

LUFTVÄRDIGHETSDIREKTIV (LVD)

F. Propeller Hartzell LVD Nr 2732

Sektion 2. Utlandstillverkad flygmateriel

TITEL: Kontroll/byte av propellernav

GÄLLER: Propellrar angivna i bifogad kopia av FAA AD 96-18-14

<u>ATGÄRD:</u> Utför åtgärder i enlighet med FAA AD 96-18-14 och där angivna

tillämpliga underlag

TID FÖR

ATGÄRD: I enlighet med tabell 1 i FAA AD 96-18-14

UNDERLAG: FAA AD 96-18-14 och där angivna tillämpliga underlag

REFERENS: FAA AD 96-18-14

BESLUTS

DATUM: 1996-09-27

LFS: 1996:57

Åtgärd enligt LVD utgör nödvändig förutsättning för ifrågavarende flygmateriels luftvärdighet. Referens BCL M 1.11. Anteckning om åtgärd, som vidtagits i enlighet med LVD, skall införas i teknisk journal för berörd flygmateriel med hänvisning till ifrågavarande LVD-nummer. Angivet underlag refererar till senaste gällande revision/utgåva. LVD utges i luftfartsverkets författningssamlingar LFS.



AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION P.O. BOX 26460 OKLAHOMA CITY, OKLAHOMA 73125-0460 U.S. Department of Transportation Federal Aviation Administration

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

96-18-14 Hartzell Propeller Inc.: Amendment 39-9738. Docket 95-ANE-30.

Applicability: Hartzell Propeller Inc. (Hartzell) Models HC-A3VF-7(), HC-B3TF-7(), HC-B3MN-3(), HC-B3TN-2(), HC-B3TN-3(), HC-B3TN-5(), HC-B4MN-5(), HC-B4MP-3(), HC-B4TN-3(), HC-B4TN-5(), HC-B5MA-3(), HC-B5MP-3(), HC-B3MN-5(), HC-B3TN-4(), HC-B4MP-4(), and HC-B5MN-3() propellers. These propellers are installed on but not limited to the following aircraft:

Aerospace Technologies of Australia PTY LTD N22B, N24A, N22S;

Air Tractor, Inc. AT-301, AT-302, AT-400, AT-400A, AT-401, AT-402, AT-503, AT-503, AT-802;

Agusta S.p.A. SF600, F.260;

Ayres Corporation S-2R, S2R-T11, S2R-T15, S2R-T34, S2R-T56, S2RHG-T65;

Beech A36, 65-90, 65-90A, C90, B90, E90, C90A, F90, 100, 200, 200C, A200C, B200, B200C, 200T, 200CT, A200CT, B200T, B200CT, 65-80, 65-A90-1, 65-A90-2, 65-A90-4, 99, 99A, A99A, B99, A200, C99, H90, 300, 300LW, B300, B300C, 1900, 1900C, T34C, T34C-1;

Cessna 208, 208A, 208B, 421, 425, 441, 402, P210N;

Construcciones Aeronauticas, S.A. (CASA) C-212-CB, -CC, -CE, -CF;

deHavilland Aircraft Co., Ltd. D.H.114;

deHavilland Inc. DHC-2, DHC-3, DHC-4; DHC-6, 1, 100, 200, 300;

Empresa Brasileira de Aeronautica S/A Embraer EMB-110P1, EMB-110P2;

Fairchild Aircraft, Inc. SA26-AT, -T; SA226-AT, -TB;

Frakes Aviation (Gulfstream American) G-73;

Great Lakes Aircraft Co. 2T-1A;

Helio HST-550, HST-550A;

Industrie Aeronautiche e Meccaniche Piaggio P.166DL3;

Israel Aircraft Industries, Ltd. Arava 101, 101B;

McDonnell Douglas DC-3 series;

McKinnon Enterprises, Inc. (Grumman) G-21E, G21-G;

Mitsubishi MU-2B series;

Pacific Aerospace Corporation, Ltd. FU24-954, FU24A-954;

Partenavia Costruzioni Aeronautiche S.p.A. AP68TP 300, AP68TP 600;

Pilatus Aircraft Ltd. PC-6/A-H2, /B1-H2, /B-H2, /B2-H2, /B2-H4, PC-7;

Piper Aircraft Corporation PA31-T1, -T2, -T3; PA31P; PA42, -42-720, -42-720R;

Prop-Jets, Inc., Interceptor (Aero Commander) (Meyers) 400;

Schweizer Aircraft Corp. (Grumman) G-164A, G-164B, G-164B-34T, -15T, G-164D;

Short Bros. Limited & Harland Ltd. SC-7 series, SD3 series;

Twin Commander Aircraft Corp. 680T, V, 681, 690A, 690B, 690C, 695, 695A;

Weatherly Aviation Company 620TP.

Note 1: The parenthesis that appear in the propeller models indicate the presence or absence of additional letter(s) which vary the basic propeller hub model designation. This airworthiness directive (AD) is applicable regardless of whether these letters are present or absent on the propeller hub model designation.

Note 2: The above is not a complete list of aircraft which may contain the affected Hartzell Propeller Inc. Models HC-A3VF-7(), HC-B3TF-7(), HC-B3MN-3(), HC-B3TN-2(), HC-B3TN-3(), HC-B3TN-5(), HC-B4MN-5(), HC-B4MP-3(), HC-B4TN-3(), HC-B4MN-5(), HC-B5MP-3(), HC-B5MP-3(), HC-B3MN-5(), HC-B3TN-4(), HC-B4MP-4(), and HC-B5MN-3() propellers because of installation approvals made by, for example, Supplemental Type Certificate or field approval under FAA Form 337 "Major Repair and Alteration." It is the responsibility of the owner, operator, and person returning the aircraft to service to determine if an aircraft has an affected propeller.

Note 3: This AD applies to each propeller identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For propellers that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must use the authority provided in paragraph (h) to request approval from the Federal Aviation Administration (FAA). This approval may address either no action, if the current configuration eliminates the unsafe condition, or different actions necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any propeller from the applicability of this AD.

Compliance: Required as indicated, unless accomplished previously.

To prevent propeller hub, blade, or blade clamp failure, which can result in loss of aircraft control, accomplish the following:

- (a) This AD operators requires action for no with Hartzell propeller models HC-B4TN-5(D,G,J)L/LT10282(B,K)-5.3R, HC-B4TN-5(D,G,J)L/LT10282N(B,K)-5.3R, HC-B4TNand 5(D,G,J)L/LT10282NS(B,K)-5.3R installed on Mitsubishi MU-2B-26A, -36A, -40, -60; MU-2B-30 modified by Supplemental Type Certificate (STC) SA336GL-D & SA339GL-D; MU-2B-36 Modified by STC SA2413SW and any other MU-2 Series aircraft which have the referenced propeller models installed. These operators must, however, comply with AD 95-01-02.
- (b) This AD requires no action for operators with Hartzell propeller models HC-B4TN-3/T10173F(N)(B,K)-12.5 and HC-B4TN-3A/T10173F(N)(B,K)-12.5 installed on Beech A100 and A100A aircraft. These operators must, however, comply with AD 95-03-03.
- (c) Disassemble the propeller in accordance with Hartzell Propeller Inc. Service Manual 118F, Revision 2, dated May 1992, pages 15 to 19, for 3- and 4-bladed hub models, and Service Manual 132A, Revision 2, dated June 1992, pages IV-5 to IV-11, for 5-bladed hub models, remove the hub from service, and replace the hub with a serviceable hub in accordance with the compliance schedule in Table 1 of this AD.
- (1) Utilize Table 1 of this AD in accordance with the following example: Model HC-B3TN-3() series propellers, starting with serial numbers (S/N's) BU1 through BU377, require replacement before the end of March of calendar year 1997. Serial numbers BU378 through BU754 require hub replacement before the end of September of calendar year 1997, and so forth.
- (2) The affected hubs can only be replaced with serviceable hubs having a S/N not listed in Table 1 of this AD for that propeller model, or serviceable hubs having a S/N for which replacement is not yet required in accordance with Table 1 of this AD.
- (3) Some existing propeller hub S/N's include a suffix letter, such as an "A." The presence or absence of this letter has no significance in determining compliance.
- (4) Since a hub may be used in various propeller models, the S/N and the model number shown in Table 1 of this AD may not coincide. Precedence is given to the hub S/N in determining compliance requirements. The hub model is only given as a reference.
- (5) Hub replacement must be accomplished by the end of the calendar month indicated at the top of the appropriate column in Table 1 of this AD. The S/N ranges in this table identify the propeller hubs that require replacement by the end of that month.
- (d) Perform a fluorescent penetrant inspection of blades for cracks in accordance with Hartzell Propeller Inc. Service Bulletin 136H, dated March 12, 1993, prior to installing a serviceable hub.
- (e) Perform magnetic particle inspection of blade clamps for cracks in accordance with Hartzell Service Manual 202A, dated March 1993, pages 201 to 215, prior to installing a serviceable hub.
- (f) If cracks are found in either the blade or the blade clamps, prior to further flight replace with serviceable blade or blade clamps.
- (g) Reassemble the propeller in accordance with Hartzell Propeller Inc. Service Manual 118F, Revision 2, dated May 1992, pages 57 to 96, for 3- and 4-bladed hub models, and Service Manual 132A, Revision 2, dated June 1992, pages VII-1 to VII-46, for 5-blade hub models.
- (h) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Chicago Aircraft Certification Office. The request should be forwarded through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Chicago Aircraft Certification Office.

Note: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Chicago Aircraft Certification Office.

- (i) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.
 - (j) The actions required by this AD shall be done in accordance with the following service documents:

Document No	Pages	Date
Hartzell Propeller Inc. SB No. 136H	1-18	March 12, 1993
Total Pages: 18.		
Hartzell Propeller Inc. Service Manual No. 202A	201-215	March 1993
Total Pages: 15.		
TRW Hartzell Propeller Overhaul Manual No. 118-E	57, 58	April 1985
Hartzell Propeller Inc. Manual No. 118F, Revision 2	59, 60	May 1992
TRW Hartzell Propeller Overhaul Manual No. 118-E	61-83	April 1985
Hartzell Propeller Inc. Manual No. 118F, Revision 2	84, 84a, 84b	May 1992
TRW Hartzell Propeller Overhaul Manual No. 118-E	<i>ु</i> 85, 86	April 1985
Hartzell Propeller Inc. Manual No. 118F, Revision 2	87 88, 88a, 88b	April 1985 May 1992
TRW Hartzell Propeller Overhaul Manual No. 118-E	89-96	April 1985
Total Pages: 44.		
Hartzell Propeller Products Division Instruction Manual No. 132-A	VII-1 - VII-30	September 1, 1985
Hartzell Propeller Inc. Instruction Manual No. 132-A	VII-31	September 1, 1985
Hartzell Propeller Inc. Manual No. 132A	VII-32	No Date
Hartzell Propeller Products Division Instruction Manual No. 132-A	VII-33-VII-40	September 1, 1985

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Document No	Pages	Date
Hartzell Propeller Inc. Instruction		
Manual No. 132-A	VII-41	September 1, 1985
Hartzell Propeller Inc. Manual No. 132A,		
Revision #1	VII-42, VII-43	April 1990
Hartzell Propeller Inc. Instruction		
Manual No. 132-A	VII-44	September 1, 1985
Hartzell Propeller Inc. Manual No. 132A.		
Revision #1	VII-45, VII-46	April 1990

Total Pages: 46.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Hartzell Propeller Inc., One Propeller Place, Piqua, OH 45356-2634, ATTN: Product Support; telephone (513) 778-4388, fax (513) 778-4321. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street NW., suite 700, Washington, DC.

(k) This amendment becomes effective on October 16, 1996.

FOR FURTHER INFORMATION CONTACT:

Tomaso DiPaolo, Aerospace Engineer, Chicago Aircraft Certification Office, FAA, Small Airplane Directorate, 2300 East Devon Ave., Des Plaines, IL 60018; telephone (847) 294-7031, fax (847) 294-7834.

Table 1

	Replacement is	March	Sept.	March	Sept.	March	Sept.
	due by end of:	1997	1997	1998	1998	1999	1999
Hub Model							
Number	S/N Series	ļ					
HC-B3TN-3	BU	1-377	378-754	755-1881	1882-3008	3009-3840	3841-4673
HC-B3MN-3	GB						3011 1075
HC-B3MN-5	FZ						
HC-B3TN-5	BV	1-86	87-172	173-529	530-885	886-1622	1623-2359
HC-B3TN-4	FK						1000 0007
HC-B3TN-2	AG	1-59	60-118	119-174	175-231	232-238	
HC-B3TF-7	EX					1-3	4-7
HC-A3VF-7	DS				1	2-20	21-39
HC-B4TN-5	CD	1-94	95-187	188-663	664-1139	1140-1399	1400-1660
HC-B4TN-3	EA	1-169	170-338	339-437	438-537	538-758	759-979
HC-B4MN-5	FL			1-35	36-70	71-238	239-406
HC-B4MP-3	FW					1-15	16-31
HC-B4MP-4	FU					1-3	4-7
HC-B5MP-5	EZ						
HC-B5MA-3	НВ						
HC-B5MN-3	ES		· , 1				
HC-B5MP-3	EV	1-51	52-101	102-223	224-345	346-478	479-612
HC-B5MP-3	FT			1-3	4-6	3.0 .70	777-012

	Replacement is due by end of:	March 2000	Sept. 2000	March 2001	Sept. 2001	March 2002	Sept. 2002
Hub Model Number	S/N Series						
HC-B3TN-3	BU	4674-5707	5708-6742	6743-7864	7865- 8987	8988- 10409	10410- 11832
HC-B3MN-3	GB				0,0,	10402	11052
HC-B3MN-5	FZ						
HC-B3TN-5	BV	2360-2689	2690-3020	3021-3410	3411-3600	3601-4035	4036-4270
HC-B3TN-4	FK			1	2-3		1000 1210
HC-B3TN-2	AG				239-244	245-295	296-351
HC-B3TF-7	EX	8-47	48-87	88-112	113-136	137-138	139-140
HC-A3VF-7	DS	40-109	110-179	180-230	231-280	281-313	314-345
HC-B4TN-5	CD	1661 1949	1940 2026	2027 2122			
HC-B4TN-3	EA	1661-1848	1849-2036	2037-2133	2134-2230	2231-3134	3135-3342
HC-B4MN-5	FL	980-1003 407-411	1004-1028	1029-1036	1037-1043	1044-1092	1093-1142
HC-B4MP-3	FW	32-371	412-416	417-423	424-429	430-436	437-1002
HC-B4MP-4	FU	32-3/1	372-711	712-1024	1025-1338	1339-1393	1394-3033
TIC-D4IVIF-4	FU		8				
HC-B5MP-5	EZ	2	3-4			5-6	7-8
HC-B5MA-3	HB	1	2-3	4-28	29-52	53-78	79-1018
HC-B5MN-3	ES	2-7	8-13				.,
HC-B5MP-3	EV	613-720	721-826	827-894	895-961	962-1002	1003-2030
HC-B5MP-3	FT	7			8		

Table 1 (continued)

	Replacement is due by end of:	March	Sept.	March 2004	Sept. 2004	March 2005	Sept. 2005
		2003 2003	2003				
Hub Model Number	S/N Series						
HC-B3TN-3	BU	11833- 13487	13488- 15141	15142- 16299	16300- 17457	17458- 18308	18309- 19160
HC-B3MN-3	GB			1-162	163-324	325-361	362-438
HC-B3MN-5	FZ			1-23	24-45	46	
HC-B3TN-5	BV	4271-4523	4524-4776	4777-4809	4810-4843	4844-4945	4946-6022
HC-B3TN-4	FK						4
HC-B3TN-2	AG	352-447	448-543	544-682	683-821	822-886	887-950
HC-B3TF-7	EX	141-208	209-275	276-330	331-386	387-472	473-558
HC-A3VF-7	DS	346-396	397-446	447-454	455-482	483-496	497-511
HC-B4TN-5	CD						
HC-B4TN-3	EA						
HC-B4MN-5	FL						
HC-B4MP-3	FW						
HC-B4MP-4	FU						
HC-B5MP-5	EZ	**					
HC-B5MA-3	HB	<u> </u>		<u> </u>			
HC-B5MN-3	ES	†					
HC-B5MP-3	EV	†					<u> </u>
HC-B5MP-3	FT						