

SECTION I

SWITCHES (MANUALLY OPERATED)

RESTRICTED

INSPECTION DEPT.

AMENDMENT RECORD SHEET

Incorporation of an Amendment List in this publication
is to be recorded by signing in the appropriate column,
and inserting the date of making the amendments

| A.L. No. | AMENDED BY | DATE |
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| 14 | J. Harper | 1-9-55 |
| 15 | J. Harper | 5-9-55 |
| 16 | J. Harper | 5-10-55 |
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| 20 | J. Harper | 14-10-55 |
| 21 | | |
| 22 | J. Harper | 24-10-55 |
| 23 | <i>Paul</i> | NOV 1955 |
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| 25 | | |
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| 27 | <i>Paul</i> | NOV 1955 |

| A.L. No. | AMENDED BY | DATE |
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| 28 | <i>Paul</i> | NOV 1955 |
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| 37 | <i>Paul</i> | DEC 1955 |
| 38 | 38-113 | |
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| 44 | <i>Edmund</i> | 17/1/58 |
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IN MR. WARBURTONS
POSSESSION.

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* An Amendment Record Continuation Sheet (R A F Form 2096B) will be required when this page is full.
Order it now.

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Hammond 17/4/58

WARNING

EJECTION SEAT

1. An ejection seat is a potential danger to personnel and aircraft. If the firing mechanism is inadvertently operated while the aircraft is on the ground the seat will be ejected; serious injury (possibly fatal) may be caused to any person in or leaning into the cabin and damage will be done to the aircraft.

2. The following instruction must therefore be obeyed implicitly:—

BEFORE ATTEMPTING TO ENTER THE CABIN OF AN AIRCRAFT FITTED WITH AN EJECTION SEAT REPORT TO THE N.C.O. IMMEDIATELY IN CHARGE OF AIRCRAFT SERVICING (R.A.F.), OR TO THE ORDNANCE SUPERVISORY RATING (R.N.), WHO WILL ENSURE THAT THE SEAT IS SAFE FOR THE PURPOSE REQUIRED.

3. Full instructions for rendering the seat safe are contained in the A.P.4288 series, in A.D.5037, and in the A.D.6038 series.

(A.L.79, Sept. 56)

RESTRICTED

NOTE TO READERS

The subject matter of this publication may be affected by Admiralty Fleet Orders, Air Ministry Orders, or by "General Orders and Modifications" leaflets in this A.P., in the associated publications listed below, or even in some others. If possible, Amendment Lists are issued to correct this publication accordingly, but it is not always practicable to do so. When an Order or leaflet contradicts any portion of this publication, the Order or leaflet is to be taken as the overriding authority.

The inclusion of references to items of equipment does not constitute authority for demanding the items.

Each leaf, except the original issue of preliminaries, bears the date of issue and the number of the Amendment List with which it was issued. New or amended technical matter on new leaves which are inserted when the publication is amended will be indicated by triangles, positioned in the text thus:— ◀ — — — — — ▶ to show the extent of amended text, and thus:— ▶ ◀ to show where text has been deleted. When a Section or Chapter is issued in a completely revised form, the triangles will not appear.



LIST OF ASSOCIATED PUBLICATIONS

| | A.P. |
|--|-------|
| <i>Electrical manual, general</i> | 4343 |
| <i>Electrical manual, generators and batteries (airborne)</i> | 4343A |
| <i>Electrical manual, control and distribution equipment (airborne)</i> | 4343B |
| <i>Electrical manual, rotary consumer equipment (airborne)</i> | 4343D |
| <i>Electrical manual, static consumer equipment (airborne)</i> | 4343E |
| <i>Electrical manual, equipment in foreign aircraft used by the R.N. and R.A.F.</i> | 4343F |
| <i>Electrical manual, ground equipment</i> | 4343G |
| <i>Electrical manual, symbols and unit wiring diagrams</i> | 4343H |
| <i>Electrical manual, M.T. and marine craft equipment</i> | 4343M |
| <i>Electrical manual, servicing equipment</i> | 4343S |
| <i>Electrical manual, armament consumer equipment (airborne)</i> | 4343X |

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LAYOUT OF A.P.4343C

ELECTRICAL MANUAL— SWITCHES, CABLES, WIRING AND ACCESSORIES (AIRBORNE)

Heavy type indicates the books being issued under this A.P. number; when issued they will be listed in A.P. 113

| | |
|-------------------------|--|
| VOLUME 1 | General and technical information |
| VOLUME 2 | Modifications |
| VOLUME 3, Part 1 | Schedule of spare parts (<i>not published: information included in A.P.1086</i>) |
| VOLUME 3, Part 2 | <i>Inapplicable</i> |
| VOLUME 3, Parts 3 and 4 | <i>Application to be decided later</i> |
| VOLUME 4 | Planned servicing schedules |
| VOLUME 5 | <i>Application to be decided later</i> |
| VOLUME 6 | Repair and reconditioning instructions |

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PREFACE

It has become necessary to introduce a new series of Air Publications dealing with electrical equipment, because the existing series cannot be re-arranged satisfactorily to meet current requirements.

Information at present contained in A.P.1095A, B, C, F, G, H and M will be examined and where necessary revised and transferred to the new A.P.4343 series.

Although no new information will go into the old publication, the two series of publications will be complementary until the transfer of information has been completed, and reference must be made to either as required. Should information appearing in the new publications conflict with that already existing in the old publications, A.P. 4343 is to be considered as the overriding authority.

Until the reader has become familiar with the new layout, reference should be made to the List of Associated Publications and to the transfer of Information table which appear at the front of each volume.

It should be noted that the suffix letters which are not listed are reserved for possible future sub-division and expansion of the new series. The division of the publications into volumes and parts is given in the Layout Tree included in each Volume 1.

A.P.4343 contains information of a general nature on equipment which may be common to any volume in the series. Information on electrical installations associated with specific aircraft will continue to be included in the appropriate Aircraft Handbook or will appear as separate Air Diagrams.

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TRANSFER OF INFORMATION TABLE

| Subject | Existing A.P. 1095 series | New A.P.4343 series |
|--|------------------------------|---|
| Indicators | 1095A, Sect. 1 | 4343, Sect. 23 and 4343E, Sect. 18 |
| Magnetic relays and solenoids ... | 1095A, Sect. 2 | 4343, Sect. 11 and 4343C, Sect. 3 |
| Wiring systems and cables | 1095A, Sect. 3 | 4343, Sect. 12 and 4343C, Sect. 5 |
| Fuses and fuseboxes | 1095A, Sect. 3 | 4343, Sect. 12 and 4343C, Sect. 5 |
| Switches and switchboxes | 1095A, Sect. 7 | 4343, Sect. 11 and 4343C, Sect. 1 |
| Lighting equipment | 1095A, Sect. 8 | 4343, Sect. 21 and 4343E, Sect. 7 |
| Bomb release circuits | 1095B, Sect. 1 | 4343, Sect. 12 and 4343X, Sect. 1 |
| Bomb carrier wiring and accessories... | 1095B, Sect. 1 | 4343, Sect. 12 and 4343X, Sect. 1 |
| Bomb-release, jettison and selector switches | 1095B, Sect. 2 | 4343, Sect. 11 and 4343X, Sect. 3 |
| Pre-selector units | 1095B, Sect. 2 | 4343X, Sect. 3 |
| E.M. fuzing and release units ... | 1095B, Sect. 3 | 4343X, Sect. 5 |
| Carrier units | 1095B, Sect. 3 | 4343X, Sect. 5 |
| Automatic bomb distributors ... | 1095B, Sect. 4 | 4343X, Sect. 3 |
| 6-way bomb control installation ... | 1095B, Sect. 5 | 4343X, Sect. 1 |
| Gun heaters | 1095B, Sect. 6 | 4343X, Sect. 13 |
| Torpedo depth-setting gear | 1095B, Sect. 6 | 4343X, Sect. 20 |
| Photoflash distributor | 1095B, Sect. 6 | 4343X, Sect. 24 |
| Cartridge flare distributor | 1095B, Sect. 6 | 4343X, Sect. 24 |
| Gun-firing buttons and solenoids ... | 1095B, Sect. 7 | 4343, Sect. 11 and 4343X, Sect. 13 |
| Firing units | 1095B, Sect. 7 | 4343X, Sect. 13 |
| Electrical control of aircraft turrets ... | 1095B, Sect. 8 | 4343, Sect. 18 and 4343X, Sect. 11 |
| Batteries, alkaline, airborne | 1095C, Sect. 1 | 4343, Sect. 3 and 4343A, Sect. 12 |
| Motors | 1095C, Sect. 2 | 4343, Sect. 18 and 4343D, Sect. 20 |
| Pumps | 1095C, Sect. 4 | 4343, Sect. 16; 4343D, Sect. 7 and 10 |
| Generators, a.c.... | 1095C, Sect. 5 | 4343, Sect. 2 and 4343A, Sect. 1 |
| Generators, d.c. | 1095C, Sect. 5 | 4343, Sect. 2 and 4343A, Sect. 3 |
| Generators, a.c./d.c. | 1095C, Sect. 5 | 4343, Sect. 2 and 4343A, Sect. 5 |
| Voltage and current regulators ... | 1095C, Sect. 6 | 4343, Sect. 6 and 4343B, Sect. 3 |
| Actuators | 1095C, Sect. 10 | 4343, Sect. 17; 4343D; Sect. 14 and 16 |
| Generators and alternators | 1095G, Sect. 1 | 4343, Sect. 2 and 4343G, Sect. 1 |
| Voltage regulators | 1095G, Sect. 3 | 4343, Sect. 6 and 4343G, Sect. 5 |
| Charging boards | 1095G, Sect. 4 | 4343G, Sect. 3 and 4343S, Sect. 14 |
| Rectifiers | 1095G, Sect. 4 | 4343G, Sect. 3 and 4343S, Sect. 14 |
| Flarepaths | 1095G, Sect. 5 | 4343G, Sect. 13 |
| Control and selector switches ... | 1095G, Sect. 8 | 4343G, Sect. 15 |
| Demagnetizing equipment | 1095G, Sect. 8 | 4343G, Sect. 15 |
| Ammeters and voltmeters | 1095H, Sect. 1 | 4343, Sect. 24; 4343A, Sect. 16, and 4343S, Sect. 24 |
| Testmeters | 1095H, Sect. 2 | 4343, Sect. 24 and 4343S, Sect. 24 |

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TRANSFER OF INFORMATION TABLE—continued

| Subject | Existing A.P. 1095 series | New A.P.4343 series |
|---------------------------------------|------------------------------|------------------------------------|
| Battery capacity test sets | 1095H, Sect. 2 | 4343S, Sect. 14 |
| Insulation resistance testers | 1095H, Sect. 2 | 4343, Sect. 24 and 4343S, Sect. 24 |
| Bonding tester | 1095H, Sect. 2 | 4343, Sect. 24 and 4343S, Sect. 24 |
| Hydrometers | 1095H, Sect. 3 | 4343, Sect. 4 and 4343S, Sect. 14 |
| Generator test sets | 1095H, Sect. 4 | 4343, Sect. 24 and 4343S, Sect. 13 |
| Switchboards and loading panels ... | 1095H, Sect. 4 | 4343, Sect. 24 and 4343S, Sect. 13 |
| Generators | 1095M, Sect. 1 | 4343M, Sect. 1 |
| Starter motors | 1095M, Sect. 1 | 4343M, Sect. 14 |
| C.A.V. control boards | 1095M, Sect. 2 | 4343M, Sect. 5 |
| Voltage regulators | 1095M, Sect. 2 | 4343M, Sect. 5 |
| Cut-outs | 1095M, Sect. 2 | 4343M, Sect. 5 |
| Solenoid switches for C.A.V. starters | 1095M, Sect. 4 | 4343M, Sect. 10 |
| Engine screening harness | 1095M, Sect. 4 | 4343M, Sect. 10 |
| 68 ft. high speed launch | 1095M, Sect. 5 | 4343M, Sect. 11 |
| Bomb loading scows | 1095M, Sect. 5 | 4343M, Sect. 11 |

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LIST OF SECTIONS AND PRELIMINARY MATTER

PRELIMINARIES

Amendment record sheet
Note to readers
List of associated publications
Layout of A.P.
Preface
Transfer of information table

SECTIONS

- 1 Switches (manual and mechanically operated)
- 2 (to be issued later)
- 3 Switches (relay, solenoid and automatic), 12/24-volt
- 4 Switches (relay, solenoid and automatic), 112-volt
- 5 Cables, wiring and accessories, 12/24-volt
- 6 Cables, wiring and accessories, 112-volt
- 7 Switches, starting, 12/24-volt
- 8 Switches, starting, 112-volt
- 9 (to be issued later)
- 10 Control switchboxes and switch panels, 12/24-volt
- 11 Control switchboxes and switch panels, 112-volt

Note.—A list of chapters appears at the beginning of each section

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(A.L.90, Dec. 56)

NOTE TO READERS

To eliminate the old-style AP numbers for general electrical publications the reference number of this publication has been changed to the electrical first element and the general information second element numbers of the current coding system. The publication has not been revised to bring the contents up to date.

When revision of information on a given equipment is required, the existing information will be removed from this publication and revised information will be issued under the specific code number for the equipment.

The initial issue of information on new electrical equipment is being made under the specific code number for the equipment.

A list of old and new publication numbers for current Topic 1 and 6 general electrical publications follows this Note to Readers.

This publication is now unclassified and new or revised leaves will not carry a security marking. Holders should delete the RESTRICTED marking as soon as reasonably convenient, and in any event before this publication or any part of it is disposed of as waste.

LIST OF ELECTRICAL PUBLICATIONS - GENERAL

AIR PUBLICATION

| Code Number | Formerly | | | TITLE |
|--------------|----------|------|------|--|
| | AP | Vol. | Book | |
| 113A-0311-1 | 4343A | 1 | - | Generators and batteries |
| 113A-0311-6 | 4343A | 6 | - | Generators and batteries |
| 113D-07191-1 | 4343B | 1 | 1 | Voltage regulators |
| 113D-0009-1 | 4343B | 1 | 2 | Control panels, cut-outs and circuit breakers |
| 113D-0010-1 | 4343B | 1 | 3 | Rotary and static transformers and inverters |
| 113D-0011-6 | 4343B | 6 | | Control and distribution equipment |
| 113D-0012-1 | 4343C | 1 | 1 | Manually and mechanically operated switches |
| 113D-0013-1 | 4343C | 1 | 2 | Relay, solenoid and automatic switches 12/28V |
| 113D-0014-1 | 4343C | 1 | 3 | Cables, starting switches and control switch boxes |
| 113D-0015-1 | 4343C | 1 | 4 | Relay, solenoid and automatic switches 100/250V |
| 113D-0016-6 | 4343C | 6 | | Switches, cables, wiring and accessories |
| 113E-0535-1 | 4343D | 1 | 1 | Starter motors and starter generators |
| 113E-0479-1 | 4343D | 1 | 2 | Pumps (electric) |

LIST OF ELECTRICAL PUBLICATIONS - GENERAL

| Code Number | AIR PUBLICATION | | | TITLE |
|--------------|-----------------|------------------|------|--|
| | AP | Formerly Vol. | Book | |
| 113E-0189-1 | 4343D | 1 | 3 | Linear actuators (electric) |
| 113E-03181-1 | 4343D | 1 | 4 | Motors (electric) |
| 113E-0267-1 | 4343D | 1 | 5 | Rotary actuators (electric) |
| 113E-0535-6 | 4343D | 6 | 1 | Starter motors and starter generators |
| 113E-0479-6 | 4343D | 6 | 2 | Pumps (electric) |
| 113E-0189-6 | 4343D | 6 | 3 | Linear actuators (electric) |
| 113E-03181-6 | 4343D | 6 | 4 | Motors (electric) |
| 113E-0267-6 | 4343D | 6 | 5 | Rotary actuators (electric) |
| 113F-0002-1 | 4343E | 1 | 1 | Solenoid actuators, lighting and braking control equipment |
| 113F-0003-1 | 4343E | 1 | 2 | Heating, refrigerating and engine synchronizing equipment |
| 107E-0002-1 | 4343E | 1 | 3 | Fire warning, extinguishing, safety and rescue equipment |
| 113F-0673-1 | 4343E | 1 | 4 | Indicators and warning devices, de-icing and miscellaneous equipment |
| 120A-0301-1 | 4343G | 1 | - | Electrical ground equipment |

LIST OF ELECTRICAL PUBLICATIONS - GENERAL

AIR PUBLICATION

| Code Number | Formerly | | | TITLE |
|-------------|----------|------|------|--|
| | AP | Vol. | Book | |
| 120A-0302-1 | 4343J | 1 | - | Electrical ground power indicators, testmeters, testers and precision indicating instruments (RN only) |
| 113D-1856-1 | 4343P | 1 | 2 | Connectors |
| 120A-0001-1 | 4343Q | 1 | - | Data book of electrical servicing equipment |
| 120A-1001-1 | 4343S | 1 | 1 | Electrical servicing equipment for general use |
| 120D-0001-1 | 4343S | 1 | 2 | Servicing equipment for M.T. rotary and control equipment |
| 120F-0001-1 | 4343S | 1 | 3 | Servicing equipment for static equipment |
| 120N-0145-1 | 4343V | 1 | 1 | Special-to-type electrical servicing equipment (RAF) |
| 120N-0146-1 | 4343V | 1 | 2 | Special-to-type electrical servicing equipment (RN) |
| 113G-0001-1 | 4343X | 1 | 1 | Armament electrical control equipment (Airborne) |
| 120G-0001-1 | 4343X | 1 | 2 | Armament electrical test equipment |

LIST OF SECTIONS AND
PRELIMINARY MATTER

PRELIMINARIES

Amendment Record Sheet
Lethal Warning
Note to Readers
List of Electrical Publications - General
List of Sections
List of Lubricants

SECTIONS

- 1 Switches (manually operated)
- 2 Switches (mechanically operated)

Note:- A list of chapters is given at the beginning of each section.

LIST OF LUBRICANTS

The following is a list of lubricants and associated materials mentioned in the AP 4343 series of publications. To avoid repetition, common user items are identified in the text of the various books by their Joint-Service designations only. Reference numbers are used for items peculiar to the RAF.

| Joint-Service designation | Reference No. | N.A.T.O. Code No. |
|--|---------------|-------------------|
| Oil, OC-600 | 34D/9100536 | O-208 |
| Oil, OEP-740 | 34B/9428567 | |
| Oil, OF-24 | 34D/9100566 | H-544 |
| Oil, OM-13 | 34D/9100570 | O-134 |
| Oil, OM-15 | 34B/9100572 | H-515 |
| Oil, OM-16 | 34D/9427822 | S-756 |
| Oil, OM-33 | 34D/9423224 | H-576 |
| Oil, OM-58 | 34D/9106165 | |
| Oil, OM-71 | 34D/9100577 | O-138 |
| Oil, OM-170* | 34B/9100553 | O-115 |
| Oil, OM-270 | 34A/9100554 | O-117 |
| Oil, OMD-110 | 34D/9100581 | O-180 |
| Oil, OX-14 | 34B/9100590 | O-147 |
| Oil, OX-23 | 34B/9423150 | O-158 |
| Oil, OX-38 | 34B/9424819 | O-419 |
| Grease, XG-265 | 34B/9433481 | |
| Grease, XG-271 | 34B/9100510 | G-382 |
| Grease, XG-275 | 34B/9100512 | G-350 |
| Grease, XG-276 | 34B/9425139 | |
| Grease, XG-277 | 34B/9100514 | G-359 |
| Grease, XG-278 | 34B/9105058 | G-354 |
| Grease, XG-284 | 34B/9439321 | G-366 |
| Grease, XG-285 | 34B/9100517 | G-355 |
| Grease, XG-290 | 34B/9105057 | |
| Grease, XG-315 | 34B/9100519 | G-394 |
| Grease, Aeroshell No.15 | 34B/1429 | |
| Silicone compound XG-250 (Previously M.S.4) | 33H/9424829 | S-736 |
| Protective, PX-7 | 34B/9100488 | S-743 |

*To be superseded by OM-270.