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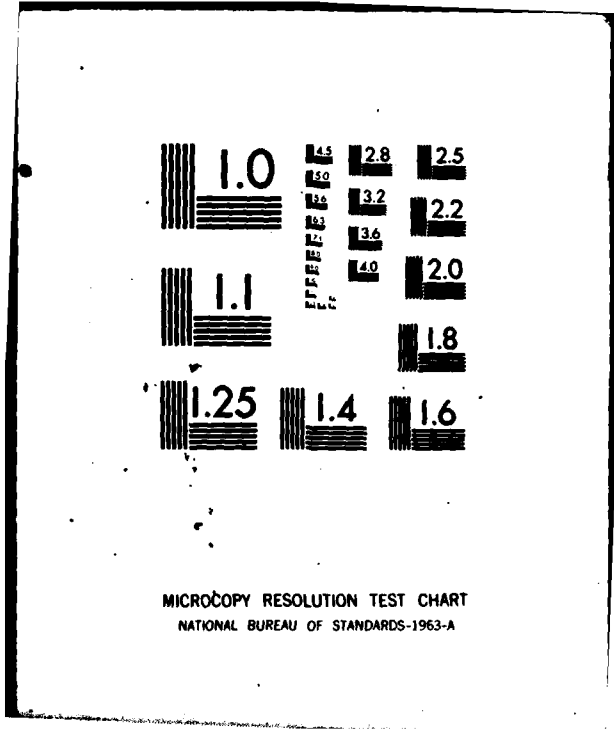
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ROYAL AIRCRAFT ESTABLISHMENT

Library Bibliography 371

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6 CATALOGUE OF THE PUBLICATIONS ISSUED IN THE AIRSCREWS (AS)
AND U NON-DEPARTMENTAL SERIES BETWEEN
1927 AND 1938

Compiled by

10 S. A. Thornton

SUMMARY

This catalogue lists the publications of two short non-departmental series covering propeller and performance research during the inter-war period.

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1 INTRODUCTION

Between the late 1920s and the start of the Second World War the Royal Aircraft Establishment carried out much fundamental research into the design and performance of airscrews, airscrew vibration and flutter. While much of this work was written up in the reports series of the Department which carried it out, the Airscrews series of publications was started to cover interdepartmental work. The main contributing departments in this series were Aerodynamics, Airworthiness, Metallurgical and Mechanical Test.

Another series, U reports, were published between 1928 and 1929 and were non-departmental. All were written by, or in collaboration with the then Superintendent of Scientific Research (RAE), Mr R.S. Capon, and also covered research into airscrews and their performance. This series however is not complete as reports U4 and U5 are missing from the Library's stock.

Many of the reports in both series were issued as Aeronautical Research Council documents, and although some of these have not been published, the appropriate ARC references have been included.

An index of the aircraft and engines referred to in the reports is appended.

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AIRSCREWS (AS) SERIES REPORTS

1	Staff	Comparison of performance of 'Fairey-Reed' duralumin airscrew to Drg.33012.A and standard wooden airscrew (Drg.P.3033) on 'F.2.b.- Falcon III aircraft.	1927.08
2	Staff	Performance of Metal Propellers, Ltd., steel blades, type S.M.P.48, on Lynx IV engine in Aero 504N aircraft.	1927.11
3	Staff	Comparison of performance of Horsley-Condor III aircraft fitted with present standard wooden airscrew to drawing Watts 454, and a second wooden airscrew to drawing Watts 730.	1927.11
4	Staff	Performance of Messrs. Metal Propellers Ltd., steel blades to drawing M.A.C. 10128 on Condor III engine in Horsley aircraft.	1927.11
5	Staff	Comparison of performance of Siskin IIIA supercharged Jaguar IV aircraft with Reed type duralumin, Leitner-Watts hollow steel and standard wooden airscrews.	1927.11
6	Lynam, E. Day, T.H.G.	Armstrong Whitworth hinged blade hollow metal airscrews.	1928.02
7	Staff	The Einstein metallised airscrew.	1928.03
8	Lynam, E.	Notes on the flutter of airscrew blades.	1928.04
9	Davis, A.H. Griffiths, C.H.	Measurement of airscrew noise on R.A.E. spinning plant.	1929.05
10	Staff	Comparison of performance of 'Siskin IIIA supercharged Jaguar IV' aircraft, with Leitner-Watts hollow steel and standard wooden airscrews, and tests of the Standard Steel Co's detachable duralumin blade airscrew on the same aircraft.	1929.06
11	Staff	Comparison of performance of Avro 504N-Lynx IV aircraft, with Leitner-Watts hollow steel and standard wooden airscrews.	1929.11
12	Staff	Flight tests of Marconi-Newton automatic variable pitch Windmill type 140.	1930.01
13	Staff	Warping tests of Micarta (Mouldensite) Windmills.	1930.07
14	Staff	Comparison of performance of 'Harrier-Jupiter VIII' aircraft with Leitner-Watts hollow steel and wooden airscrews.	1930.12

15	Staff	Performance tests of two-blade wooden airscrew to drawing P.3317A/3 on 'Bulldog-Jupiter VII.F' aircraft.	1930.12
16	Staff	Haw airscrews. Examination and tests.	1931.06
17	Staff	Adjustable pitch magnesium alloy windmills manufactured by Messrs. The Blackburn Aeroplane Co. for aircraft D.P. W/T generators.	1931.06
18	Staff	Metallurgical and mechanical tests of Standard Steel Co.'s aluminium alloy airscrew.	1931.06
19	Staff	Comparison of performance of 'Hart-Kestrel II.B.' aircraft with Leitner-Watts hollow steel, Fairey-Reed and wooden airscrews.	1932.02
20	Staff	Comparison of performance of 'Atlas-Jaguar IV' aircraft with detachable duralumin blade airscrew and standard wooden airscrew.	1932.07
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21A	Staff	Pendulum apparatus for the dynamic balancing of airscrews.	1933.01
22	Staff	Comparison of performance of 'Bulldog-Jupiter VIIF' aircraft with magnesium and wooden airscrews and investigation of the failure of the magnesium airscrew.	1933.01
23 (ARC 530)	Johnson, F.W.	Further notes on the flutter of airscrew blades.	1933.03
24	Staff	Calibration on the spinning plant of a direct drive Jupiter test fan assembled in front of a mock-up engine and front fuselage.	1933.06
25 (ARC 1232)	Staff	The structural design of detachable metal airscrew blades.	1934.04
26 (ARC 1354)	Johnson, F.W. Day, T.H.	Comparison of variable and fixed pitch airscrews on a long range aeroplane with compression ignition engine.	1934.06
27	Staff	Failure of four blade magnesium test fan.	1934.06
28	Staff	Performance and endurance flight tests of two-blade magnesium alloy airscrew for Fury-Kestrel IIS.	1934.07

29 (ARC 1652)	Johnson, F.W. Day, T.H.	Comparison of fixed pitch, two-pitch, three-pitch and variable pitch airscrews on the Long Range Monoplane with special Lion XI.A. engine.	1934.12
30 (ARC 1485)	Morris, J.	A note on forced vibration experiments with airscrews.	1934.08
31	Staff	Performance tests of three-blade magnesium alloy airscrew for Fury-Kestrel IIS.	1934.10
32 (ARC 1625)	Morris, J.	Vibration of airscrew blades.	1934.11
33 (ARC 1703)	Johnson, F.W.	Note on airscrews for large power plants.	1935.02
34 (ARC 3319)	Staff	Performance and endurance flight tests of Gloster Hele-Shaw variable pitch airscrew for Kestrel II.S. engine.	1937.08
35 (ARC 2052)	Johnson, F.W.	Static thrust of airscrews absorbing increased take-off power.	1935.10
36 (ARC 2288)	Morris, J.	Vibration stresses in airscrew blades.	1935.12
37 (ARC 2199)	Johnson, F.W. Day, T.H.	Mean take-off thrust of airscrews absorbing increased take-off power.	1935.12
38 (ARC 2494)	Johnson, F.W. Day, T.H.	The effect of tip speed reduction on airscrew design and performance.	1936.05
39	Staff	Spinning and endurance flight tests of V.D.M. variable pitch airscrew for Merlin II engine.	1938.06

U SERIES REPORTS

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1	Capon, R.S.	A method of calculating suitable airscrew characteristics to meet given conditions and the resulting airscrew performance.	1928.03
1 Revised (ARC T2607R) (ARC R&M1254)	Capon, R.S.	A method of calculating suitable airscrew characteristics to meet given conditions and the resulting airscrew performance.	1928.09
2 (ARC T2629)	Capon, R.S.	Comparison of the performance of fixed pitch airscrews and a type of variable pitch airscrew.	1928.05
2 Addendum (ARC T2629A)	Capon, R.S.	Comparison of the performance of a fixed pitch airscrew and a type of variable pitch airscrew. (Comparison of observed and predicted results.)	1928.05
3	Capon, R.S.	Note of dimensional relationships for air compressors.	1928.05
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6 (ARC T2718)	Capon, R.S.	The effect on aircraft performance of increasing the engine power.	1928.11
7 (ARC R&M1254) (ARC T2729)	Capon, R.S.	Note on the variable pitch airscrew.	1928.11
8	Capon, R.S.	Note on the reduction of airscrew tip speeds with special reference to noise emitted by the airscrew.	1929.01
9	Capon, R.S.	Some suggestions as to the programme of research on the reduction of noise.	1929.02
10 (ARC R&M1254) (ARC T2799)	Capon, R.S.	A comparison of the observed change of performance consequences on a change of airscrew.	1929.06
11	Capon, R.S.	The possible improvements in airscrew performance.	1929.07
12 (ARC T2833)	Capon, R.S. Fowler, N.R.	Note on the effect on performance of restricting the engine to normal R.P.M. at the operational height.	1929.07

Report No.	Author	Title	Date
13 (ARC T2865)	Capon, R.S. Fowler, N.R.	A note on supercharging.	1929.09
14	Capon, R.S.	A note on range.	1929.10
15	Capon, R.S.	The present position of research on fuel consumption at the R.A.E.	1929.10
16	Capon, R.S. Davis, A.H. Griffiths, C.H.	Further measurements of airscrews noise on R.A.E. spinning plant.	1929.10

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