

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

P-857
Revision 22
McCauley
1A170
1A175
1B175
March 27, 1998

TYPE CERTIFICATE DATA SHEET NO. P-857

Propellers of models described herein conforming with this data sheet (which is part of Type Certificate No. 857) and other approved data on file with the Federal Aviation Administration, meet the minimum standards for use in certificated aircraft in accordance with the pertinent aircraft data sheets and applicable portions of the Federal Aviation Regulations provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other approved instructions.

Type Certificate Holder	McCauley Propeller Systems 3535 McCauley Drive Vandalia, Ohio 45377
Type	Fixed pitch metal
Material	Aluminum Alloy
No. of Blades	Two

Model (See NOTE 2)	Takeoff & <u>Max. Cont.</u>		Diameter Limits	Standard Pitch	<u>Hub Drilling</u>			<u>Hub Dimensions</u>		Weight (lb.) (Max. Dia.)
	HP	RPM			No. Holes	Dia. Holes	Dia. Bolt Circle	Dia.	Thickness	
1A170/DF 1A170/DM 1A170/L 1A170/LL 1A175/DM	165	2800	82"-70"	80"-40"	8	25/64"	5-1/4"	6-1/4"	3-7/16"	33
1A170/BMS										
1A170/GM	165	2800	82"-70"	80"-40"	6	25/64"	4-3/4"	6-1/4"	3-7/16"	33
1A170/CFA	180	2700	78"-70"	80"-40"	6	33/64"	4-3/4"	6"	7-7/16"	40*
1A170/EFA	180	2700	78"-70"	80"-40"	6	33/64"	4-3/4"	5-3/32"	4-15/16"	36*
1A170/FFA	180	2700	78"-70"	80"-40"	6	33/64"	4-3/4"	5-3/32"	6-3/32"	38*
1A170/JFA	180	2700	78"-70"	80"-40"	6	33/64"	4-3/4"	6-1/4"	4-15/16"	40.75*
1A170/JHA	180	2700	78"-70"	80"-40"	6	33/64"	4-3/4"	6-1/4"	4-15/16"	40.75

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Model (See NOTE 2)	Takeoff & Max. Cont.		Diameter Limits	Standard Pitch	Hub Drilling			Hub Dimensions		Weight (lb.) (Max. Dia.)
	HP	RPM			No. Holes	Dia. Holes	Dia. Bolt Circle	Dia.	Thickness	
1A170/KFA	180	2700	78"-70"	80"-40"	6	33/64"	4-3/4"	6-1/4"	6-3/32"	41.25*
1A170/SFA	180	2700	78"-70"	80"-40"	6	33/64"	4-3/4"	5-3/4"	3-7/16"	33
1A170/SFC	165	2800	82"-70"	80"-40"	6	33/64"	4"	5-1/4"	3-7/16"	33
1A175/FC	175	2400	84"-70"	80"-40"	6	33/64"	4"	6-1/2"	3-7/16"	33
1A175/GM	165	2800	82"-78"	80"-40"	6	25/64"	4-3/4"	6-1/4"	3-7/16"	33
1A175/GMA	165	2800	82"-78"	80"-40"	6	25/64"	4-3/4"	6-1/4"	5-7/16"	37.5*
1A175/SFC	165	2800	82"-70"	80"-40"	6	33/64"	4"	5-1/4"	3-7/16"	33
1B175/MFC	185	2500	84"-78"	80"-40"	6	33/64"	4"	5-1/4"	3-7/16"	33
1A175/ATM	165	2800	82"-78"	80"-40"	6	29/64"	4-3/4"	5-63/64"	6-13/16"	39.25*
1A175/ETM	165	2800	82"-78"	80"-40"	6	29/64"	4-3/4"	5-63/64"	6-13/16"	39.0*

* Includes doweled spacer

Certification basis

Models 1A170/DF, 1A170/DM, 1A170/L, 1A170/LL, 1A170/DL, 1A170/GM, 1A170/SFC, 1A175/FC, 1A175/GM, 1A175/SFC and 1B175/MFC:
Civil Air Regulations Part 14 effective October 19, 1945 with Amendment 14-1 thereto.

All other models except 1A170/JHA:

Federal Aviation Regulations Part 35 with Amendments 35-1 and 35-2 thereto.

Type Certificate No. 857 issued April 23, 1947. Model 1A170/SFA approved

October 25, 1963 under Delegation Option Provisions of Part 410 of the Regulations of the Administrator. The following models were approved under Delegation Option Authorization Procedures of Federal Aviation Regulations Part 21, subpart J:

1A170/SFC approved July 1, 1966

1A170/CFA approved August 19, 1967

1A175/GMA approved August 19, 1967

1A175/ATM approved January 5, 1968

1A170/EFA approved June 14, 1968

1A175/ETM approved April 16, 1973

1A170/FFA approved August 2, 1974

1A170/JFA approved October 4, 1982

1A170/KFA approved October 4, 1982

1A170/JHA: 14 Code of Federal Regulation Part 35 with Amendments 35-1 through 35-6 thereto.

Date of Application for Type Certificate January 27, 1947.

Production basis

Production Certificate No. 3

NOTE 1. Installation. These propellers are for installation on flanged propeller shaft ends (See NOTE 2). The front plate supplied by the engine manufacturer is not to be used. Installation is to be made with special alloy steel bolts which are either furnished or specified by the propeller manufacturer.

Propeller model 1A170/CFA is for use on modified SAE #2 flanged propeller shaft with McCauley P/N B-3637 spacer and must be installed in accordance with McCauley Drawing C-3883.

Propeller models 1A170/DF, 1A170/DM and 1A175/DM are for use on SAE #3 flanged propeller shaft and must be installed in accordance with McCauley Drawing C-1177.

Propeller models 1A170/L and 1A170/LL are for use on the modified SAE #3 flanged propeller shaft with special 2-3/16 pilot diameter and must be installed in accordance with McCauley Drawing C-1203.

Propeller models 1A170/GM and 1A175/GM are for use on SAE #2 flanged propeller shaft and must be installed in accordance with McCauley Drawing C-1968.

Propeller model 1A170/SFA is for use on modified SAE #2 flanged propeller shaft and must be installed in accordance with McCauley Drawing C-3343.

Propeller models 1A170/SFC, 1A175/SFC, and 1B175/MFC are for use on the special Continental Motors Corporation propeller flange and must be installed in accordance with McCauley Drawing C-2359.

Propeller models 1A175/FC is for use on the special Continental Motors Corporation propeller flange and must be installed in accordance with McCauley Drawing C-2125.

Propeller model 1A175/GMA is for use on SAE #2 flanged propeller shaft with McCauley P/N B-3515 spacer and must be installed in accordance with McCauley Drawing C-3518.

Propeller model 1A175/ATM is for use on modified SAE #2 flanged propeller shaft with McCauley P/N B-3898 spacer and must be installed in accordance with McCauley Drawing C-3900.

Propeller model 1A170/EFA is for use on modified SAE #2 flanged propeller shaft with McCauley P/N B-4020 spacer and must be installed in accordance with McCauley Drawing C-4018.

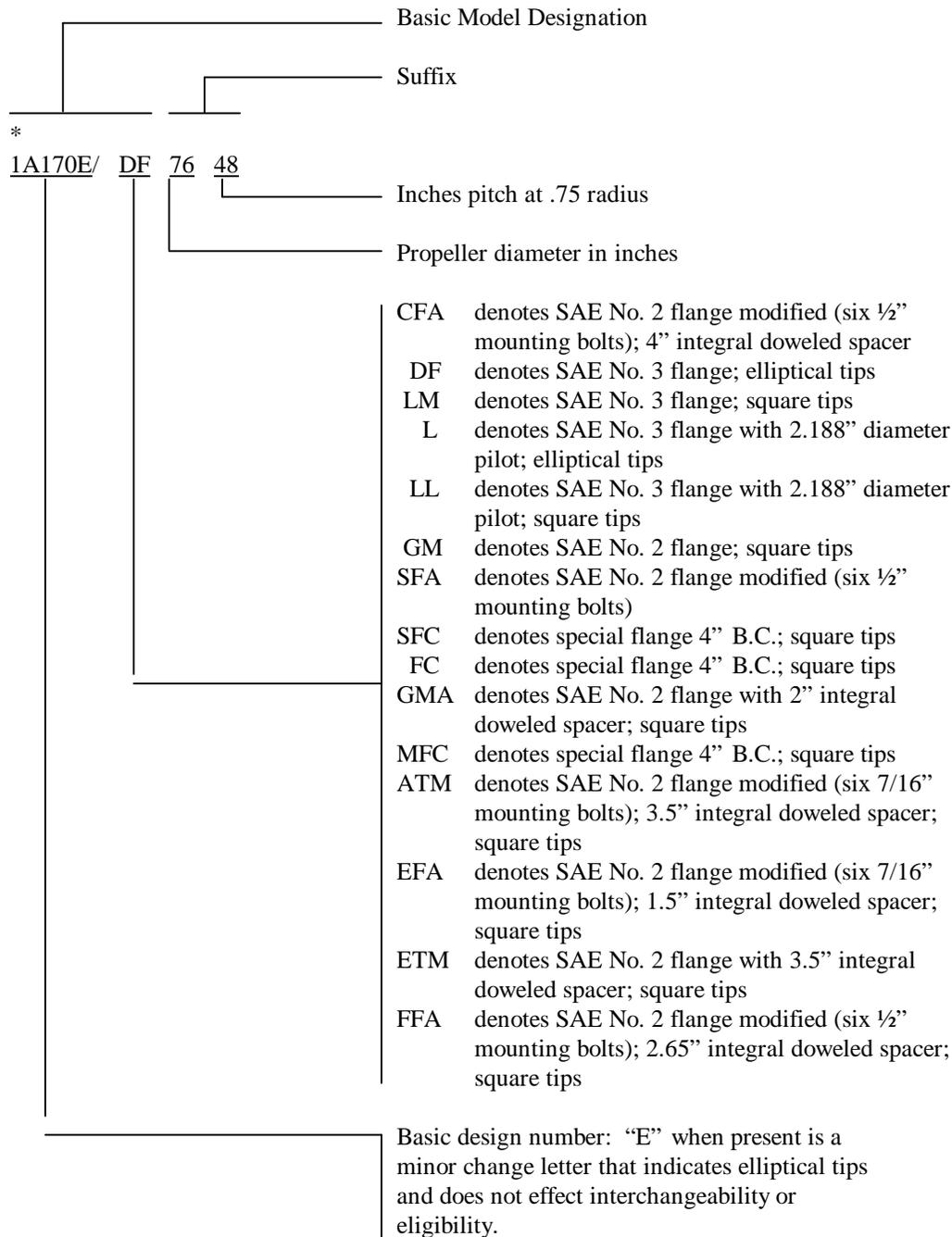
Propeller model 1A175/ETM is for use on SAE #2 flanged propeller shaft with McCauley P/N C-4516 spacer and must be installed in accordance with McCauley Drawing B-4518.

Propeller model 1A170/FFA is for use on modified SAE #2 flanged propeller shaft with McCauley P/N B-4273 spacer and must be installed in accordance with McCauley Drawing C-4280.

Propeller models 1A170/JFA and 1A170/JHA are for use on modified SAE #2 flanged propeller shaft with McCauley P/N C-5464 spacer and must be installed in accordance with McCauley Drawing C-5465.

Propeller model 1A170/KFA is for use on modified SAE #2 flanged propeller shaft with McCauley P/N B-4273 spacer and must be installed in accordance with McCauley Drawing C-5448.

NOTE 2. Propeller Model Designation. The propeller model designation consists of a series of numbers suffixed to the basic design number to indicate propeller diameter and geometric pitch at the .75 radius.



* Some propellers of these models may have been marked with a hyphen following the basic design number in lieu of a diagonal line (i.e. 1A170-DF7648)

NOTES 3, 4, and 5. Not applicable.

NOTE 6. Interchangeable Propellers. Propellers of the same basic design number with square or elliptical tips are sufficiently similar aerodynamically and vibrationwise to permit interchangeability in the same diameter and static r.p.m. without a flight test.

NOTE 7. Accessories.

(a) Spinners.

- (1) Model 1A170/CFA eligible with McCauley spinner consisting of D-3876 dome, C-3877 front bulkhead and C-3878 rear bulkhead assembled and installed in accordance with McCauley Drawing D-3875.

NOTE 8. Not applicable.

NOTE 9.

Table of Propeller-Engine Combinations
Approved Vibrationwise for Use on Normal Category Single-Engine Tractor Aircraft

The maximum and minimum propeller diameters that can be used from a vibration standpoint are shown below. No reduction below the minimum diameter listed is permissible since this figure includes the diameter reduction allowable for repair purposes.

<u>Propeller Model</u>	<u>Engine Model</u>	<u>Max. Dia. (Inches)</u>	<u>Min. Dia. (Inches)</u>	<u>Placards</u>
1A170/DM	Continental C-125-2	73	71-1/2	None
1A170/DF 1A170/DM 1A170/SFC or 1A175/DM	Continental C-145 Series and Continental O-300 Series up to 145 hp. and 2700 r.p.m.	80	73	None
1A170/DF or 1A170/DM	Franklin 6A4-150-B3	76	74	Avoid cont. engine operation between 2100 and 2300 r.p.m.
1A170/SFC	Franklin 6A-150-B4	76	74	Avoid continuous operation between 2100 and 2300 r.p.m.
1A170/DF or 1A170/DM	Franklin 6A-165-B3	76	74	Avoid cont. engine operation between 2150 and 2250 r.p.m.
1A170/SFC	Franklin 6A4-165-B4	76	74	Avoid continuous operation between 2150 and 2250 r.p.m.
1A170/DF 1A170/DM 1A170/GM 1A170/L or 1A170/LL	Lycoming O-290 Series up to 135 hp. and 2600 r.p.m.	76	70	None
1A170/GM	Lycoming O-320 Series up to 160 hp. and 2700 r.p.m.	78	70	None

<u>Propeller Model</u>	<u>Engine Model</u>	<u>Max. Dia. (Inches)</u>	<u>Min. Dia. (Inches)</u>	<u>Placards</u>
1A170/CFA 1A170/EFA or 1A170/SFA	Lycoming O-360 Series up to 180 hp. and 2700 r.p.m.	78	74	None
1A175/GM	Lycomng O-290 Series up to 135 hp. and 2600 r.p.m.	82	78	None
1A175/GM or 1A175/GMA	Lycoming O-320 Series up to 160 hp. and 2700 r.p.m.	82	78	None
1A175/SFC	Continental C-145 Series up to 145 hp. and 2700 r.p.m. Continental O-300 Series up to 145 hp. and 2700 r.p.m.	80	73	None
1A175/FC	Continental GO-300-A	84	78	None
1A175/GMA 1A175/ATM or 1A175/ETM	Lycoming O-320 and IO-320 Series up to 160 hp. and 2700 r.p.m.	82	78	None
1A170/FFA	Lycoming O-360 Series up to 180 hp. and 2700 r.p.m.	75	74.5	“ Avoid continuous operation while descending between 1850 and 2250 r.p.m.”
1B175/MFC	Continental GO-300-A	84	78	None

NOTE 10. The word “eligible” as used herein does not signify approval. For approval, compliance with the applicable aircraft airworthiness requirements is necessary.

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