A.F.O. 5761/45

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ADMIRALTY FLEET ORDER

AMERICAN AIR STORES AND EQUIPMENT FOR NAVAL PURPOSES—GENERAL GUIDE TO CLASSIFICATION, IDENTIFICATION, DEMANDING, ETC.

ADMIRALTY, S.W.1, 11th October, 1945.

The following Order having been approved by My Lords Commissioners of the Admiralty is hereby promulgated for information and guidance and necessary action.

By Command of Their Lordships,

It.v. markham

Distribution Limited

To Commanders - in - Chief, Flag Officers, Senior Naval Officers, Captains and Commanding Officers of H.M. Aircraft Carriers and Aircraft Maintenance and Repair Ships, Commanding Officers of R.N. Air Stations, Sections, Training Establishments and Squadrons, Superintendents and Officers in Charge of H.M. Naval Establishments, and Naval Store Depots.

Depots. Note: The scale of dist.	ribution is shown in th	ne Admiralty Fleet Order
Volume, 1941, Instructions, 1	paragraph 10.	io manufactor or acc

5761. American Air Stores and Equipment for Naval Purposes-General Guide to Classification, Identification, Demanding, etc.

(N.S. Air 10787/45.-11 Oct. 1945.)

The various difficulties encountered by supply organizations in connection with classification and identification, etc., of American spares and equipment of types dealt with by Naval Store Department, for the purposes of demanding, stowage and accounting, arise primarily from a lack of knowledge of the systems of classification adopted by the different U.S.A. services. Improvement should be effected to a large extent by the wide distribution of the various publications, including the A.S.O. catalogue, and the particulars furnished in this order are issued as a brief compendium of the available information on the subject. The latest position as to the availability of the various publications is given in an A.F.O. each month.

- 2. Terms and Abbreviations.—The definitions of terms and abbreviations in this Order, and in general use with reference to American equipment, are-
 - A.S.O. ... Aviation Supply Office, U.S. Navy.
 - Alternative title of the "Catalogue of Aeronautical Materials, A.S.O. Catalogue Spare Parts and Equipment " issued by the A.S.O.

A.N. ... Army-Navy specification These symbols are applied to part numbers of ma-A.C. ... Air Corps specification > terial manufactured to N.A.F. ... Naval Aircraft Factory specification such specifications.

F.S.S.C... Federal Standard Stock Catalogue.

G.F.E. ... Government Furnished Equipment, i.e., articles which are supplied from Government sources for embodiment in an aircraft, engine or item of equipment.

Classification

3. The Classifications adopted for use in the Royal Navy (complete airframes and engines are excluded) are :-

(a) U.S. Navy Classes

- 1, 2, 3. Armament, gun parts, sights, bomb-carriers, etc.
 - 6. Kits, mooring.
 - Tyre and tube accessories, hand pumps, pressure gauges, valves, caps and cores, etc.
 - 11. Pumps, bilge, refuelling, etc.
 - 14. Graphite greases, lubricating oils, rust preventive compounds.
 - 15. Electric cable and wire (insulated).
 - 16. Radio items (see para. 6).
 - 17. Electrical items not included in R.A.F. Section 105 (see para. 6).
 - Instruments of precision, photographic equipment, etc.
 - 22. Wire rope and wire bare.
 - 32. Heat insulating materials.
 - Gaskets, hose, packing, rubber sheet and strip.
 - 34. Leather belting, harness.
 - 37. Flight clothing, goggles, helmets, safety belts.
 - 40. Machine tools.
 - Hand tools.
 - 42. Hardware-bearings, eyelets, fasteners, grommets, etc.

- 43. Bolts, nuts, rivats, screws, washers.
- 44. Pipes, tubes, tubing (non-flexible).
- 45. Pipe fittings.
- 46. Metal in bars (flat, hexagon, octagon, round, square).
- 47. Metal in plates and sheets.
- 48. Metal-shapes (angles, channels, etc.).
- 51. Abrasive materials, acids, chemicals, gases, cylinders.
- 52. Paints, paint ingredients.
- 58. Fire-fighting apparatus, fire extinguishers.
- 81. Major airframe spares.
- 82. Minor airframe spares.
- Airframe accessories.
- Engine spares.
- 86. Engine accessories.
- 87. Propellers and propeller spares.
- Aircraft instruments.
- 89. Lifting and handling equipment.
- 93. Special aeronautical training devices.
- 94. Turrets, power gun mounts, gun synchronisers, gun-firing solenoids,

These classes, however, include many items, particularly of the more common consumable stores, for which equivalents of British manufacture exist and of which stocks are already provided under the R.A.F. Sections or as British Naval Stores. Such equivalents, of which a list is published in A.F.O. 3077/45, should be demanded and supplied except where otherwise permitted by that Order.

(b) R.A.F. Sections

For various reasons, notably the close association between the R.A.F. and R.N. in the procurement and supply of radio and electrical equipment, it has been found desirable to adopt the R.A.F. classification, as shown below, for all items falling within U.S. Navy Classes 16 and 17, so far as they have received a reference number in Sections 110 and 105 of the R.A.F. vocabulary (A.P. 1086c.).

R.A.F. Section 110 (U.S.N. Class 16).

R.A.F. Section 105 (U.S.N. Class 17).

(c) Special Ranges

A range of spares and equipment for Vengeance aircraft has been procured from R.A.F. and R.A.A.F. sources. These items bear R.A.F. reference numbers in the section "100" series and should be classified and stored accordingly, except for common stores which can be identified with their U.S. Navy equivalents. The latter should be transferred to their appropriate U.S. Navy classes. (The same principle applies to spares and equipment for Canadian-built Mosquitoes.)

The following items, which are procured from R.A.F. sources for use with American-produced equipment, should also be demanded and stocked under the R.A.F. sections indicated :-

Sec.

106C ... Tools for the repair of Artificial Horizons and Direction Indicators manufactured by the Sperry Gyroscope Co.

106JA ... Spares for ditto.

... Spares for Link Trainers, Types D, D2 and AN-T-18.

4. U.S. Navy Systems of Classifying Aeronautical Material.-Full details as to the construction and use of stock numbers by the U.S. Navy are to be found in the A.S.O. Catalogue.

- (a) Material which is standard (i.e. common to many types of aircraft) is allotted a standard stock number which may fall into one of the following categories:—
 - (i) Items used in the maintenance of aircraft and yet primarily purchased for the maintenance of ships (as Naval Stores) are classified under the Federal Standard Stock Catalogue.

Example: Files, Swiss, F.S.S.C. No. 41-F-2700.

F.S.S.C. stock numbers are assigned by the Standards Division, Treasury Department, to standard Naval Stores and material and are published in the Navy Supplement to the Federal Standard Stock Catalogue and in the A.S.O. Catalogue. Such stock numbers take precedence over all other stock numbers used in Naval supply and replace any other stock numbers assigned to materials equivalent to standard Naval Stores and material used by the U.S. Navy.

(ii) Items which are primarily purchased for the maintenance of aircraft are classified under the Aviation Supply Office Stock Number, which is distinguished from the F.S.S.C. series by the inclusion of the prefix "R" in front of the class number.

Example: Gasket, Engine, A.S.O. Stock No. R85-G-25060.

(iii) As a general rule, the stock numbers assigned by the Aviation Supply Office to standard material consist of the class number —initial of the subject, article or material—serial stock number. However, in some instances, where material is manufactured to standard Army—Navy specifications, the assignment by the A.S.O. of a serial stock number has been discontinued in favour of the AN specification number (which is the drawing number).

Example: Hose synthetic rubber . . . Stock No. R33-H-AN884-5-16. The same applies to material manufactured to AC or NAF specifications.

(b) Material which is not sufficiently standard in nature and is common to some, but not all, types of aircraft is classified, firstly, into the class most appropriate to its nature or use, and secondly, by the manufacturer's code symbol and part number.

Examples: R82–GR–20645–Trim Tab. (Airframe part, manufactured to Grumman design), R85–WAC–110227–Gasket (engine part, manufactured by Wright Aeronautical Corporation). The code symbols used to identify the various manufacturers of proprietary goods can be found in the A.S.O. catalogue.

It is standard U.S. Navy practice to adopt the parent firm's code symbols for all parts manufactured by a daughter firm which bear the same part number as that assigned by the drawings of the parent firm. This practice assumes interchangeability between parts manufactured by the parent and daughter firms, where these parts bear the same part number.

Example: R82-GR-20645 will apply to a trim tab manufactured, to a Grumman drawing, either by Grumman or by General Motors, Limited.

(c) Accessory assemblies and instruments manufactured by various contractors to a similar broad specification may differ in detailed design and their components should be classified under the individual makers' code and part number, cross reference being made to other manufacturers' part numbers where known. This is essential since the complete assemblies (which bear a common stock number) will be interchangeable but the component parts will not. In consequence, it often will be necessary, in the absence of components for one maker's accessory or instrument, to issue a complete article by another maker.

- 5. Discontinuing Aircraft Part Nos.—Hitherto it has been U.S. practice for the prime aircraft contractors to assign their own series of part numbers to components supplied to them as G.F.E. or obtained from sub-contractors. This practice is gradually being discontinued and in future all such parts will be correctly classified under the code and reference number of the manufacturer of the component and not under that of the aircraft manufacturer. (See para. 11.)
- 6. Air Radio and Electrical Equipment (Classes 16 and 17).—These stores are allotted R.A.F. reference numbers in Sections 110 and 105 of the Vocabulary (A.P. 1086c) (see para. 3 (b)). As far as Air radio equipment in use by the Royal Navy is concerned, arrangements are being made for the issue, in advance, of the official amendment of the vocabulary, of details of the reference numbers allotted to such American equipment, whatever its original source of procurement. This information will include all the available details as to stock numbers and manufacturers' part numbers. Shipments from the United Kingdom to stations abroad will be made under R.A.F. reference numbers (and should be so dealt with at destination), but this will generally not be the case with supplies received from U.S.A. and it will be a matter for careful cross-reference of available information at receiving depots to avoid duplicate stock-holding.
- 7. Material Procured from U.S. Army Sources.—Equipment for aircraft not of U.S. Navy basic types is generally procured from U.S. Army sources and in consequence is invoiced under U.S. Army stock and/or makers' part numbers. Arrangements have been made whereby such invoices will show (a) the U.S. Navy classification and (b) the U.S. Army stock and/or maker's part number, and the material (pending the issue of cross-indices now in preparation) should be accounted for under these references. The U.S. Army stock or maker's part number may, in such circumstances, be prefixed by a "code number", but this should be ignored for stock-keeping and accountancy purposes. The "code number" provides, however, a useful reference to the class and material in cases of doubt, and its interpretation is included in Book 1 (Memorandum of Instructions) of A.P. 1086c, page 15, et seq., in which the U.S. Army Air Force method of allocation of stock numbers is explained.
- 8. Local Stock Numbers.—It will be necessary on occasions to establish local stock numbers for ledger and stockholding purposes where stock numbers have not been allotted by the Aviation Supply Office or the Federal Standard Stock Catalogues. The following system will ensure that stock numbers are produced which are capable of interpretation with a minimum of explanation, but it must be emphasized that these local numbers must not be used for demanding on R.N. store depots and are not to be applied unless all other sources of identification fail.

The following steps are to be followed in constructing local stock numbers. This system follows U.S. Navy practice.

- Step 1. Show that the number is assigned locally by prefixing with the letter "L".
- Step 2. Take the Stock Class from the A.S.O. catalogue (Book 1 in Appendix).
- Step 3. Use the first letter of key noun of description of item.
- Step 4. (i) For Standard articles or material.
 Ascertain the AN, AC, NAF part number.
 - (ii) For non-Standard articles or materials.

Ascertain the manufacturer's code letters from the manufacturer's Name, Code, Index and to this add the manufacturer's Part or Drawing Number, separated by an oblique stroke. This procedure is explained in greater detail in the preface to the Classification Index Supplement No. I to the A.S.O. Catalogue.

Example: L 86-P-CH/9014 Pump.

L=Assigned locally.

86=Class 86.

P=Pump.

CH = Made by Chandler Evans Co.

9014=Chandler Evans, Model No.

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Identification

9. Means of Identification.—The foregoing principles of classification having been assimilated, the identification of American spares and equipment should present less difficulty than hitherto. For purposes of receipt, stowage and issue, the tallies, which should invariably be affixed to the parts, are a sufficient means of identification and it is equally important that returned stores should be properly tallied by the returning service. The identification of a part or article for demand purposes is primarily by its location or function in the aircraft or in the assembly of which it is a component. This ascertained, the following publications provide suitable sources of reference and the more important are referred to in greater detail in paragraph 15 in connection with Demanding, and in the Appendix to this Order.

(a) Airframe Spares (Classes 81 and 82).

*Parts Catalogue (illustrated where available).

*Photographic Catalogue (not entirely reliable, and being superseded by the Parts Catalogues as they become available).

*Erection and Maintenance Manual.

A.S.O. Catalogue.

(b) Engine Spares (Class 85).

*Spare Parts Catalogue (illustrated where available).

*Operators' Handbook.

*Overhaul Manual.

*Interchangeability List and Replenishment Request Forms.

(c) Airframe and Engine Accessories (Classes 83 and 86), Propellers and Propeller Spares (Class 87) and Instruments (Class 88).

A.S.O. Catalogue (for Identification of equipment fitted in particular types of aircraft).

*Handbook of Instructions, with Parts Catalogue.

(d) Armament Spares and General Stores and Equipment (Classes 1-3, 5-15, 18-75, 89).

A.S.O. Catalogue (which includes U.S. Aviation Ordnance Stock List).

*For type of aircraft engine or equipment concerned.—See monthly A.F.Os. referred to in paragraph 1.

- 10. Development of American Identification System.—American aircraft publications were originally produced by the manufacturer of the aircraft, engine or piece of equipment under comparatively wide discretion. In course of time, however, the U.S. Army, and later the U.S. Navy, began to exercise in the interests of uniformity a greater measure of control over the production of publications, and a common register of publication numbers was used by the two services, those prepared for, or by, the U.S. Army being entitled "Technical Orders", and those for, or by, the U.S. Navy, "NAVAER". Later still, joint publications were produced for common equipment and here again numbers were taken from the pre-existing common register and prefixed by the symbol "AN". It will generally be found, particularly in relation to airframes and engines, that the "AN" publications are the latest and are also illustrated.
- 11. Alphabetical Symbols.—An important aspect of the identification of American aircraft parts and equipment is the use of alphabetical symbols, in conjunction with stock or part numbers, to indicate the manufacturer, and it is important that these symbols, where they are known, should be used for demanding, stockholding and accounting. If the manufacturer's name and symbol do not appear in the A.S.O. Catalogue the full name of the manufacturer should be used pending the promulgation of a code symbol. The code symbols are not applicable to standard articles such as are included in Classes 1–75. The symbols should not be confused with the type symbol allotted to the aircraft itself, e.g. TBF1= Avenger I (Grumman). The symbol for a part manufacturer by Grumman, or a part for an aircraft of which Grumman are the prime manufacturers is GR.

- 12. British made items of U.S. design.—There is an increasing tendency towards the manufacture by British firms of airframe, engine and propeller parts to the design of the equivalent American-produced part, particularly as a result of a modification (or "change") introduced in the U.S.A. Such parts will be identified by the original American part number, prefixed by the symbol "U.K." in place of the contractor's symbol, to indicate the source of supply. Where, however, a purely British modification to an American aircraft or engine is introduced, the modification parts will bear the British manufacturer's post number, prefixed by the symbol "U.K." It will thus be made clear that such parts cannot be procured from U.S.A. sources.
- 13. Use of Standard Airframe Equipment List (S.A.E.L. B.R. 380 Series), and Appendix "A" Publications.—For equipment fitted in the Avenger, Corsair, Helleat and Wildcat aircraft a useful source of identification is the appropriate S.A.E.L., which is the equipping authority for American naval aircraft. This book is used by the Royal Navy in lieu of a Standard Appendix "A" for those aircraft. (A.F.O. 1249/45.) and the latter publications should only be used as a last resort.

For the other types of American aircraft used in the Royal Navy (for which S.A.E.L.'s have not been prepared) the appropriate British Conversion Appendix "A", or if not available, the American Appendix "A" may be utilized, but the information should be verified if possible from any other publication available.

Items of equipment shown in these publications should be demanded by stock number if this is shown. Where a stock number is not shown it is essential to check any R.A.F Reference numbers with the appropriate A.P. 1086c. In respect of AN, NAF or AC numbers, check should be made with the Cross Index in the A.S.O. Catalogue which will give the stock number; or, in the case of a manufacturer's part number, check should be made with the A.S.O. Catalogue under the appropriate class which will show whether the item is to be ordered by stock number or by class and maker's part number. If it is possible only to ascertain the British R.A.F. refererence number, the item should be demanded under that number.

14. Items of which only Part Numbers are known.—It very frequently happens that a store-holding authority is presented with a requirement expressed as a part number only—no 1 arther information can be produced. In these circumstances the Part Number Indicator which is published as a section of the A.S.O. Catalogue, and should be bound immediately behind the cross-reference index, provides an important aid to the determination of the description, maker's name and U.S. Navy class of items of general equipment and such type spares as are included in the A.S.O. Catalogue. The indicator is in two sections, one concerned with part numbers beginning with a numeral and the other with part numbers beginning with a letter, and by the aid of the key provided in columnar form the composition of the part number in relation to the complete details needed for identification and demand purposes is simply demonstrated by means of typical examples. It is not, however, a comprehensive list of part numbers.

Rules for Demanding

- 15. Preparation of Demands.—Use of the publications which are in general use for American spares, details of which are included in the Appendix to this order, and observance of the points referred to below, will enable supply staffs to avoid many of the difficulties formerly encountered in raising demands and assist Store Depot staffs in executing them.
 - (a) Demands should be raised under the appropriate U.S. Navy Class stock number and description except in the following instances when the R.A.F. section and reference numbers, which appear in A.P. 1086c, should be used:—
 - Air Radio Equipment and Electrical Stores (Sections 110 and 105 respectively).
 - (ii) Peculiar spares and equipment for Vengeance aircraft.
 - (iii) Tools and spares for Artificial Horizons and Direction Indicators manufactured by Sperry Gyroscope (Secs. 106c and 106JA). Spares for link trainers, types, D, D2 and AN-T-18 (Sec. 106L).

- (iv) When demanding on R.A.F. maintenance units.
- (v) When no stock or part number or AN/AC/NAF number can be traced, but the article appears in A.P. 1086c or in the Appendix A for the type under an R.A.F. reference number.
- (b) Generally speaking, demands are to be raised-
 - (i) by stock number,
 - (ii) by AN/NAF/AC number if this number cannot be linked to a stock number by the cross index,
 - (iii) by maker's part number.
 - (iv) by R.A.F. Section and Reference Number, in that order of preference, i.e. (iii) is not to be used if (ii) is available, and (ii) is not to be used if (i) is available.
- 16. Information in Doubtful Cases.—It is essential that the following particulars be given in all demands for spares and equipment, and where there is the slightest possibility of a store depot not recognizing the item from the number and description on the demand, the publication page and item number for the required article are also to be quoted. Book numbers quoted below refer to column 1 of the appendix.
 - (a) General Equipment-
 - (i) Ascertain the class number from Book I (see Appendix to this Order)
 - (ii) Refer to appropriate section of Book I and identify article required by reference to index of material and, if necessary, photograph or drawing provided.
 - (iii) If AN/NAF/AC number is known, but not stock number, refer to cross-index (Book I) to ascertain the latter. In the absence of a stock number, demand under AN/NAF/AC number.
 - (iv) For bulk material (e.g. metal tubing, bar, sheet, extrusions, etc., wire, cable, timber, paint, lubricants, etc.) the first source of reference in Supplement M.1 to Book I.
 - (v) Stock number.
 - (vi) Full description including functional use where necessary.
 - (vii) Quantity.
 - Example: Cl. 43. PK.65A-4-4 screw, Parker Kalon, slotted binding head, gimlet point, diameter and threads 4-24, length ½-in, for securing panels to aircraft skin. Quantity 6.
 - (b) Airframe Spares-
 - (i) Ascertain the description and part number of the item required by comparing it with its illustration in Book 2. (Earlier editions of these publications, however, may not be illustrated.)
 - (ii) If the part number is preceded by the letters AN/NAF/AC, ascertain the stock number from Book I (Cross Index) and demand under this number. In the absence of a stock number, demand under AN/NAF/AC number.
 - (iii) Further information, particularly with regard to the maintenance ranges of spares for wheel equipment and other proprietary articles, is to be found in Book I.
 - (iv) The part number having been ascertained from Book 2 (see (i) above), care must be taken by reference to Book I to ascertain whether a standard stock number does exist. If it does, it should be used in preference to the part number. (See Example (b) below.) Where it does not exist, use the part number. (See Example (a) below.)

- (v) From the above the full demanding particulars are now available.
 - Example: (a) R82-CV-VS16982-1, fairing, or
 - (b) R82-B-625550, sway brace.
- (vi) Class 81 (or 82 as applicable) and Part No. or Stock Number.
- (vii) Full description, including functional use if description is uncertain.
- (viii) Quantity.
- (ix) Model number of aircraft for which item is required. (Found in cockpit of aircraft.)
- (x) Serial number of aircraft.

Example: R.82 CV-VS-16982-1 fairing for front centre section.

Quantity 1 for Corsair III J.S.607.

Note.—A comparatively small number of airframe spares bear the same number whether for "left-" or "right-" hand fitting. Care should be taken when demanding these items to quote "left-" or "right-" hand (as seen from the pilot's cockpit, looking forward).

- (c) Engine Spares-
 - (i) Being aware of the major assembly, of which the item required is a part, find an exploded view of this assembly in Book 3.
 - (ii) Having found the item in the exploded view, refer by means of the key reference to the details given in the body of Book 3. The maker's part number will be shown against the item. (See also paragraph 18 below.)
 - (iii) If the part number is preceded by the letters AN/NAF/AC, ascertain stock number from Book I and demand under this number.
 - (iv) Class 85 and part number or stock number.
 - (v) Full description.
 - (vi) Quantity.
 - (vii) Make and type number of engine.

Example: (i) R85-PW-202 oil suction pipe, clip, or (ii) R85-G-25020 gasket, quantity 1, for Pratt and Whitney 1340-AN1. (For engine spares it is not essential to quote the aircraft type and number; the engine type and model is normally sufficient).

- (d) Accessories, Instruments, Propellers and Propeller Spares-
 - (i) Ascertain class number from Book I.
 - (ii) Under the class number find details of the complete article or assembly in Book I.
 - (iii) For components, if not ascertained by step (ii) above, refer to Books 4, 5 or 6 as appropriate to the class of material.

Note.—Demands for components should give an indication of the article or assembly for which required.

(e) Ordnance Material (Classes 1, 2 and 3)-

The Aviation Ordnance Stock List included in Book I is a complete and reliable source of reference.

- (f) Radio (Section 110/Cl. 16)-
 - (i) Ascertain the R.A.F. reference number from Book 15.

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- (ii) If the article required is not in Book 15 refer to the maker's maintenance handbook provided with the set, which will indicate the maker's part number or drawing.
- (iii) Then refer to Book 16 to translate part or drawing number to R.A.F. reference number.
- (iv) For common radio items, not identified with any particular set, refer to Book 1 or Book 7. The U.S. Navy stock number found in Book 1 can be translated to the R.A.F. reference number by reference to Book 16.
- (v) R.A.F. Section No. (110) and reference number.
- (vi) Description.
- (vii) Quantity.
- (viii) Main equipment (i.e. set) for which required.
- (ix) Source of information, when demanded under part or drawing number, if R.A.F. reference number is not ascertainable.

Example: Sec. 110K, Ref. 914, Power Unit, 24 volt, Quantity 1 for SCR 522.

(g) Electrical Equipment (Section 105/Cl. 17)-

- (i) Ascertain the part number of the article required. This is stamped on the article in nearly all cases. (See paragraph 17.)
- (ii) Refer to cross-index in the appropriate section of Book 7, which translates part number into R.A.F. reference number.
- (iii) Failing the above, refer to Book 1 under U.S. Navy, Class 17 and demand under stock number.
- (iv) R.A.F. Section (105) and reference number.
- (v) Description.
- (vi) Quantity, or if R.A.F. number not available insert (vii) below.
- (vii) U.S.N. Class 17 and stock number.
- (viii) Description.
- (ix) Quantity.

In absence of other information, demand under part number, indicating source of reference.

Examples: Sec. 105G Ref. 11 Adaptor Plug for Starter Trolley Quantity 1, or

R 17-L-12932-130 Filament Lamp Assembly Quantity I.

- 17. Verification of Stock or Part Numbers.—It is highly important that the number stamped on any item should not be taken as its Stock or Part Number until verified as the correct number from the relative publication. The number stamped on a spare part may be casting number only and bear no relation to the correct Stock or Part Number.
- 18. Catalogue Particulars.—In Parts Catalogues, the group of components of assemblies are shown as exploded views of the various assemblies in a series of illustrated figures. In these illustrations the parts are indicated by a key number and this may be prefixed by the letter "R". This number is not the Maker's Part Number, Stores Reference Number or Stock Number. Particular care should be taken to avoid confusion where certain manufacturers head the column containing this number, "Reference Number" (e.g., Parts Catalogue for Ranger Aero-Engines).

19. Alternatives for Discontinued Items.—In many instances, supplies of spares initially provided by the aircraft manufacturers are later discontinued, since in these cases it is possible to provide replacements by the issue of the several components from the bulk supplies provided under Classes 5–75. As an example—Hose Assembly Cl. 82 is comprised of:—

Recourse to this alternative should not be overlooked when demanding or supplying the made-up article. Details of individual instances of this nature are published by A.F.O. from time to time.

Stowage and Accounting

- 20. Stowage of articles and materials in the U.S. Navy Classes should be arranged in order of Class Number, Alphabetical Prefix and Stock Number, the last in numerical sequence. Where, however, the manufacturer's identification symbol (see para. 11) forms parts of the Stock Number, stowage should be arranged in order of Class Number, Manufacturer's Symbol, or Stock Number. Ledger Pages should be arranged in similar order.
- 21. Interchangeable Items.—As stated in A.F.O. 2616/45, interchangeability exists between the airframe spares for Avenger, I, II and III, Wildcat IV, V and VI, and Hellcat I and III, when these parts bear the same part number. Such parts should be classified under the prime manufacturer's symbol, GR (Grumman), and stowed and accounted for together in accordance with para. 20. Similar circumstances arise with Corsair airframe spares of Chance Vought and Goodyear manufacture, the prime manufacturer's symbol being CV (Chance Vought). Parts which are non-interchangeable should be stowed separately. It follows that issues in satisfaction of demands will be made without discrimination as to mark or manufacture of the aircraft, but for initial storings of ships and services major airframe spares appropriate to the mark of aircraft will be supplied.

Book No.	Publication No. or Short Title	Full Title	e Type of Equipment	Whether Illustrated	Principal Contents	Use (or Remarks)
1	A.S.O. Catalogue	Catalogue of Aeronautical Materials, Spare Parts and Equipment.	Catalogue of U.S. Navy aeronautical material (see Con- tents column). In- cludes supplement for Ordnance Equipment Classes 1-3.	Extensively illus- trated and pro- vided with notes.	Full details of all aeronautical material which has been allotted stock numbers by the A.S.O. together with F.S.S.C. items of aeronautical application and proprietary material in Classes 80–90 within the maintenance ranges.	Prime source of reference for all U.S. Navy aeronautical material not special to type. New sections and revisions are constantly being issued. A Check List is periodically issued to all holders of the book. This List also represents a suggested arrangement of the Catalogue.
2	Example: AN.01-45HA-4 (Corsair I, II or III).	Illustrated Parts Catalogue.	Airframe spares	Yes	(i) Maker's part numbers. (ii) AN and NAF numbers. (iii) Description. (iv) Key references to drawings.	Publications relating to material common to the U.S. Navy and U.S. Army are now published under A.N. specifications. Formerly the service having the prime interest in the sub-
3	Example: AN.02-35HC-4 (A.P. 2046C) (Wright R.2600 -20 and -22).	Parts Catalogue for Aircraft Engines.	Engine spares	Yes	(i) Maker's part numbers. (ii) AN and NAF numbers. (iii) Description. (iv) Key references to drawings.	ject of the publication was responsible for its specification, the Specification No. being prefixed Navair for the Navy and T.O. (Technical Order) for the Army. The procedure was, however, in other respects identical Thus if Navair-01-
4	Example: AN.03-5CA-13 (Models JH-3, etc., Starters).	Handbook of Instructions with Parts Catalogue.	Accessories	Yes	(i) Maker's part numbers. (ii) AN and NAF numbers. (iii) Description. (iv) Key references to drawings.	85WA-4 were revised and put under an AN specification, the number would read AN-01- 85WA-4. Navair and T.O. Specification Nos. are still used where material is not common to the

5	Example: AN.03-20BD-1 (Curtiss C.5325- C58, C.53158- D54).	Instructions with Parts Catalogue for Electric Propellers.	Propellers and propeller spares.	Yes	(i) Maker's part numbers. (ii) AN and NAF numbers. (iii) Description. (iv) Key references to drawings.	two services. In some in- stances, where an aircraft, or piece of equipment is no longer in production, but is common to both services, the most authoritative source of refer-
6	Example: AN.05-70C-2 (Pressure Ganges R88-G-690).	Instructions with Parts Catalogue for Dual Manifold Pressure Gauge.	Instruments	Yes	(i) Maker's part numbers. (ii) AN and NAF numbers. (iii) Description. (iv) Key references to drawings.	ence remains the original Navair or T.O. publication.
7	A.P. 1086C	Vocabulary of American Equipment for the R.A.F. (Issued in volumes containing various Sections).	General, excluding airframe and en- gine spares.	Drawings and illustrations to certain parts.	Classification under R.A.F. reference numbers, with cross-reference in some cases to stock or part numbers.	Used to— (i) Demand on R.A.F. sources. (ii) Demanding Radio and Electrical Equipment under R.A.F. Sections 110 and 105. (iii) Ascertaining U.S.A.A.F. Class and Stock numbers.
8	Example: AN.01-90CC-2 (Traveller Aircraft).	Erection and Maintenance Instructions.	Aircraft	Yes (Technical Drawings).	Erection and maintenance data including— (i) Maker's part numbers, and (ii) NAF, AN and AC drawing numbers. (iii) Description.	To ascertain Maker's Part or Drawing Numbers, where starting-point of enquiry is the function of the part in the aircraft where very full illus- tration needed to identify part.
9		Photographic Catalogue (for the type of aircraft concerned).	Airframe spares	Photographic illustrations of assemblies and detailed parts.	(i) Maker's part numbers. (ii) Class numbers. (iii) NAF, AN and AC drawing numbers. (iv) Description and photograph.	These Catalogues have been superseded by Parts Catalogues (see Book 2 above). Information should be carefully checked before use.

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Book Publication No. or Short Title		Full Title Type of Equipment Whether Illustrated		Principal Contents	Use (or Remarks)	
10	TO.03-569	Index of Army - Navy Aeronautical Equip- ment—Electrical.	Electrical	Yes	(i) All numbers, including U.S.A.A.F. (ii) Description, includes technical data, dimensions and alternatives.	Primarily of use in referring to U.S. Army items not common to U.S. Navy and therefore not shown in A.S.O. Catalogue. It can be considered the U.S. Army counterpart of the A.S.O. Catalogue.
11	TO.05-1-67	Index of Army - Navy Aeronautical Equip- ment - Instruments.	Instruments	Yes	(i) All numbers, including U.S.A.A.F. (ii) Description, includes technical data, dimensions and alternatives.	Primarily of use in referring to U.S. Army items not common to U.S. Navy and therefore not shown in A.S.O. Catalogue. It can be considered the U.S. Army counterpart of the A.S.O. Catalogue.
12		Appendix "A" applicable to the type of aircraft.	All fitted in the air- craft except air- frame and engine spares and acces- sories.	No	All equipment fitted in the type of aircraft, under R.A.F. reference numbers and in some instances U.S. Navy stock numbers.	Owing to the frequent changes in the American equipment fitted to aircraft this publication is often unreliable.
13	B.R. 377 and 378 Series.	Air Stores Establishment applicable to type of aircraft.	All	No	Established allowances of aircraft stores.	Owing to the fact that the A.S.Es. are amended from the appro- priate American publication. references are usually more reliable from the latter.
14	B.R. 383 (AM) Series	Air Stores Establishment Aero Engines and Accessories.	Engines, accessories and tools.	No	Established allowances of engine speres, accessories and tools.	Supersedes B.R. 377 and B.R. 378 for Engines and Accessories.

15	A.P. (N) 51	American Aircraft Radio Equipment.	Radio	 . No	Break-down of radio sets giving R.A.F. reference numbers in relation to drawings.	To identify components of Radio Sets. In course of publication and distribution set by set. ZBX is already published.
16	A.P. (N) Number 55	Cross-index and Inter- changeability List for Stock and Part Num- bers and R.A.F. Refer- ence Numbers.	Radio	 . No	Stock numbers, maker's part and drawing numbers, R.A.F. reference numbers in cross-index form.	To ascertain R.A.F. reference numbers.

(A.F.Os. 1249/45, 2616/45 and 3077/45.)

