

AIR PUBLICATION

102C- $\left\{ \begin{array}{c} 1512 \\ \text{to} \\ 1517 \end{array} \right\}$ -1

(Formerly A.P. 4321 G,J,L,N,U, & V, Vol.1)

**AVON MK.10700,10900,11300,  
11500,12100,AND12200 SERIES  
ENGINE CHANGE UNITS  
GENERAL AND TECHNICAL INFORMATION**

BY COMMAND OF THE DEFENCE COUNCIL

*A. T. Dunnett*

Ministry of Defence  
FOR USE IN THE  
ROYAL AIR FORCE

(Prepared by the Ministry of Technology)



# AMENDMENT RECORD SHEET

To record the incorporation of an Amendment List in this publication, sign against the appropriate A.L. No. and insert the date of incorporation.

A.L. No.	Amended by	Date
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## NOTE TO READERS

The subject matter of this publication may be affected by Defence Council Orders or by "General Orders and Modification" 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.

In the two column presentation 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 this: ▶ .. ◀ to justify where text has been deleted. When a Part, Section, or Chapter is issued in a completely revised form, the triangles will not appear.

In the single - column, direct-type presentation, which supersedes the two-column, each page will bear a number and date of issue and the number of Amendment List with which it was issued. Revised technical matter will be indicated by black rule positioned in the left hand margin adjacent to the amendment or deletion. When a Part, Section or Chapter is completely revised each page will bear a black rule for the entire text length.

This publication is now unclassified; new or revised leaves will not carry a security marking. A.L.33 called for all security marking to be deleted from pages already issued. Holders must ensure that this has been done before the publication or any part of it is disposed of as waste.

## LIST OF ASSOCIATED PUBLICATIONS

	A.P.
Electrical equipment (Power services airborne) .. ..	1095C
Fuel system components for gas turbine aero-engines ..	4282 Series
Instrument manual, general instruments .. ..	1275A
Preservation of Aero-engines, Engine Change Units, Accessories, Propellers and Associated Equipment .. ..	4471A
Pressure operated control equipment for aircraft ..	4303B
R.A.F. engineering .. ..	1464 Series
Rotol accessory gearboxes and drives .. ..	2240A
Starting systems for aero-engines .. ..	1181
Also relevant aircraft publications and Pilot's Notes	



LAYOUT OF A.P.102C-1512 to 1517-1

AVON MK.10700, 10900, 11300, 11500,  
12100, and 12200 SERIES

ENGINE CHANGE UNITS

VOLUME 1 Parts, 1, 2 and 3	General and technical information
VOLUME 2	General orders and modifications
Volume 3, Part 1	Schedule of spare parts
VOLUME 3, Part 2	Not applicable
VOLUME 3, Parts 3, and 4	Scales of unit equipment and servicing spares
VOLUME 4	Planned servicing schedules
VOLUME 5	Basic servicing schedules (refer to relevant aircraft publication)
VOLUME 6, Part 1	Minor repairs
VOLUME 6, Part 2	Major repairs
VOLUME 6, Part 3	Schedule of fits, clearances and repair tolerances
VOLUME 6, Part 4	Reconditioning instructions (requirement not yet decided)

(The publications issued to date are listed in A.P.113)



## MODIFICATION STANDARD

The effects of all existing applicable modifications up to and including Mod.1155 have been incorporated in this book. Succeeding modifications will be considered, and their effect incorporated as necessary; in the event, this leaf will be re-issued with each amendment precipitated by modification(s).

Information on modification titles, classification categories and mark applicabilities are contained in the engine/E.C.U./type Modifications Lists.

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## PREFACE

The Avon series of engine change units described in this publication are completely detachable units and consist of the basic mark of the Avon aero-engine built up to the minimum standard necessary to enable the unit to be installed in or removed from the airframe within the time specified for the aircraft type.

Supplements providing for E.C.U. differences are included when necessary at the end of each chapter. In certain instances, the information given in the supplement is devoted to those items comprising the E.C.U. which are additional to the basic engine, the latter being the subject of the main chapter. In others, particularly in the case of those chapters dealing with any technical procedure which is influenced by aircraft installational differences, that part of the procedure which is peculiar to the installation is given in the supplement, in full, in order that the sequence of operations and continuity of detail may be preserved.

Since the issue of this publication the engine of the Mk. 10700 series E.C.U. has been twice uprated, first to a nominal thrust of 7600 lb and secondly to a nominal thrust of 7965 lb. These two variants are redesignated the Mk. 11300 and 11500 respectively and with the exception of the Operating Limitations, and a top temperature limiter on the Mk. 11500 the E.C.U.'s are identical. A third variant which has been introduced is the Mk. 12100. This E.C.U. is basically a Mk. 11500 with a nominal rating of 7750 lb thrust and with the following differences to give fuel-dipping and air-bleed when firing the aircraft's guns.

- (1) Pilot manifold fuel bleed unit.
- (2) Two additional compressor outlet bleed valves and control unit.
- (3) Changes in area, blade-angle and clearances in the compressor and turbine.

A fourth variant is the Mk. 12200. This E.C.U. is similar to the Mk. 12100 with the addition of a fuel filter de-icing system.

References to the Mk. 10700 apply equally to the Mk. 11300, 11500, 12100 and 12200 except where stated.

The suffix Letter L has been added to the publication number in respect of the Mk. 11300, N in respect of the Mk. 11500, U in respect of the Mk. 12100 and V in respect of the Mk. 12200, and will be included in the normal course of future amendments.



## **LIST OF PARTS AND SECTIONS**

### **PART 1 LEADING PARTICULARS AND GENERAL INFORMATION**

#### **PRELIMINARIES**

**Introduction**  
**Leading particulars**  
**Operating limitations**

#### **SECTIONS**

- 1 Description**
- 2 Operation**

### **PART 2 TECHNICAL INFORMATION**

#### **SECTIONS**

- 1 Unpacking and preparing for installation**
- 2 Starting and ground running**
- 3 Servicing**

### **PART 3 FAULT DIAGNOSIS**

#### **SECTIONS**

- 1 Running defects**

### **PART 4**

*(Not applicable)*

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