



Reporte de Aceptación de Certificado Tipo



Type Certificate Acceptance Report

FAA TC No. P10NE Rev. 22, April 30, 2013

HARTZELL PROPELLER INC.

Models HC-D4 and HC-E4



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RESUMEN (SUMMARY)

La aceptación de Tipo Colombiana ha sido otorgada para los modelos HC-D4 y HC-E4 de la compañía "Hartzell Propeller Inc.", basada en el Certificado Tipo FAA No. P10NE.

La aeronave Beechcraft AT-6C utiliza la hélice HC-E4A-2 / E9673 con palas de aluminio. Las aeronaves Beechcraft B200 series utiliza la hélice HC-E4N-3 / NC9208 con núcleo de aluminio y palas de material compuesto. Las aeronaves Beechcraft B200 series utiliza la hélice HC-D4N-3 / D9515 con palas de aluminio, bajo el STC de Raisbeck Engineering.

Colombian Civil Aviation Authority grants Type Certificate Acceptance for the models HC-D4 and HC-E4 of the Hartzell Propeller Inc., based on the FAA Type Certificate No. P10NE.

The Beechcraft AT-6C aircraft uses the HC-E4A-2 / E9673 feathering propeller with aluminum blades. The Beechcraft B200 series aircraft uses the HC-E4N-3 / NC9208 feathering/reversing propeller with aluminum hub and composite blades. The Beechcraft 200 series aircraft uses the HC-D4N-3 / D9515 feathering/reversing propeller with aluminum blades under Supplemental Type Certificate of Raisbeck Engineering.

1. INTRODUCCIÓN (INTRODUCTION)

Este reporte detalla los aspectos para la aceptación del Certificado Tipo de la FAA No. P10NE, de acuerdo con los RAC Parte 9ª literal **§9.1 (d) y 9.2.3**.

This report details the basis on which the FAA Type Certificate No. P10NE was accepted, in accordance with the RAC's, part 9.1 (d) and 9.2.3.

Específicamente este reporte está dirigido a:

Specifically the report aims to:

(a) Determinar los estándares de diseño del código de aeronavegabilidad asociados al certificado tipo extranjero para la aceptación de estos modelos de Hélice en Colombia.	(a) State Design standards of the airworthiness code related to the foreign Type Certificate for the acceptance of these Propellers model in Colombia.
(b) Identificar cualquier condición especial, nivel equivalente de seguridad o excepción aplicable al modelo cubierto por el Certificado Tipo.	(b) Identify any special condition, Safety Equivalent Level, or applicable exception to a model covered by the Type Certificate.

2. DETALLES DE CERTIFICACIÓN DE TIPO OACI (ICAO TYPE CERTIFICATE DETAILS)

Los modelos de hélices HC-D4 y HC-E4 de la compañía Hartzell Propeller Inc., cumplen con los estándares de aeronavegabilidad definidos en el Anexo 8 de OACI, respecto a los requisitos de diseño y requisitos de aeronavegabilidad continuada. A partir de los



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documentos presentados por el fabricante se establece que no existe ninguna diferencia que deba ser evaluada.

The Hartzell propeller models HC-D4 and HC-E4 are in compliance with the ICAO annexes 8 and 16 about rules necessities for the design and continued airworthiness conditions. In accordance with the information provided by the manufacturer, it is established that there is no difference that should be evaluated.

3. DETALLES DE ACEPTACIÓN DE TIPO (TYPE ACCEPTANCE DETAILS)

La aplicación para la aceptación del Certificado Tipo de las hélices Hartzell modelo HC-D4 y HC-E4 fue solicitada por el fabricante el 20 de agosto de 2013 y fue aprobada el 8 de Octubre de 2013, basada en el Certificado Tipo de la FAA No. P10NE.

The application for Colombian type certificate acceptance of the Hartzell Models HC-D4 and HC-E4 was received from the manufacturer, Hartzell, on 20st August 2013. Type Acceptance Certificate was approved on 8th October 2013, based on the FAA Type Certificate No. P10NE.

4. REQUERIMIENTOS DE LOS RAC PARTE 9ª (COLOMBIAN RAC PART 9th DATA REQUIREMENTS)

Los requerimientos establecidos en la parte Novena de los RAC han sido cumplidos y se sustentan en la hoja de datos del Certificado Tipo de la FAA No. P10NE Rev. 22, de Abril 30 de 2013, y con los siguientes documentos:

The Type Data requirements of RAC Part 9 have been satisfied according to the FAA Type Certificate Data Sheet No. P10NE Rev. 22 dated April 30, 2013 and the following documents:

(1) Certificado Tipo (*Type certificate*):

- FAA Type Certificate No. P10NE Rev. 22 dated April 30, 2013.

(2) Resumen de los ítems de Certificación (*Summary certification items*)

Model	Document	Issue Date
HC-E4 (HC-E4A-2 / E9673)	Certification Compliance Checklist TC-ODA-100082-CE-372	4/30/2013
HC-E4 (HC-E4N-3 / NC9208)	Certification Compliance Checklist TC-ODA-100082-CE-370	14/10/2010
HC-D4 (HC-D4N-3 / D9515)	Certification Compliance Checklist TC-ODA-100082-CE-401	19/10/2012



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Certification Compliance Plan (Amended TC Project): Add the HC-E4A-2 propeller with E9673 blades.

Bases de Certificación (Certification Basis):

14 CFR Part 35 effective October 14, 1980 with amendments 1 through 5 thereto. Type Certificate No. P10NE issued January 18, 1985 under Delegated Option Authorization procedures of 14 CFR Part 21 Subpart J.

Models approved to the original certification basis include the following:
HC-D4N-(2,3,5); HC-D4P-5; HC-E4N-3; HC-E4P-5

Models added, updated or revised in accordance with 14 CFR Part 35 effective August 18, 1990 with amendments 35-1 through 35-6 include the following:
HC-D4N-5; HC-E4A-(2,3); HC-E4N-(2,3,5); HC-E4P-5; HC-E4W-(3,5)

The following models were added, updated or revised in accordance with 14 CFR Part 35 with amendments 35-1 through 35-8 effective December 23, 2008:
HC-E4N-3; HC-E4A-3; HC-D4N-3

The following models were added, updated or revised in accordance with 14 CFR Part 35 with amendments 35-1 through 35-9 effective March 19, 2013:
HC-E4A-2

Métodos de Cumplimiento (Means of Compliance)

The means of compliance related to the Propeller Configuration, Instructions for Propeller Installation and Operation, Instructions for Continued Airworthiness, Propeller Ratings and Operating Limitations, Safety Analysis, Propeller Critical Parts, Durability, Strength, Design Definition, Design Requirements, Design Loads, Stress Analysis, Centrifugal Load Test, Bird Impact, Fatigue Limits, and Lightning Strike are described in the Engineering Report No. 3785 dated April 29, 2013, applicable to the HC-E4E-2/E9673 propeller.

(3) Documentación técnica del fabricante (*Maintenance Manuals, Operating Manuals and Service Instructions*)

Model	Document	Issue Date
HC-E4	Hartzell Propeller Metal Spinner Maintenance Manual no. 127	Rev. 5. Feb. 2013
	Hartzell Propeller Aluminum Blade Overhaul Manual no. 133C.	Rev. 30 April 2013
	Hartzell Propeller Aluminum Blade Overhaul Manual no. 135F.	Rev. 19 Dec. 2012
	Hartzell Propeller Owner's Manual no.	Rev. 4 Sept. 2010



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	147,	
	Hartzell Propeller Overhaul/Maintenance Manual no. 141.	Rev. 7 Aug. 2007
	Hartzell Propeller Overhaul/Maintenance Manual no. 142.	Rev. 14 June 2013
	Hartzell Propeller Overhaul/Maintenance Manual no. 143.	Rev. 15 April 2011
	Hartzell Propeller Standard Practices Manual no. 202A.	Rev. 45 June 2013
HC-D4	Hartzell Propeller Metal Spinner Maintenance Manual no. 127	Rev. 5. Feb. 2013
	Hartzell Propeller Aluminum Blade Overhaul Manual no. 133C.	Rev. 30 April 2013
	Hartzell Propeller Aluminum Blade Overhaul Manual no. 135F.	Rev. 19 Dec. 2012
	Hartzell Propeller Owner's Manual no. 149,	Rev. 16 May 2013
	Hartzell Propeller Overhaul/Maintenance Manual no. 141.	Rev. 7 Aug. 2007
	Hartzell Propeller Overhaul/Maintenance Manual no. 142.	Rev. 14 June 2013
	Hartzell Propeller Overhaul/Maintenance Manual no. 143.	Rev. 15 April 2011
	Hartzell Propeller Standard Practices Manual no. 202A.	Rev. 45 June 2013

5. REQUERIMIENTOS ADICIONALES DE LOS RAC PARTE 4^a
(ADDITIONAL COLOMBIAN REQUIREMENTS RAC PART 4TH)

Los requerimientos de aeronavegabilidad adicionales para la emisión de un certificado de aeronavegabilidad estándar, definidos en los capítulos II y VI de la Parte Cuarta, "Requisitos Generales de Aeronavegabilidad" y en 9.2.3 de las Parte Novena de los RAC, aplicarán según la aeronave en la cual se halla instalado la hélice validada.

The additional requirements for the issuance of a Standard Airworthiness Certificate for an aircraft that is going to operate in Colombia, in accordance with RAC's (Colombian Regulations), Part Fourth- Chapters II and Chapter VI and in #9.2.3 Part Ninth, will depend of the type of aircraft and its installed propeller.



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APENDICE 1 - LISTA DE CHEQUEO DE LA HELICE
(APPENDIX 1 – PROPELLER CHECK LIST)

CERTIFICADO TIPO (Type Certificate):	FAA TC P10NE. Rev 22, April 30, 2013.
FABRICANTE (Manufacturer):	Hartzell Propeller Inc. Piqua, OH 45356 USA Contact Person: Mrs. Melanie J.L. Patton International Certification Representative mpatton@hartzellprop.com Phone: 001.937.778.4380
PLANTA MOTRIZ (Engine):	No aplica <i>Not applicable</i>
OPERADOR NACIONAL (National Operator):	Desconocido <i>Unknown</i>
FUNCIONARIO(S) (Team):	Ing. Jairo Sora Torres Ing. Laura F. Mateus
REGULACIONES R.A.C. (R.A.C. Regulation):	Paragraph 9.1. d). Paragraph 9.2.3.

DOCUMENTACION (DOCUMENTS)	CUMPLIMIENTO (DOCUMENTOS REVISADOS)												
1. DATOS GENERALES DEL CERTIFICADO TIPO (Type Certificate Data Sheets):	FAA Type Certificate Data Sheet No. P10NE Rev. 22 dated April 30, 2013												
2. Lista de Chequeo de Conformidad Código de Aeronavegabilidad (Compliance Check List airworthiness code):	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Model</th> <th style="width: 50%;">Document</th> <th style="width: 30%;">Issue Date</th> </tr> </thead> <tbody> <tr> <td>HC-E4 (HC-E4A-2 / E9673)</td> <td>Certification Compliance Checklist TC-ODA-100082-CE-372</td> <td>4/30/2013</td> </tr> <tr> <td>HC-E4 (HC-E4N-3 / NC9208)</td> <td>Certification Compliance Checklist TC-ODA-100082-CE-370</td> <td>14/10/2010</td> </tr> <tr> <td>HC-D4 (HC-D4N-3 / D9515)</td> <td>Certification Compliance Checklist TC-ODA-100082-CE-401</td> <td>19/10/2012</td> </tr> </tbody> </table>	Model	Document	Issue Date	HC-E4 (HC-E4A-2 / E9673)	Certification Compliance Checklist TC-ODA-100082-CE-372	4/30/2013	HC-E4 (HC-E4N-3 / NC9208)	Certification Compliance Checklist TC-ODA-100082-CE-370	14/10/2010	HC-D4 (HC-D4N-3 / D9515)	Certification Compliance Checklist TC-ODA-100082-CE-401	19/10/2012
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3. Lista Maestra de Planos (<i>Master Drawing List or Type Build Standard (TBS)</i>):	Propeller Assembly Drawings No.: HC-D4N-3A HC-E4A-2		
4. NIVELES EQUIVALENTES DE SEGURIDAD (<i>Equivalent Level Of Safety –ELOS</i>)	No aplica Not applicable		
5. ISSUE PAPERS	No aplica Not applicable		
6. EXCEPCIONES (<i>Exceptions</i>)	No aplica Not applicable		
7. Plano en tres vistas del conjunto (impreso o copia) (<i>views assembly drawing (Printed or blueprint)</i>):	No aplica Not applicable		
8. MANUAL DE MANTENIMIENTO (<i>Maintenance Manual</i>):	Model	Document	Issue Date
	HC-E4	Hartzell Propeller Metal Spinner Maintenance Manual no. 127	Rev. 5. Feb. 2013
		Hartzell Propeller Aluminum Blade Overhaul Manual no. 133C.	Rev. 30 April 2013
		Hartzell Propeller Aluminum Blade Overhaul Manual no. 135F.	Rev. 19 Dec. 2012
		Hartzell Propeller Owner's Manual no. 147,	Rev. 4 Sept. 2010
		Hartzell Propeller Overhaul/Maintenance Manual no. 141.	Rev. 7 Aug. 2007
		Hartzell Propeller Overhaul/Maintenance Manual no. 142.	Rev. 14 June 2013
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Hartzell Propeller Overhaul/Maintenance Manual no. 143.	Rev. 15 April 2011																	
Hartzell Propeller Standard Practices Manual no. 202A.	Rev. 45 June 2013																	
9. MANUAL DE VUELO (<i>Flight Manual</i>):	No aplica Not applicable																	
10. BOLETINES DE SERVICIO, (<i>Service Bulletins</i>):	Service Bulletins http://www.hartzellprop.com																	
11. DIRECTIVAS DE AERONAVEGABILIDAD (<i>Airworthiness Directives</i>):	FAA web site: http://www.faa.gov																	
12. CERTIFICACION DE RUIDO (<i>Noise Compliance</i>):	No aplica Not applicable																	
13. BASES DE CERTIFICACIÓN (<i>Certification Basis</i>):	<p>14 CFR Part 35 effective October 14, 1980 with amendments 1 through 5 thereto. Type Certificate No. P10NE issued January 18, 1985 under Delegated Option Authorization procedures of 14 CFR Part 21 Subpart J.</p> <p>Models approved to the original certification basis include the following: HC-D4N-(2,3,5); HC-D4P-5; HC-E4N-3; HC-E4P-5</p> <p>Models added, updated or revised in accordance with 14 CFR Part 35 effective August 18, 1990 with amendments 35-1 through 35-6 include the following: HC-D4N-5; HC-E4A-(2,3); HC-E4N-(2,3,5); HC-E4P-5; HC-E4W-(3,5)</p> <p>The following models were added, updated or revised in accordance with 14 CFR Part 35 with amendments 35-1 through 35-8 effective December 23, 2008: HC-E4N-3; HC-E4A-3; HC-D4N-3</p>																	



APENDICE 2 - ADJUNTOS (*APPENDIX 2 - ATTACHMENTS*)

Los siguientes documentos son adjuntos de este informe:
The following documents are attached to this report:

- Copia del Certificado Tipo de la FAA No. P10NE.
(Copy of FAA Type Certificate No. P10NE).
- Otros: No aplica
(Other) Not applicable

Firmas (*Signatures*)

.....
Jairo Sora Torres
Inspector de Seguridad Aérea
Air Safety Inspector
(UAEAC - Technical Group Engineer)

.....
Edgar L. Cadena Cañón
Jefe de Grupo Técnico – UAEAC
(UAEAC- Technical Group Chief)

Dated: October 28, 2013



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The United State of America

*Department of Transportation
Federal Aviation Administration*

PROPELLER

Type Certificate

Number P10NE

This certificate issued to Hartzell Propeller Inc.

certifies that the type design for the following product with the operating limitations and conditions therefor as specified in the Federal Aviation Regulations and the Type Certificate Data Sheet, meets the airworthiness requirements of Part 35 of the Federal Aviation Regulations.

Aircraft Propeller Models: HC-D4, HC-E4

This certificate, and the Type Certificate Data Sheet which is a part hereof, shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: December 4, 1984

Date of issuance: January 18, 1985

Reissued: April 9, 1987
Model HC-E4 approved May 10, 1990

By direction of the Administrator.

(Signature) Charles L Smalley
for Donald P. Michal, Manager
(Title) Chicago Aircraft Certification Office

This certificate may be transferred if endorsed as provided on the reverse hereof.

Any alteration of this certificate and/or the Type Certificate Data Sheet is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.