

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

A-773  
Bellanca  
Revision 10  
14-13  
14-13-2  
14-13-3  
14-13-3W  
  
October 1, 1973

AIRCRAFT SPECIFICATION NO. A-773

Type Certificate Holder                      Bellanca Aircraft Corporation  
New Castle, Delaware 19720

I - Models 14-13, 4 PCLM, Approved September 25, 1946; 14-13-2, 4 PCLM, Approved June 2, 1947; 14-13-3, 4 PCLM and 14-13-3W, 2 pclm, Approved October 25, 1948.

Model 14-13-2 same as 14-13 except for increased areas of stabilizer and elevators, decreased tip fin area, revised wood construction and revised elevator stops. Model 14-13-3 same as 14-13-2 except for dual landing lights in left wing leading edge, revised oleo struts and nut crackers, adjustable front seat backs and revised instrument panel. Model 14-13-3W same as 14-13-3 except for removal of rear seats.

Engine	Franklin 6A4-150-B3		
Fuel	80 min. grade aviation gasoline.		
Engine limits	For all operations, 2600 r.p.m. (150 hp)		
Airspeed limits	Level flight or climb	160 m.p.h.	(139 knots)
(True Ind)	Glide or dive	216 m.p.h.	(187 knots)
	Flaps extended	85 m.p.h.	( 74 knots)
C.G. range (landing gear extended)	14-13: (+16.2) to (+23.6)		
	14-13-2, 14-13-3, 14-13-3W: (+16.2) to (+24.5)		
Empty weight C.G. range	None.		
Datum	Leading edge of wing at rib No. 1. Rib No. 1 is 24 .in. outboard from fuselage center line.		
Leveling means	Horizontal lugs, sta. 1 and 2. Vertical lugs, sta. 3.		
Maximum weight	14-13: 2100 lb.		
	14-13-2, 14-13-3, 14-13-3W: 2150 lb.		
No. seats	4 (Two at +18 or +20, Two at +50.5).		
Maximum baggage	60 lb. (+69). When baggage compartment per Dwg. 15086 is installed, maximum is 110 lb. (+80.5). In case of 14-13-3W station wagon compartment maximums are:		
	Fwd. comp't: 260 lb. (+35)		
	Aft. comp't: 413 lb. (+55)		
Fuel capacity	40 gal. (+29)		
Oil capacity	2 gal. (-36)		
Control surface movements			
	14:13	Elevator - landing gear up	18° up      19° down
		- landing gear down	23° up      19° down
		Elevator trim tab	12° up      22° down
		Rudder	18° left     18° right
		Aileron	28° up      22° down
		Flaps	46° down
	14-13-2, 14-13-3, and 14-13-3W:		
		Elevator	19° up      19° down
		Elevator trim tab	12° up      22° down
		Rudder	18° right    18° left
		Aileron	25° up      19° down
		Flaps	46° down

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Serial Nos. eligible	1060 and up. Serial numbers 1060 through 1385 are Model 14-13. Serial numbers 1386 through 1583 are Model 14-13-2. Serial numbers 1584 and up are Model 14-13-3 and 14-13-3W. Serial numbers 1060 through 1385 are eligible as Model 14-13-2 providing they are revised to conform to Bellanca Dwg. 9989, 9995, 9996 and 9918 and proper control surface movements.
Required equipment	In addition to the pertinent required basic equipment specified in CAR 4a, the following items of equipment must be installed: Landplane: Items 1, 103, 104, 105, 201(a), 202(a), 204(a). Skiplane: Items 1, 103, 104, 105, 208(a).

Specifications Pertinent to all Models

Certification basis	Type Certificate No. 773 (CAR 4a)
Production basis	None.
Equipment:	A Plus (+) or minus (-) sign preceding the weight of an item indicates net weight change when that item is installed.

Propellers and Propeller Accessories:

1. Propeller-Sensenich 74RA or any other fixed pitch wood propeller rated for required hp and rpm and following limits: 20 lb. (-56)  
Static rpm at maximum permissible throttle setting:  
Not over 2100, not under 2000. No additional tolerance permitted.  
Diameter: Not over 74 in., not under 72.5 in.
2. (a) Propeller-Koppers Aeromatic Hub F200, blades 00-74A, 00-74B or 00-74C. 31 lb. (-56)  
Parts List Assembly No. 4275.  
Low pitch setting 14° at 24 in. sta.  
Static rpm at maximum permissible throttle setting:  
Not over 2550, not under 2500. No additional tolerance permitted.  
Diameter: Not over 74 in., not under 72.5 in.  
Installation must be accomplished in accordance with Koppers  
"Installation Procedure and Operating Limitation No. 1B"  
(Without Altitude Control).
- (b) Altitude Control, (optional) Parts List Assembly No. 4379 6 lb. (-44)  
When Altitude Control is installed, the propeller installation  
must be made in accordance with Koppers Company Adjustment  
Instructions and Operating Limitations No. 54, Koppers Installation  
Dwg. No. 4275H and the engine must be modified in accordance with  
Aircooled Motors Corporation Dwg. Nos. 18487, 18218 and SK-582-6.
- (c) Propeller - Kopper Aeromatic Hub F200, blades 00-74B or 00-74C 31 lb. (-56)  
Parts List Assembly No. 4275-1  
Low pitch setting 14° at 24 in. sta., High pitch setting 26°  
Static rpm at maximum permissible throttle setting:  
Not over 2650, not under 2600. No additional tolerance permitted.  
Diameter: Not over 74 in., not under 72.5 in.  
Installation must be accomplished in accordance with Koppers  
"Installation Procedure and Operating Limitations No. 84"  
(Without Altitude Control)  
Eligible only with item 110 engine. Tachometer must be red-lined at 2650 rpm.

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|----|--|---------------------------------|
| 3. | Propeller - Sensenich, Controllable; Hub model CS3FR5, blade model PC376B4-2. (eligible with Item 110 engine only)<br>Pitch settings at 3/4 radius: Low 13°; High 19.5°.<br>Diameter: Not over 74 in., not under 72.5 in.  | 37 lb. (-56)                    |
| 4. | Propeller - Koppers Aeromatic; Hub F200H; Blades 00-74B<br>Parts List Assembly No. 4275AH-1<br>Altitude Control Parts List Assembly No. 4370<br>Low pitch setting 14° at 24 in. sta.<br>Static rpm at max. permissible throttle setting:<br>Not over 2650, not under 2600. No additional tolerance permitted.<br>Diameter: Not over 74 in., not under 72.5 in.<br>Installation must be accomplished in accordance with Koppers,<br>"Adjustment Instructions and Operating Limitations No. 65"<br>(Eligible only with Item 110 engine. Tachometer must be red-lined at 2650 rpm). | 31 lb. (-56)<br><br>6 lb. (-44) |

Engine and Engine Accessories - Fuel and Oil System

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|------|---|-------------------------|
| 101. | Starter - Delco-Remy, part No. 10750  | 16 lb. (-26)            |
| 102. | Generator - Autolite, part No. 10119 (15 amp)   | 12 lb. (-24)            |
| 103. | Fuel pump - A.C. diaphragm type, part No. 11921   | 2 lb. (-31)             |
| 104. | Oil cooler - Fedders (1311H) or heat exchangers (102)   | 6 lb. (-30)             |
| 105. | Carburetor heater   | 2 lb. (-30)             |
| 106. | Fuel strainer - Koehler K2250-B   |                         |
| 107. | Two mufflers - Kay Industries - (Bellanca Dwg. 15062)   | +1 lb. ea. (-34)        |
| 108. | Generator - Delco-Remy 25 amp., part No. 1101887  | +4 lb. (-24)            |
| 109. | Oil filter - Fram PB5, kit No. K-501<br>Fram Installation Dwg. 61627  | 5 lb. (-19)             |
| 110. | Engine - Franklin, 6A4-165-B3<br>Engine limits - 2800 rpm (165 hp)<br>Fuel - 80 minimum octane aviation gasoline<br>(Eligible with Item 2(c), 3 and 4 propellers only)<br>Installation eligible only when original basic Franklin<br>6A4-150-B3 engine installation components utilized with<br>no changes to aircraft structure. | (Negligible wt. change) |

Landing Gear

- |      |  |   |
|------|--|---|
| 201. | Two main wheel-brake assemblies, 6.00-6, Type III,<br>(a) Goodyear Model 6 IBD,<br>Wheel Assembly No. 511413-M<br>Brake Assembly No. 511640-M<br>(b) Goodrich Model 605MD,<br>Wheel Assembly No. D-3-105-MD<br>Brake Assembly No. D-2-524<br>(c) Firestone Model DFA207,<br>Wheel Assembly No. DFA180<br>Brake Assembly No. CFA252<br>(d) Goodyear Model CL6HBD (Castering wheels)<br>Wheel Assembly No. 9530375/76<br>Brake Assembly No. 9530369/68<br>(Install in accordance with Bellanca Dwg. 18224) | 15 lb. (+8)<br><br>No weight change<br><br>-1 lb. (+8)<br><br>31 lb. (+8) |
| 202. | Two main wheel, 4-ply rating, Type III tires, with regular tubes,<br>(a) 6.00-6<br>(b) 7.00-6  | 18 lb. (+8)<br>+3 lb. (+8)  |

- 204. Tail Wheel Assembly
  - (a) Firestone Model CFA160, 6x2.00 2 lb. (+192)
  - (b) Same as (a), steerable per Bellanca Dwgs. 15085 and 15091 +4 lb. (+192)
  - (c) Maule Hub and Axle Model SFS-P8 Use actual wt. change  
General Tire 8.00 SC per Bellanca Dwg. 18222
- 208. Two Main Skis Use actual wt. change
  - (a) Federal Model A2500, Federal Installation Dwg. 11R185
  - (b) Federal Model A2500A, Federal Installation Dwg. 11R185
  - (c) Federal Model A3500, Federal Installation Dwg. 11R185
  - (d) Federal Model A3500A, Federal Installation Dwg. 11R185
- 210. One Tail Ski Use actual wt. change  
Federal Model AT-3500
- 211. Electric landing gear retraction installation per Bellanca +7 lb. (+18.5)  
Dwg. No. 15103

Electrical and Radio Equipment

- 301. Battery - Reading R-24L 24 lb. (-17)
- 302. Radio equipment 12 lb. (-11)
- 303. Antenna and mast 1 lb. (+6)
- 304. Landing light - Grimes ST-250 3 lb. (+21)
- 305. Dual landing light installation - G.E. No. 4509 2 lb. (+9)

Interior Equipment

- 401. Flares (5 one-minute, International) 17 lb.

NOTE 1. Current weight and balance report including list of equipment included in certificated weight empty, and loading instructions when necessary, must be in each aircraft at the time of original certification at all times thereafter (except in the case of air carrier operators having an approved weight control system).

NOTE 2. The following placards must be installed in full view of the pilot:  
(a) "Intentional Spinning Prohibited."  
(b) "Front seats must be occupied when used as three place."  
(Applicable to Model 14-13).

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