

**AP 102P-0401-16A7**

(Formerly A.P. 1538 K, Vol 1  
and Vol. 6, Part 1)

**PROPELLER  
HAWKER SIDDELEY DYNAMICS  
TYPES DF 178/334/1,2 AND DB229/336/1  
FOR SHACKLETON AIRCRAFT**

**GENERAL AND TECHNICAL INFORMATION  
MINOR REPAIRS  
PRESERVATION**

BY COMMAND OF THE DEFENCE COUNCIL



Ministry of Defence

FOR USE IN THE ROYAL AIR FORCE

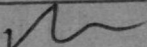
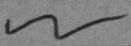

Prepared by the Procurement Executive, Ministry of Defence

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# 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

AL No.	Amended by	Date
71	ALL to 73 incorporated	
72	by Revision	
73	dated Dec. 70	
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## NOTE TO READERS

The subject matter of this publication may be affected by Defence Council Instructions, Servicing schedules, or "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 Instruction, Servicing schedule, or leaflet contradicts any portion of this publication, the Instruction, Servicing schedule, 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 will be indicated by black triangles positioned in the text thus:-  to show the extent of amended text, and thus:-  to show where text has been deleted. When a Topic or Chapter is issued in a completely revised form, the triangles will not appear.

## ASSOCIATED PUBLICATIONS

A.P.

Shackleton aircraft	...	...	...	101B-1700 series
Propellers - general information	...	...	...	102P-0001-1
Griffon engines	...	...	...	102B-0357 )
				102B-0358 ) series





## MODIFICATION RECORD

This publication is technically up-to-date in respect of the modifications listed below.

## FRONT PROPELLER, DF178/334/1 and /2

2502	3101	3146	3169	3238	3282	3345	3561	3643	3699
3787	3809	3917	3964	3986	4021	4039	4198	4242	4288
4304	4318	4342	4656	4680	4684	4685	4731	4798	5034
5077	5092	5111	5267	5294	5342	5355	5455	5456	5662
5838	5854	5905	5958	6356	6608	6819	6992	7088	7707
9078	9242	9615	9816	9870	10666	11128	11735	14081	14292
14819	14836	24061	25438	25470	26364	26449	29158	29314	29520
◀ 29672	29730	29923	▶						

## REAR PROPELLER, DB229/336/1

3699	4913	4964	5034	5077	5092	5267	5294	5571	5642
5838	5854	5958	6149	6992	7088	7325	7707	9615	9816
9870	10223	10666	11215	11735	14081	14292	14819	14836	24061
25470	25919								

## CONSTANT-SPEED UNIT, AY205

4389	6384	6415	8412	14927	25646
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## TRANSLATION UNIT, P79335A

11100	14385	24225	24313	26762	26833	26931	29637
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PRELIMINARY MATERIAL

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Amendment record sheet  
Note to readers/associated publications  
Modification record  
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- 2 Spinners
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## Chapter 1

## LEADING PARTICULARS

## CONTENTS

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## TABLES

No.		Pages
1	Propeller type	
	DF178/334/1 and /2 ) ... ..	2 and 3
	DB229/336/1 )	

1. The tables given in this chapter contain essential information for the identification of de Havilland series counter-rotating propellers. The aircraft applications of all types of propellers in current use are given in tabular form in A.P.102P-0001-1.

### Designation of propellers

2. Each counter-rotating propeller is identified by a type number. Both front and rear propellers are interchangeable with propellers of identical type number. Analysis of the type numbers is as follows:-

(1) The prefix DF indicates that this is the front propeller and the prefix DB denotes the rear propeller.

(2) The figures preceding the first oblique stroke indicate the design standard.

(3) The first of the three figures following the first oblique stroke indicates the number of blades, the second figure the size of the blade, and the third figure the size of the shaft.

(4) The last figure in the type number, which follows the second oblique stroke, is the serial number of the design.

## Designation of constant-speed units

3. Constant-speed units fitted to counter-rotating propellers are of the double acting type. The prefix letters 'AY' in the type number AY205 denotes that the units are designed for clockwise rotation of the driving shaft when viewed from the base.

TABLE 1

Propeller, Type No. DF178/334/1, /2 and DB229/336/1

### Front propeller DF178/334/1, /2

Number of blades	...	...	...	...	Three
Direction of rotation	...	...	...	...	L.H.
Weight DF178/334/1	...	...	...	...	271.0 lb
DF178/334/2	...	...	...	...	276.2 lb
Diameter (swept)	...	...	...	...	13 ft
Hub assembly DF178/334/1	...	...	...	...	PXF334-02
DF178/334/2	...	...	...	...	PXF334-06
Blade assembly	...	...	...	...	PR5232150PA-104-1
Blade angles					
Basic angle range	...	...	...	...	23 to 91 deg
Fine pitch	...	...	...	...	23 deg
Coarse pitch (feathered)	...	...	...	...	89 deg

### Rear propeller DB229/336/1

Number of blades	...	...	...	...	Three
Direction of rotation	...	...	...	...	R.H.
Weight DB229/336/1	...	...	...	...	257.4 lb
Diameter (swept)	...	...	...	...	12 ft 4½ in
Hub assembly DB229/336/1	...	...	...	...	PXB336-07
Blade assembly	...	...	...	...	PR5232109PA-104-1
Blade angles					
Basic angle range	...	...	...	...	24 to 92 deg
Fine pitch	...	...	...	...	24 deg
Coarse pitch (feathered)	...	...	...	...	90 deg

### Translation unit

Type No.	...	...	...	...	P79335A
Weight	...	...	...	...	33 lb

## ASSOCIATED EQUIPMENT

### Constant-speed unit

Type	...	...	...	...	AY205
Governor control	...	...	...	...	Mechanical
Cover position	...	...	...	...	S

### Pressure cut-out switch

Type	...	...	...	...	B2305/1
Cut-out pressure of switch	...	...	...	...	510 ± 10 lbf/in <sup>2</sup>
Wiring	...	...	...	...	Twin-wire
Operation	...	...	...	...	Single line

TABLE 1 - continued

Spinner (front)							
Type No.	...	...	...	...	...	...	3BBF2/2
Weight	...	...	...	...	...	...	33.5 lb
Diameter	...	...	...	...	...	...	27.86 in
Spinner (rear) DB229/336/1							
Type No.	...	...	...	...	...	...	3BBB3/1
Weight	...	...	...	...	...	...	46.5 lb
Diameter	...	...	...	...	...	...	31.96 in

## FEATHERING EQUIPMENT

Motor/pump unit	...	...	...	...	...	C2801/1 H.F. Mk.6
Cockpit push button switch	...	...	...	...	...	XJ-D/4
Single-way solenoid relay	...	...	...	...	...	Type J
Mounting for cut-out switch	...	...	...	...	...	Aircraft manufacturers' supply

## DE-ICING EQUIPMENT

Overshoe (front propeller)	...	...	...	...	...	P27665-504
Overshoe (rear propeller)	...	...	...	...	...	P27665-507
Screen (front propeller)	...	...	...	...	...	P22771-12
Screen (rear propeller)	...	...	...	...	...	P22771-8
Trough	...	...	...	...	...	P21292

Note...

The propellers specified in this table are fitted with blade-mounted de-icing equipment only.

