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*

4HFR34C761: 30 August 1990*
4HFR34C762: 19 June 1989*
4HFR34C763: 19 June 1989*
4HFR34C766: 30 September 1991*
4HFR34C768: 28 January 1993*
4HFR34C769: 11 May 1983*
4HFR34C771: 28 January 1994*
4HFR34C773: 28 January 1994*
4HFR34C778: 25 November 2016

*: The EASA Certification Date has been taken over from individual EASA Member States.

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
4HFR34C755: 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

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

				Hub Model 4HFR34C771			
94L[X]-0 to -6	633,8	2080	633,8	2080	238,8 to 223,5	66,22	Aluminium Alloy
				Hub Model 4HFR34C778			
102BH[X]-0 to -4	646,5	2000	646,5	2000	259,1 to 248,9	64,41	Aluminium Alloy

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.

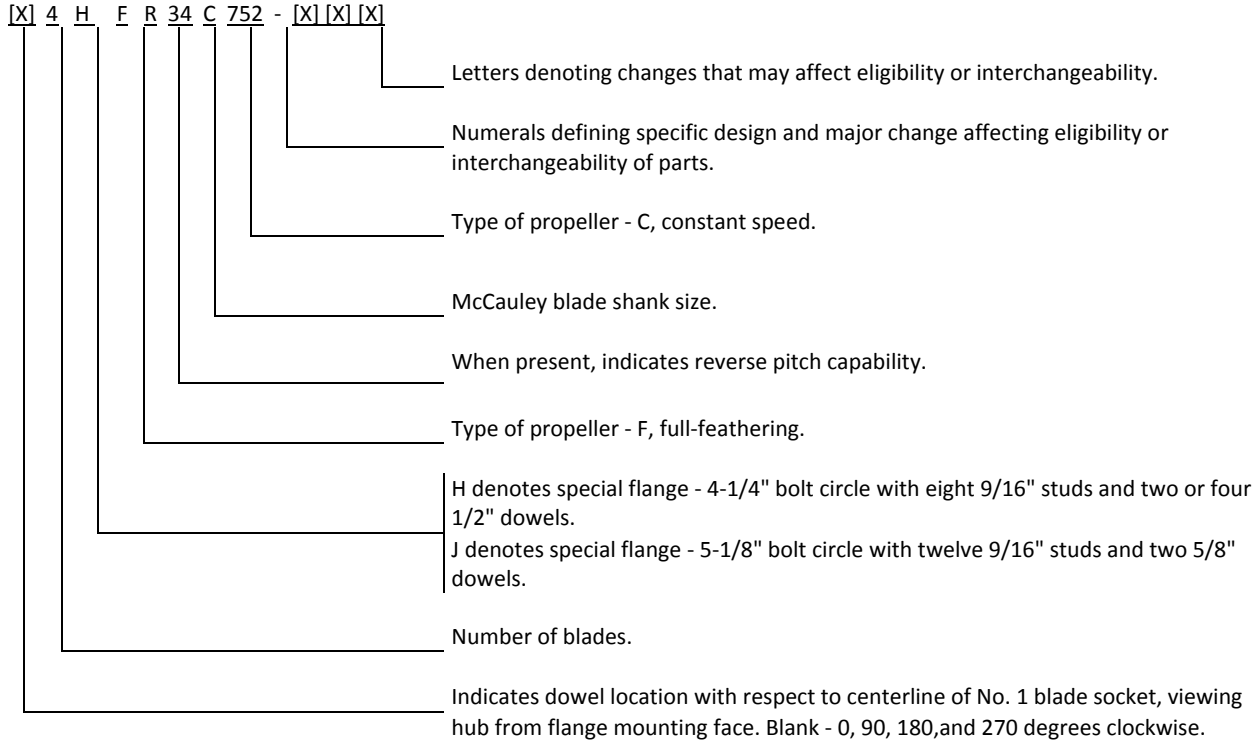
V. Operating and Service Instructions

McCauley Owner/Operator Manual incl. Airworthiness Limitations	MPC26 (*)
McCauley C750 series Overhaul Manual	MPC750 (*)
McCauley Standard Practices Manual	SPM100 (*)
McCauley Blade Overhaul Manual	BOM100 (*)
Service Bulletins	

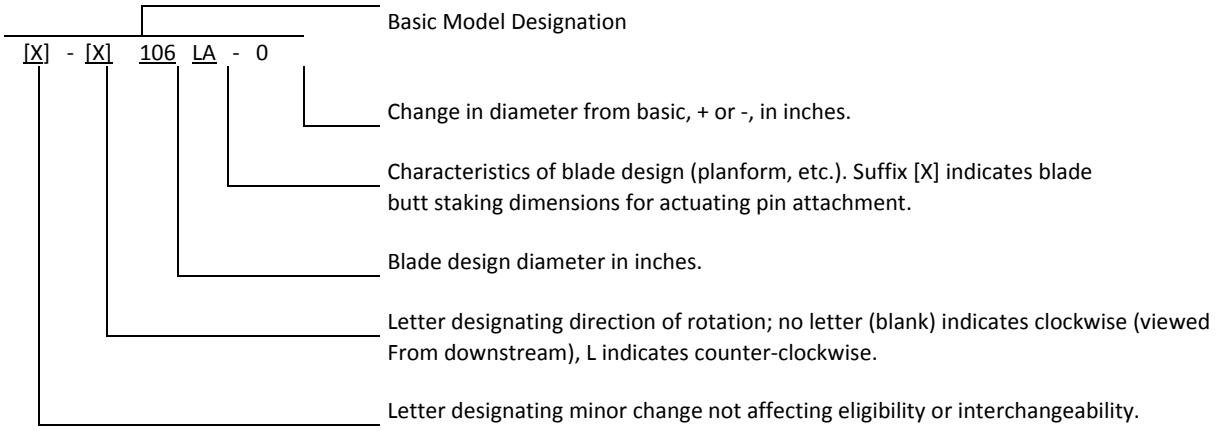
(*): or later approved revision

VI. Notes

1. Hub Model Designation:



2. Blade Model Designation:



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-40245series, 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.

(22) Model 4HFR34C778/102BH[X] with McCauley deicer, P/N B-40245-56, reference McCauley drawing E-5550 or McCauley anti-ice feed shoe, P/N C-40323-83, reference McCauley drawing E-5550.

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.

(8) Model 4HFR34C752/106L[X] with spinner, reference McCauley drawing E-5410.

(9) Models 4HFR34C754/94L[X], 4HFR34C755/94L[X] and 4HFR34C771/94L[X] with spinner, reference McCauley drawing E-5550 and E-6790.

(11) Model 4HFR34C755/94L[X] with spinner, reference McCauley drawing E-5550.

(12) 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.

(15) Model 4HFR34C762/94LM[X] with spinner, reference McCauley drawing E-5550.

(16) Model 4HFR34C763/94LM[X] with spinner, reference McCauley drawing E-6223.

(17) Intentionally left blank.

(18) Model 4HFR34C766/94LN[X] with spinner, reference McCauley drawing E-6720.

(19) Model 4HFR34C768/94LM[X] with spinner, reference McCauley drawing E-6790.

(20) Model 4HFR34C769/94LM[X] with spinner, reference McCauley drawing E-6790.

(21) Model 4HFR34C773/94LM[X] with spinner, reference McCauley drawing E-6790.

(22) Intentionally left blank.

(23) Intentionally left blank.

(24) Intentionally left blank.

(25) Intentionally left blank.

(26) Model 4HFR34C778/102BH[X] with spinner, reference McCauley drawing E-8107.

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

Issue	Date	Changes	TC issue
Issue 01	25 November 2016	Initial Issue	25 November 2016

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