

THE DE HAVILLAND CHIPMUNK AIRCRAFT MAINTENANCE AND REPAIR MANUAL



Owner's name and address

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Aircraft Mk. No.....

Constructor's No.....

Registration No.....

READERS' NOTE

This publication has been compiled to assist personnel in the maintenance and repair of de Havilland CHIPMUNK Mks. 20, 21, 22 and 22A aircraft, Chipmunk Mks. 21, 22 and 22A being those which are covered by British Civil Airworthiness Requirements. The publication is divided into three sections—Section 1 giving descriptive and maintenance information, Section 2 minor repairs, and Section 3 major repairs. Each section is preceded by an index to Chapters within the section. Any differences between the aircraft are clearly defined where necessary.

Throughout the publication, reference is made to manuals prepared by manufacturers of accessory equipment. These manuals are listed in following pages, and should be read in conjunction with the appropriate chapter in this volume so that the chapter contents can be fully understood.

Amendment action will be made when necessary and holders of the publication will receive amendments as issued. Normally, amendments will take the form of new leaves to be inserted in the place of out-dated material, with vertical lines to indicate where alterations of a technical nature have been made. Always record the embodiment of amendments on the AMENDMENT RECORD SHEET which follows this page.

THE DE HAVILLAND AIRCRAFT CO. LTD
HATFIELD AERODROME,
HATFIELD, HERTFORDSHIRE,
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CHIPMUNK
MAINTENANCE AND REPAIR MANUAL
(Publication C.M.R.1)

AMENDMENT LIST No.21

Published January 1976

Instructions for incorporating this amendment


SECTION 1

Chapter 6 Remove and destroy pages 39 and 39A and substitute
new pages 39 and 39A (one leaf) attached.

NOTE

RECORD THE INCORPORATION OF THIS AMENDMENT
BY INSERTING SIGNATURE AND DATE IN THE SPACE
PROVIDED ON THE AMENDMENT RECORD SHEET

This permanent revision complies with British Civil Airworthiness Requirements,
Section A, Chapter A6-2.

Signed  Date 27th January, 1976
CAA Approval No.DAI/1011/55

CHIPMUNK

MAINTENANCE AND REPAIR MANUAL
(Publication C.M.R.1)

AMENDMENT LIST No.20

Published July 1971

Instructions for incorporating this amendment

SECTION 1

- | | | | |
|------------|-----|-----|--|
| Chapter 5 | ... | ... | Remove and destroy pages 31 and 32 and substitute new pages 31 and 32 (one leaf) attached. |
| Chapter 6 | ... | ... | Remove and destroy pages 35 and 36 and substitute new pages 35 and 36 (one leaf) attached. |
| Chapter 10 | ... | ... | Remove and destroy pages 69 and 70 and substitute new pages 69 and 70 (one leaf) attached. |

NOTE

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This amendment list complies with British Civil Airworthiness Requirements, Chapter A6-2.
The technical content of this amendment list has been verified and is certified correct.

Signed.....

Date.....21st July 1971.....

ARB Design Approval No. AD/1048/55

CHIPMUNK

MAINTENANCE AND REPAIR MANUAL

(Publication C.M.R.-1)

AMENDMENT LIST No. 19

Published September 1968

This amendment list complies with British
Civil Airworthiness Requirements, Section A,
Chapter A 6-2. The technical content of this
amendment has been verified and is certified
as correct.

Signed....

A. W. B. B. B.

Date.....

18/9/68

A.R.B. Design Approval No. AD/1048/55

Instructions for incorporating this amendment :

SECTION 2:

- Chapter 1 Remove pages 7 and 8 (1 leaf); insert replacement pages 7 and 8 (1 leaf)
- Chapter 2 Remove pages 13 and 14 (1 leaf); insert replacement pages 13 and 14 (1 leaf)
Remove page 17 and insert replacement pages 17/18 and 18A to 18E (4 leaves)
- Chapter 4 Remove pages 25 to 30 (3 leaves); insert replacement pages 25 to 30 (3 leaves)
- Chapter 6 Remove pages 59 and 60 (1 leaf); insert replacement pages 59 and 60 (1 leaf)
Remove pages 67 and 68 (1 leaf); insert replacement pages 67 and 68 (1 leaf)
- Chapter 8 Remove pages 97 and 98 (1 leaf); insert replacement pages 97 and 98 (1 leaf)
- Chapter 9 Remove pages 115 to 118 (1 leaf); insert replacement pages 115 to 118 (1 leaf)

SECTION 3 :

- Leaflet G1 Remove pages 1 and 2 (1 leaf); insert replacement pages 1 and 2 (1 leaf)

NOTE

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AMENDMENT RECORD SHEET

Alterations to the contents of this publication are circulated in the form of Amendment Lists (abbreviated "A.L."), each being identified by a number and issued in numerical sequence. In order that the amendment state of the publication can be readily ascertained, entries should be made against the appropriate No. below, immediately an A.L. is recorded. The introduction of any amendment not certified in accordance with British Civil Airworthiness Requirements, Section A, Chapter A6-2, will invalidate the statement of approval on the title page. Amendments embodied in the manual, which have been certified under an approval authorization other than that applicable to the initial approval, must be recorded on separate record sheets.

A.L. No.	Embodied by:	Date	Remarks	A.L. No.	Embodied by:	Date	Remarks
1 to 14	Incorporated			30			
15	INCORPORATED			31			
16				32			
17				33			
18			A.I.L. 1/72 OPP.	34			
19	J.E. Quinn		P.31 IN SEC. 1	35			
20		19 1 72	A.I.L. 1/74 P.36 IN SEC. 1	36			
21	N.G.	10 4 86	A.I.L. 1/75 P.29 IN SEC. 1	37			
22			A.I.L. 1/80 P.39 SEC. 1	38			
23			A.I.L. 2/80 P.9 SEC. 1	39			
24			A.I.L. 3/80 P.12 SEC. 1	40			
25				41			
26				42			
27				43			
28				44			
29				45			

ASSOCIATED PUBLICATIONS

The following list includes only those publications known to be available at the time the list was compiled. Other publications may be added later by amendment action.

DE HAVILLAND

- (1) **The De Havilland Aircraft Co. Ltd,**
Hatfield, Hertfordshire
(Hatfield 2345)

De Havilland Chipmunk Aircraft
 Pilots' Manual
(Publication CHK.P.N.-1)

The De Havilland Chipmunk
 Schedule of Spare Parts
(No reference)

- (2) **The De Havilland Engine Co. Ltd,**
Stag Lane, Edgware, Middlesex.
(Edgware 2300)

The De Havilland Gipsy Major
 Series 10 Handbook
(No reference)

NOTE: The above handbook is also applicable to
 the Gipsy Major 8 engine.

ACCESSORY MANUFACTURERS

Manufacturer	Component	Installation		Publication, title, and reference
		Title	Chapter	
Amal Ltd, Holford Works, Perry Barr, Birmingham 20, Warwickshire. <i>(Birchfields 4571)</i>	Fuel filter	Fuel system	8	Amal Fuel Filters for Aircraft. <i>(List No. 413R or 512, as appropriate)</i>
Avimo Ltd, Taunton, Somerset. <i>(Taunton 3634)</i>	Pressure head	Controls and equipment in cockpit Electrical system	3 11	The Avimo Electrically-heated Pressure Head., Type Mark 8. Maintenance and Repair Manual. <i>(No reference)</i>
Dunlop Rubber Co. Ltd, Aviation Division, Holbrook Lane, Foleshill, Coventry, Warwickshire. <i>(Coventry 88733)</i>	Alighting gear: Main wheel Brake unit Master cylinder Header tank Tail wheel	Alighting gear and brake system	7	Dunlop Aircraft Equipment fitted to the De Havilland "Chipmunk". Descriptive and Servicing Notes. <i>(No reference)</i>

ASSOCIATED PUBLICATIONS

(continued)

Manufacturer	Component	Installation		Publication, title, and reference
		Title	Chapter	
Fairey Aviation Co. Ltd, Propeller Division, Hayes, Middlesex. (Hayes 3800)	Propeller	Engine installation	10	The Fairey Fixed Pitch Two-Bladed Metal Propeller as fitted to the "Chipmunk". (Publication T.P.40-1)
Fireproof Tanks Ltd, The Airport, Portsmouth, Hants. (Portsmouth 70836/7/8)	Fuel tank—Chipmunk Mk. 20 and 22 (Alternative to Marston Excelsior Ltd, fuel tank)	Fuel system	8	Hycatrol Flexible Fuel Tanks Manual (No reference)
Graviner Manufacturing Co. Ltd, Poyle Mill Works, Colnbrook, Bucks. (Colnbrook 2345)	Hand fire extinguisher (27N/12)	Controls and equipment in cockpit	3	Graviner Airborne Fire Protection Equipment Manual. (No reference)
Marston Excelsior Ltd, Fordhouses, Wolverhampton, Staffordshire. (Fordhouses 2181)	Fuel tank—Chipmunk Mk. 20, 21, 22 and 22A	Fuel system	8	"Flexilite" Tank Manual Vol. 1, Sect. 3, Repairs. Vol. 2 Flexible Tank Manual. (No reference)
Peto & Radford Ltd, 137 Victoria Street, London, S.W.1. (Tate Gallery 9212)	Accumulator	Electrical system and Radio installation	11	Dagenite Accumulator Leaflet. (Form No. 882)
The Plessey Co. Ltd, Ilford, Essex. (Ilford 3040)	Vacuum equipment: Vacuum pump Suction relief valve	Controls and equipment in cockpit	3	Service Manual for Vacuum Pump B3X, Suction Regulator Valve Type 215B and Oil Separator Types 218F/2 and S.20. (Publication Z1462) Cartridge Starter Type "S" Service Manual. (Publication Z1318) Service Manual: Light Aircraft V.H.F. Transmitter-receiver Type P.T.R.61E, F, G and H. (Publication No. 708)
	Cartridge starter (when fitted)	Engine installation	10	
	Radio equipment (when fitted)	Electrical system and Radio installation	11	
Reid and Sigrist, Braunstone Aerodrome, Leicester. (Leicester 88101/2/3/4)	Turn and slip indicator	Controls and equipment in cockpits	3	Turn and slip indicator. Type T.N. 300.

ASSOCIATED PUBLICATIONS

(continued)

Manufacturer	Component	Installation		Publication, title, and reference
		Title	Chapter	
Rotax Ltd, Willesden Junction, London, N.W.10. (Elgar 7777)	Generator	Electrical system	11	Generators, Type B.1801 to B.1806 and B.1809 to B.1820 inclusive. (Technical Leaflet T.L.3 and Service Leaflet S.L.4) Service and Overhaul Manual. Direct-cranking Hand and Electric Starter. Types C.0209, C.0246, C.0225 to C.0248. (Includes Addendum for C.0252). (No reference) Taxying lamp, Type H.2901. (Technical Leaflet T.L.55)
	Electric starter (when fitted)	Electrical system	11	
	Taxying lamp	Electrical system	11	
Smiths Aircraft Instruments Ltd, Cricklewood Works, London, N.W.2. (Gladstone 3333)	Instruments: Air-speed indicator Altimeter Artificial horizon Engine speed indicator, generator, and flexible drive Fuel contents gauge Oil temperature gauge and thermometer bulb P.11 compass Pressure head Pressure gauges Rate of climb indicator Vacuum gauge	Controls and equipment in cockpits	3	The Installation and Maintenance of Smiths Instruments Fitted to de Havilland Chipmunk Aircraft. (D.M. leaflets) Note: Pressure head leaflet (D.M.2, Pt. 2) is alternative to Avimo Ltd manual.
Self-Priming Pump & Engineering Co. Ltd, Trading Estate, Slough, Bucks. (Slough 23277)	Non-return valves	Fuel system	8	S.P.E. Non-return Valves. Service Manual. (Publication No. 43)
Sperry Gyroscope Co. Ltd, Great West Road, Brentford, Middlesex. (Ealing 6771)	Direction indicator	Controls and equipment in cockpit	3	Instruction Manual for the Sperry Directional Gyro, Type D.L.1 (Publication No. 634) or Instructions for Installing, Operating and Testing the Air-driven Gyro Horizon and Directional Gyro. (Publication No. 496A)

ASSOCIATED PUBLICATIONS

(continued)

Manufacturer	Component	Installation		Publication, title, and reference
		Title	Chapter	
Standard Telephones & Cables Ltd, Radio Division, New Southgate, London, N.11. (Enterprise 1234)	Radio equipment (when fitted)	Electrical system and Radio Installation	11	STR-9X Aircraft Radio Communication Equipment. (Handbook No. 1048)
Vickers-Armstrong Ltd, Weybridge, Surrey. (Byfleet 140)	Fuel cocks	Fuel system	8	Fuel Cocks D and E Type: Maintenance and Repair Instructions. (Servicing leaflet No. 2)