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[Page 55108]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 95-ANE-30-AD; Amendment 39-9738; AD 96-18-14]

RIN 2120-AA64

Airworthiness Directives; Hartzell Propeller Inc. HC-A3V, HC-B3M, HC-B3T, HC-B4M, HC-B4T, and HC-B5M Series Propellers; Correction

AGENCY: Federal Aviation Administration, DOT.

ACTION: Correcting amendments.

SUMMARY: This document contains corrections to the final airworthiness directive (AD), which was published in the Federal Register on September 11, 1996, (61 FR 47809). The regulations related to Hartzell Propeller Inc. HC-A3V, HC-B3M, HC-B3T, HC-B4M, HC-B4T, and HC-B5M series propellers blade inspection and replacement.

EFFECTIVE DATE: October 16, 1996.

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

SUPPLEMENTARY INFORMATION:

Background

The final AD 96-18-14 that is the subject of these corrections affects owners and operators of Hartzell Propeller Inc. HC-A3V, HC-B3M, HC-B3T, HC-B4M, HC-B4T, and HC-B5M series propellers who are required to perform hub replacements over a 10-year time frame with a concurrent blade and blade clamp inspection.

Need for Correction

As published, AD 96-18-14 (61 FR 47809, September 11, 1996) contains errors that may prove to be misleading and need to be clarified.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Accordingly, 14 CFR part 39 is corrected by making the following correcting amendments:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

Sec. 39.13 [Corrected]

2. Amend AD 96-18-14 in the Compliance section as follows:

a. Revise paragraph (c)(3) as set forth below; and

b. In Table 1 at the end of paragraph (c)(5), in the entry for Hub Model Number HC-B4MP-3, under the column heading "Sept. 2002", revise "1394-3033" to read "1394-2034", and in the entry for Hub Model Number HC-B5MP-5, under the column heading "March 2002", remove "5-6", and under the column heading "Sept. 2002", remove "7-8".

96-18-14 Hartzell Propeller Inc.: Amendment 39-9738, Docket No. 95-ANE-30.

* * * * *

Compliance: * * *

(c) * * *

(3) The two-letter prefix of some existing propeller hub serial numbers may be followed by a third letter 'A.' The presence or absence of this letter has no significance in determining compliance.

* * * * *

Issued in Burlington, MA, on August 20, 2002.

Jay J. Pardee,

Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 02-21831 Filed 8-27-02; 8:45 am]

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[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [61 FR 47809 NO. 177 09/11/96]

[Docket No. 95-ANE-30; Amendment 39-9738; AD 96-18-14]

RIN 2120-AA64

Airworthiness Directives; Hartzell Propeller Inc. HC-A3V, HC-B3M, HC-B3T, HC-B4M, HC-B4T, and HC-B5M Series Propellers

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to Hartzell Propeller Inc. (Hartzell) HC-A3V, HC-B3M, HC-B3T, HC-B4M, HC-B4T, and HC-B5M series propellers, that requires hub replacement over a 10-year time period with a concurrent blade and blade clamp inspection. This amendment is prompted by reports of two propeller hub failures and one crack indication that occurred on Mitsubishi MU-2B-60 aircraft, the similarity of construction and load transfer paths between the Hartzell propeller models installed on the Mitsubishi MU-2 aircraft and Hartzell's 3, 4, and 5-bladed steel hub propeller models, several blade shank failures, and reports of cracks in blade clamps. The actions specified by this AD are intended to prevent propeller hub, blade, or blade clamp failure, which can result in loss of aircraft control.

DATES: Effective October 16, 1996.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of October 16, 1996.

ADDRESSES: The service information referenced in this AD 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. This information may be examined at the Federal Aviation Administration (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.

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.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to Hartzell Propeller Inc. (Hartzell) HC-A3V, HC-B3M, HC-B3T, HC-B4M, HC-B4T, and HC-B5M series propellers was published in the Federal Register on April 26, 1996 (61 FR 18520). That action proposed to require over a 10-year time period, propeller hub replacement with a concurrent blade and blade clamp inspection for 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-B4TN-5(), HC-B5MA-3(), HC-B5MP-3(), HC-B5MP-5(), HC-B3MN-5(), HC-B3TN-4(), HC-B4MP-4(), and HC-B5MN-3() propellers.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Commenters state that the AD should be modified to limit the affected propellers to those installed on engine types similar to those in Mitsubishi MU-2 aircraft. The commenters also state that their service history has shown that this engine type has more problems and that the NPRM documents that only propellers on the Mitsubishi MU-2 aircraft have been found with cracked hubs. The FAA does not concur. Regardless of engine types, the 3, 4, and 5-bladed hubs have similar loading and load paths to the failed propellers and, in addition, could contain characteristics that the FAA has determined can cause a reduction in hub fatigue strength. The NTSB has also recommended addressing the same hub fatigue strength characteristics for the 3, 4, and 5-bladed hubs. This hub replacement program will provide the following hub fatigue strength improvements: 1) Improved hub metallurgy; 2) Elimination of any surface decarburization in the pilot tube bore; 3) Introduction of compressive residual stress in the pilot tube bore; 4) Improved corrosion protection in the pilot tube bore; and 5) Improved surface finish in the pilot tube bore.

Additionally, the commenters state that the cost of complying with the proposed AD is severely understated and will increase overhaul costs. Therefore, they imply that the proposed AD should be withdrawn or limited in scope. The FAA does not concur. The costs documented in the AD are weighted average costs. For example, individual operators with five-bladed propellers will have costs that run higher than the weighted average costs. Therefore, the costs stated in the AD should not be construed as understated. Concerning the increase in overhaul costs comment, the FAA has determined that the required actions are necessary to address an unsafe condition. While those required actions may increase maintenance costs, those increased costs are balanced by achieving a level of safety that protects against further failures. However, if the operator complies with the proposed AD at overhaul, the cost is lower than accomplishing the AD action by itself.

Since issuance of the NPRM, the FAA has determined that relief can be given to the compliance schedule. Therefore, the dates for hub replacement and inspections are shifted three months for all affected propellers. Table 1 now reflects the denoted three month calendar shift.

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed with the changes described previously. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

There are approximately 24,320 propellers of the affected design in the worldwide fleet. The FAA estimates that 50% of the subject propellers are installed on aircraft of U.S. registry and that 75% will have the work done during normally scheduled propeller maintenance. For those who accomplish the AD action during normal propeller maintenance, the parts cost will average \$1,955 with no additional labor. For those who accomplish the AD action by itself, the parts cost will average \$2,174, plus approximately 27 work hours per propeller at an average labor rate of \$60 per work hour. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$29,363,360. The cost will vary between the 3, 4, and 5-bladed propeller configurations and the above data represents an average cost.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air Transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.
Adoption of the Amendment Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 USC 106(g), 40113, 44701.

§39.13 - [AMENDED]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC



U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) 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 14 CFR part 39, subpart 39.3).

CORRECTION [*Federal Register: August 28, 2002 (Volume 67, Number 167); Page 55108;*
www.access.gpo.gov/su_docs/aces/aces140.html]

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-B5MP-5(), 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-502, 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-B4TN-5(), HC-B5MA-3(), HC-B5MP-3(), HC-B5MP-5(), 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 requires no action for operators 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, and HC-B4TN-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) The two-letter prefix of some existing propeller hub serial numbers may be followed by a third letter '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.

TABLE 1

	Replacement is due by end of:	March 1997	Sept. 1997	March 1998	Sept. 1998	March 1999	Sept. 1999
Hub Model Number	S/N Series						
HC-B3TN-3	BU	1-377	378-754	755-1881	1882-3008	3009-3840	3841-4673
HC-B3MN-3	GB						
HC-B3MN-5	FZ						
HC-B3TN-5	BV	1-86	87-172	173-529	530-885	886-1622	1623-2359
HC-B3TN-4	FK						
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		1				
HC-B5MA-3	HB						
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		

Table 1 (continued)

	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						
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		
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	1661-1848	1849-2036	2037-2133	2134-2230	2231-3134	3135-3342
HC-B4TN-3	EA	980-1003	1004-1028	1029-1036	1037-1043	1044-1092	1093-1142
HC-B4MN-5	FL	407-411	412-416	417-423	424-429	430-436	437-1002
HC-B4MP-3	FW	32-371	372-711	712-1024	1025-1338	1339-1393	1394-2034
HC-B4MP-4	FU		8				
HC-B5MP-5	EZ	2	3-4				
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 2003	Sept. 2003	March 2004	Sept. 2004	March 2005	Sept. 2005
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						
HC-B5MN-3	ES						
HC-B5MP-3	EV						
HC-B5MP-3	FT						

(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 Total Pages: 18.	1-18	March 12, 1993.
Hartzell Propeller Inc., Service Manual No. 202A Total Pages: 15.	201-215	March 1993.
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. 119-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	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	Sept. 1, 1985.
Hartzell Propeller Inc., Instruction Manual No. 132-A	VII-31	Sept. 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	Sept. 1, 1985.
Hartzell Propeller Inc., Instruction Manual No. 132-A	VII-41	Sept. 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	Sept. 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.