464B	8	9	3	Portable floodlight	Transferred to A.P. 1095G, Vol. I			
1464B	8	9	5	Compressed air operated oil primer	1464G	2	5	7
1464B	8	9	6	Flameless heaters, Types B and C	1464G	2	5	6
1464B	8	9	7	Inflation adaptors for oleo-leg servicing equipment	1464G	2	5	10
1464B	8	10	2	Bristol compressor trolley unit	1464G	2	5	8
1464B	8	10	3	Instrument-testing trolley	1464G	2	5	11
1464B	8	10	4	Pneumatic servicing trolley—Low pressure	1464G	2	5	12
1464B	8	10	5	Pneumatic servicing trolley—High pressure	1464G	2	5	13
1464B	8	10	13	Accumulator trolley—Aero-engine electric starting	1464G	2	5	14
1464B	8	10	14	Aero-engine starting accumulator charging sets (Stores Ref. 42U/10, 42U/12 and 42U/16)	1464G	2	5	15
1464B	8	10	15	Aero-engine starting accumulator charging set (Stores Ref. 42U/500)	1464G	2	5	16

NOTES TO READERS

Air Ministry Orders and Vol. II, Part I leaflets either in this A.P., or in the A.P.'s listed below, or even in some others, may affect the subject matter of this publication. Where possible, Amendment Lists are issued to bring this volume into line, but it is not always practicable to do so, for example when a modification has not been embodied in all the stores in service.

When an Order or leaflet is found to contradict any portion of this publication, the Order or leaflet is to be taken as the overriding authority.

When this volume is amended by the insertion of new leaves in an existing section or chapter, the new or amended technical information is indicated by a vertical line in the outer margin. This line is merely to denote a change and is not to be taken as a mark of emphasis. When a section or chapter is re-issued in completely revised form, the vertical line is not used.

Each leaf is marked in the top left-hand corner with the number of the A.L. with which it was issued.

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**FOR LIST OF ASSOCIATED
PUBLICATIONS SEE PART
THREE OF THIS VOLUME**

R.A.F. ENGINEERING
GENERAL ENGINEERING

LIST OF PARTS

Note.—A list of sections appears at the beginning of each part

PART 1 *Principles of general engineering (to be issued later)*

PART 2 *Miscellaneous general engineering subjects*

PART 3 *List of general engineering publications (to be issued later)*



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