TYPE-CERTIFICATE
DATA SHEET

No. IM.P.192

for Propeller
4HFR34C(---) series propellers

Type Certificate Holder
McCauley Propeller Systems

One Cessna Boulevard
Wichita, KS 67277-7704
USA

For Models:
4HFR34C652
4HFR34C661
4HFR34C663
4HFR34C752
4HFR34C754
4HFR34C755
4HFR34C760
4HFR34C761
4HFR34C762
4HFR34C763
4HFR34C766
4HFR34C768
4HFR34C769
4HFR34C771
4HFR34C773
4HFR34C778
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I. General

1. Type / Models

4HFR34C(---) / 4HFR34C652, 4HFR34C661, 4HFR34C663, 4HFR34C752, 4HFR34C754, 4HFR34C755, 4HFR34C760, 4HFR34C761, 4HFR34C762, 4HFR34C763, 4HFR34C766, 4HFR34C768, 4HFR34C769, 4HFR34C771, 4HFR34C773, 4HFR34C778

2. Type Certificate Holder

McCauley Propeller Systems
One Cessna Boulevard
Wichita, KS 67277-7704
USA

3. Manufacturer

McCauley Propeller Systems

4. Date of Application

4HFR34C652: Before 1987*
4HFR34C661: Before 1994*
4HFR34C663: Before 2000*
4HFR34C752: Before 1987*
4HFR34C754: Before 1987*
4HFR34C755: Before 1987*
4HFR34C760: Before 1990*
4HFR34C761: Before 1990*
4HFR34C762: Before 1989*
4HFR34C763: Before 1989*
4HFR34C766: Before 1991*
4HFR34C768: Before 1993*
4HFR34C769: Before 1983*
4HFR34C771: Before 1994*
4HFR34C773: Before 1983*
4HFR34C778: 02 January 2016

*: The exact Date of Application was not recorded in individual EASA Member States.

5. EASA Type Certification Date

4HFR34C652: 24 April 1987*
4HFR34C661: 28 January 1994*
4HFR34C663: 23 September 2000*
4HFR34C752: 24 April 1987*
4HFR34C754: 24 April 1987*
4HFR34C755: 24 April 1987*
4HFR34C760: 30 August 1990*
II. Certification Basis

1. State of Design Authority Certification Basis

Refer to FAA TCDS no. P3NE.

2. Reference Date for determining the applicable airworthiness requirements

4HFR34C652: 14 October 1980
4HFR34C661: 07 July 1992
4HFR34C663: 08 August 1996
4HFR34C752: 14 October 1980
4HFR34C754: 11 January 1984
4HFR34C755: 28 February 1986
4HFR34C760: 29 January 1990
4HFR34C761: 29 January 1990
4HFR34C762: 17 September 1987
4HFR34C763: 26 February 1988
4HFR34C766: 13 March 1991
4HFR34C768: 01 April 1991
4HFR34C769: 30 September 1991
4HFR34C771: 12 May 1992
4HFR34C773: 30 September 1991
4HFR34C778: 03 December 1981 and 23 December 2008 for CS-P 390 and CS-P 400.

3. EASA Certification Basis

3.1. Airworthiness Standards

4HFR34C652, 4HFR34C752, 4HFR34C754, 4HFR34C755, 4HFR34C760, 4HFR34C761, 4HFR34C762, 4HFR34C763:
14 CFR Part 35 with Amendments 1 through 5 effective 14 October 1980.

4HFR34C661, 4HFR34C663, 4HFR34C771, 4HFR34C766, 4HFR34C768, 4HFR34C773, 4HFR34C769:
14 CFR Part 35 with Amendments 1 through 6 effective 18 August 1990.
4HFR34C778:
14 CFR Part 35 with Amendments 1 through 5 effective 14 October 1980 and CS-P Amendment 1 dated 16 November 2006 for CS-P 390 and CS-P 400.

*: Application was made to EASA Member States before EASA was established. Refer to Commission Regulation (EU) No 748/2012. These propeller models are EASA certified based on member states approvals prior to EASA existence. The original and updated FAA certification basis as indicated above had been taken over from the FAA TCDS.

3.2. Special Conditions (SC)

None.

3.3. Equivalent Safety Findings (ESF)

None.

3.4. Deviations

None.

III. Technical Characteristics

1. Type Design Definition

The propeller type is defined by a propeller assembly drawing including a parts list (or later approved revisions).

4HFR34C652: Drawing E-5322, rev O, dated 09 February 2010
4HFR34C661: Drawing E-6817, rev E, dated 17 February 2010
4HFR34C663: Drawing E-6401, rev F, dated 17 March 2010
4HFR34C752: Drawing E-5410, rev A, dated 07 December 1982
4HFR34C754: Drawing E-5550, rev I, dated 25 June 2015
4HFR34C760: Drawing E-6120, rev D, dated 17 August 2000
4HFR34C761: Drawing E-6122, rev C, dated 17 August 2000
4HFR34C762: Drawing E-5550, rev I, dated 25 June 2015
4HFR34C763: Drawing E-6223, rev C, dated 17 August 2000
4HFR34C766: Drawing E-6720, rev D, dated 17 August 2000
4HFR34C768: Drawing E-6790, rev D, dated 17 August 2000
4HFR34C769: Drawing E-6790, rev D, dated 17 August 2000
4HFR34C771: Drawing E-6790, rev D, dated 17 August 2000
4HFR34C773: Drawing E-6790, rev D, dated 17 August 2000
4HFR34C778: Drawing E-5550, rev I, dated 25 June 2015
2. Description

The 4HFR34C778 propeller has 4 blades and a hydraulically operated variable pitch control with constant speed.
The model incorporate reversing, feathering and unfeathering features (See Note 4).
The hub is milled out of aluminium alloy. The blade material is aluminium alloy, too.
Optional equipment includes spinner and ice protection.

3. Equipment

Spinner: See Note 7.
Governor: Has to be approved as part of the aircraft installation.
Ice Protection: See Note 7.

4. Dimensions

Diameters from 248,9 cm to 259,1 cm. (See Table of Section IV)

5. Weight

Depending on Propeller-Design Configuration. (See Table of Section IV)

6. Hub / Blade Combinations

Details are mentioned within Table of Section IV.

7. Control System

Propeller governor has to be approved as part of the aircraft installation.

8. Adaptation to Engine

Special flange. (See Note 1)

9. Direction of Rotation

The left hand version of an approved model propeller is approved at the same rating and diameter limitations as listed for the right hand model. (See Note 5)
### IV. Operating Limitations

<table>
<thead>
<tr>
<th>Blades (see Note 2)</th>
<th>Maximum Continuous RPM</th>
<th>Take Off RPM</th>
<th>Diameter Limits (cm)</th>
<th>Approx. Max Wt. Complete (kg)</th>
<th>Blade Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>kW (min⁻¹)</td>
<td>kW (min⁻¹)</td>
<td>(see Note 2)</td>
<td>(For Ref. Only)</td>
<td>Construction</td>
</tr>
<tr>
<td>Hub Model 4HFR34C652</td>
<td>L106L[X]-0 to -6</td>
<td>932,1 1591</td>
<td>932,1 1591</td>
<td>269,2 to 254,0</td>
<td>76,20 Aluminium Alloy</td>
</tr>
<tr>
<td>Hub Model 4HFR34C661</td>
<td>90LN[X]-0 to -6</td>
<td>533,2 2000</td>
<td>533,2 2000</td>
<td>228,6 to 213,4</td>
<td>61,23 Aluminium Alloy</td>
</tr>
<tr>
<td>Hub Model 4HFR34C663</td>
<td>L106L[X]-0 to -6</td>
<td>932,1 1591</td>
<td>932,1 1591</td>
<td>269,2 to 254,0</td>
<td>76,20 Aluminium Alloy</td>
</tr>
<tr>
<td>Hub Model 4HFR34C752</td>
<td>106L[X]-0 to -6</td>
<td>969,4 1700</td>
<td>969,4 1700</td>
<td>269,2 to 254,0</td>
<td>70,76 Aluminium Alloy</td>
</tr>
<tr>
<td>Hub Model 4HFR34C754 and 4HFR34C755</td>
<td>94L[X]-0 to -6</td>
<td>633,8 2000</td>
<td>633,8 2000</td>
<td>238,8 to 223,5</td>
<td>66,22 Aluminium Alloy</td>
</tr>
<tr>
<td>Hub Model 4HFR34C760</td>
<td>95D[X]-0 to -8</td>
<td>671,1 2000</td>
<td>671,1 2000</td>
<td>241,3 to 221,0</td>
<td>66,22 Aluminium Alloy</td>
</tr>
<tr>
<td>Hub Model 4HFR34C761</td>
<td>L95D[X]-0 to -8</td>
<td>671,1 2000</td>
<td>671,1 2000</td>
<td>241,3 to 221,0</td>
<td>66,22 Aluminium Alloy</td>
</tr>
<tr>
<td>Hub Model 4HFR34C762</td>
<td>94LM[X]-4 to -10</td>
<td>522,0 2200</td>
<td>522,0 2200</td>
<td>228,6 to 213,4</td>
<td>60,33 Aluminium Alloy</td>
</tr>
<tr>
<td>Hub Model 4HFR34C763</td>
<td>94LM[X]-4 to -10</td>
<td>410,1 2200</td>
<td>410,1 2200</td>
<td>228,6 to 213,4</td>
<td>60,33 Aluminium Alloy</td>
</tr>
<tr>
<td>Hub Model 4HFR34C768</td>
<td>94LM[X]-0 to -10</td>
<td>522,0 2200</td>
<td>522,0 2200</td>
<td>238,8 to 213,4</td>
<td>61,23 Aluminium Alloy</td>
</tr>
<tr>
<td>Hub Model 4HFR34C766</td>
<td>94LN[X]-2 to -10</td>
<td>522,0 2200</td>
<td>522,0 2200</td>
<td>233,7 to 213,4</td>
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<tr>
<td>Hub Model 4HFR34C769 and 4HFR34C773</td>
<td>94LM[X]-0 to -10</td>
<td>533,2 2200</td>
<td>533,2 2200</td>
<td>238,8 to 213,4</td>
<td>61,23 Aluminium Alloy</td>
</tr>
</tbody>
</table>
1. Approved Installations

The propeller is initially intended for use on the Cessna Caravan 208EX aircraft. (See Note 10)

2. Maximum Take Off Power and Speed

Details are mentioned within Table of Section IV.

3. Maximum Continuous Power and Speed

Details are mentioned within Table of Section IV.

4. Propeller Pitch Angle

The propeller has variable pitch capability. Pitch control is provided by a governor.

V. Operating and Service Instructions

<table>
<thead>
<tr>
<th>Manual/Manual incl.</th>
<th>MPC26 (*)</th>
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</thead>
<tbody>
<tr>
<td>McCauley Owner/Operator Manual incl. Airworthiness Limitations</td>
<td>MPC26 (*)</td>
</tr>
<tr>
<td>McCauley C750 series Overhaul Manual</td>
<td>MPC750 (*)</td>
</tr>
<tr>
<td>McCauley Standard Practices Manual</td>
<td>SPM100 (*)</td>
</tr>
<tr>
<td>McCauley Blade Overhaul Manual</td>
<td>BOM100 (*)</td>
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<tr>
<td>Service Bulletins</td>
<td>(*)</td>
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</table>
VI. Notes

1. **Hub Model Designation:**

<table>
<thead>
<tr>
<th>[X]</th>
<th>4</th>
<th>H</th>
<th>F</th>
<th>R</th>
<th>34</th>
<th>C</th>
<th>752</th>
<th>-</th>
<th>[X]</th>
<th>[X]</th>
<th>[X]</th>
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</tbody>
</table>

   Letters denoting changes that may affect eligibility or interchangeability.

   Numerals defining specific design and major change affecting eligibility or interchangeability of parts.

   Type of propeller - C, constant speed.

   McCauley blade shank size.

   When present, indicates reverse pitch capability.

   Type of propeller - F, full-feathering.

   H denotes special flange - 4-1/4" bolt circle with eight 9/16" studs and two or four 1/2" dowels.

   J denotes special flange - 5-1/8" bolt circle with twelve 9/16" studs and two 5/8" dowels.

   Number of blades.

   Indicates dowel location with respect to centerline of No. 1 blade socket, viewing hub from flange mounting face. Blank - 0, 90, 180, and 270 degrees clockwise.

2. **Blade Model Designation:**

<table>
<thead>
<tr>
<th>[X]</th>
<th>-</th>
<th>[X]</th>
<th>106</th>
<th>LA</th>
<th>-</th>
<th>0</th>
</tr>
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</tr>
</tbody>
</table>

   Basic Model Designation

   Change in diameter from basic, + or -, in inches.

   Characteristics of blade design (planform, etc.). Suffix [X] indicates blade butt staking dimensions for actuating pin attachment.

   Blade design diameter in inches.

   Letter designating direction of rotation; no letter (blank) indicates clockwise (viewed from downstream), L indicates counter-clockwise.

   Letter designating minor change not affecting eligibility or interchangeability.
3. Intentionally left blank.

4. **Feathering:**

All propeller models are approved for feathering and unfeathering capability when installed with appropriate feather/unfeathering controls.

**Reversing:**

All propeller models are approved for installation with appropriate reversing controls.

5. **Left-Hand Models:**

The left-hand version of an approved propeller model propeller is approved at the same rating and diameter limitations as listed for the right-hand model.

6. Intentionally left blank.

7. **Accessories:** Substantiated accessories not included in propeller type design:

   a. **Propeller Anti-icing**

   (1) Model 4HFR34C652/L106L[X] is eligible with McCauley deicers, P/N B-40183 or B-40245 series, installed per McCauley Specification MC-2611 and drawing E-5322.

   (2) Intentionally left blank.

   (3) Intentionally left blank.

   (4) Model 4HFR34C661/90LN[X] is eligible with McCauley deicers, P/N B-40183 or B-40245 series, installed per McCauley Specification MC-2611 and drawing E-6817.

   (5) Intentionally left blank.

   (6) Model 4HFR34C663/L106K[X] is eligible with McCauley deicers, P/N B-40183 or B-40245 series, installed per McCauley Specification MC-2611 and drawing E-6401.

   (7) Intentionally left blank.

   (8) Model 4HFR34C752/106L[X] is eligible with McCauley deicers, P/N B-40183 or B-40245 series, installed per McCauley Specification MC-2611 and drawing E-5410.

   (9) Model 4HFR34C754/94L[X] and 4HFR34C755/94L[X] are eligible with McCauley deicers, P/N B-40183 or B-40245 series, installed per McCauley Specification MC-2611 and drawing E-5550.

   (10) Intentionally left blank.
(11) Intentionally left blank.

(12) Model 4HFR34C760/95D[X] is eligible with McCauley deicers, P/N B-40183 or B-40245 series, installed per McCauley Specification MC-2611 and McCauley drawing E-6120.

(13) Model 4HFR34C762/94LM[X] is eligible with McCauley deicers, P/N B-40183 or B-40245 series, installed per McCauley Specification MC-2611 and drawing E-5550.

(14) Model 4HFR34C763/94LM[X] is eligible with McCauley deicers, P/N B-40183 or B-40245 series, installed per McCauley Specification MC-2611 and McCauley drawing E-6223.

(15) Intentionally left blank.

(16) Model 4HFR34C766/94LN[X] is eligible with McCauley deicers, P/N B-40183 or B-40245 series, installed per McCauley Specification MC-2611 and McCauley drawing E-6720.

(17) Model 4HFR34C768/94LM[X] and 4HFR34C771/94L[X] are eligible with McCauley deicers, P/N B-40183 or B-40245 series, installed per McCauley Specification MC-2611 and McCauley drawing E-6790.

(18) Model 4HFR34C769/94LM[X] is eligible with McCauley deicers, P/N B-40183 or B-40245 series, installed per McCauley Specification MC-2611 and McCauley drawing E-6790.

(19) Model 4HFR34C773/94LM[X] is eligible with McCauley deicers, P/N B-40183 or B-40245 series, installed per McCauley Specification MC-2611 and McCauley drawing E-6790.

(20) Intentionally left blank.

(21) Intentionally left blank.


b. Propeller Spinner

(1) Model 4HFR34C652/L106L[X] with spinner, reference McCauley drawing E-5322.

(2) Intentionally left blank.

(3) Intentionally left blank.

(4) Model 4HFR34C661/90LN[X] with spinner, reference McCauley drawing E-6817.

(5) Intentionally left blank.

(6) Model 4HFR34C663/L106K[X] with spinner, reference McCauley drawing E-6401.

(7) Intentionally left blank.


(12) Intentionally left blank.

(13) Model 4HFR34C760/95D[X] with spinner, reference McCauley drawing E-6120.

(14) Model 4HFR34C761/L95D[X] with spinner, reference McCauley drawing E-6122.


(17) Intentionally left blank.


(22) Intentionally left blank.

(23) Intentionally left blank.

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(25) Intentionally left blank.


8. Intentionally left blank.

9. Special Limits:
Please reference the airworthiness limitations section of the appropriate Service and Operator's manuals. Propeller models 4HFR34C761/L95D[X] and 4HFR34C663/L106K[X] contain life limited parts.
10. **Special Notes:**
Aircraft installation must be approved as part of the aircraft type certificate upon compliance with the applicable aircraft airworthiness requirements.

11. The EASA approved Airworthiness Limitations Section of the Instructions for Continued Airworthiness is published in the applicable Propeller Owner’s Manual, chapter 5 "Airworthiness Limitations".

---------------------------------------------------------------
**SECTION: ADMINISTRATIVE**

I. Acronyms and Abbreviations
None.

II. Type Certificate Holder Record
N/A.

III. Change Record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
<th>TC issue</th>
</tr>
</thead>
</table>

-END-