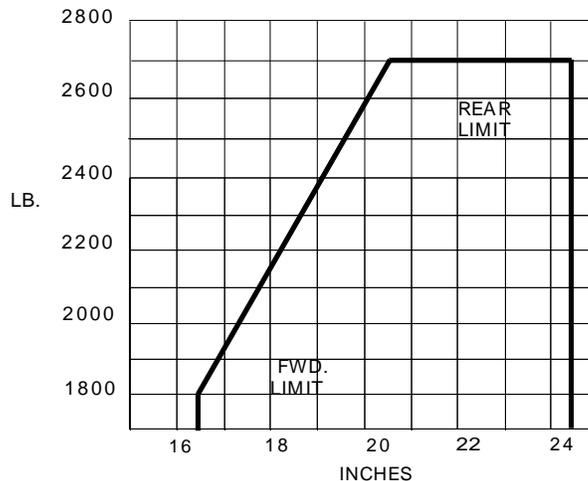


I - Model 14-19 (con'd)

No. of seats	4 (2 at +20, 2 at +53)		
Maximum baggage		Normal Category	Utility Category
	Without auxiliary fuel tank	198 lb. (+84)	171 lb. (+84)
	With empty auxiliary fuel tank (item 104) (see loading schedule)	186 lb. (+84)	159 lb. (+84)
Fuel capacity	Main wing tanks 40 gal. (+29). See items 104, 105 and 106 for auxiliary tanks.		
Oil capacity	12 qt. (-35)		
Control surface movements (within $\pm 1^\circ$)	Elevator trim tab	Up 12° Down 29°	
	Elevator	Up 22° Down 15°	
	Aileron	Up 20° Down 20°	
	Rudders	Right 22° Left 22°	
	Flaps	Down 46°	
Serial Nos. eligible	2000, 2002 thru 4000		
Required equipment	Items 1 or 2, 102, 103, 110(c), 201, 202(a), 204(a) and 401(a)		

II - Model 14-19-2, 4 PCLM (Normal Category), Approved January 7, 1957

Engine	Continental O-470-K		
Fuel	80/87 minimum grade aviation gasoline		
Engine limits	For all operations, 2600 r.p.m. (230 hp.)		
Airspeed limits	Never exceed	226 m.p.h. (197 knots)	True Ind.
	Maximum structural cruising	167 m.p.h. (145 knots)	True Ind.
	Maneuvering	115 m.p.h. (100 knots)	True Ind.
	Flaps extended	86 m.p.h. (75 knots)	True Ind.
	Landing gear extended	167 m.p.h. (145 knots)	True Ind.
	Landing gear operation	124 m.p.h. (108 knots)	True Ind.
C.G. range (landing gear extended)	(+20.5) to (+24.4) at 2700 lb. (+16.4) to (+24.4) at 1800 lb. or less Straight line variation between points given		



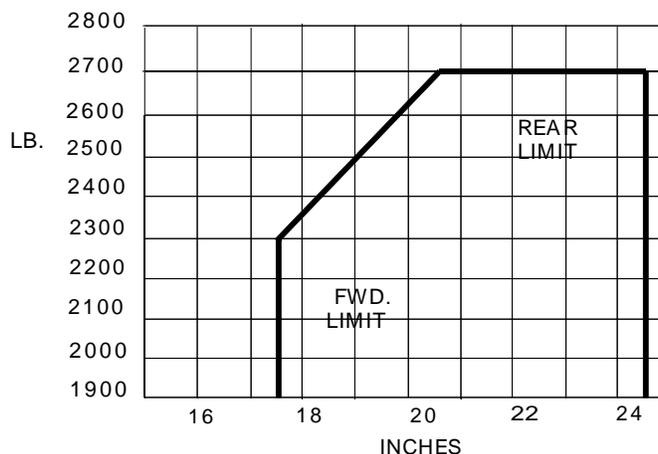
Empty weight C.G. range	None		
Maximum weight	2700 lb.		
No. of seats	4 (2 at +20, 2 at +53)		
Maximum baggage (see loading schedule)	Without auxiliary fuel tank:	198 lb. (+84)	
	With empty auxiliary fuel tank (item 105):	186 lb. (+84)	

II - Model 14-19-2 (cont'd)

Fuel capacity	Main wing tanks 40 gal. (+29). See item 105 or item 112 for auxiliary tank and NOTE 1 for data on system fuel.
Oil capacity	12 qt. (-35), 7 qt. usable. See NOTE 1 for data on system oil.
Control surface movements (within $\pm 1^\circ$)	Elevator trim tab Up 12° Down 29° Elevator Up 22° Down 15° Aileron Up 20° Down 20° Rudders Right 22° Left 22° Flaps Down 46°
Serial Nos. eligible	4001 thru 4105
Required equipment	Items 3 or 4, 107, 108, 201, 202(a), 204(a), 401(b) or (c) and 403

III - Model 14-19-3, 4 PCLM (Normal Category), Approved February 20, 1959

Engine	Continental IO-470-F
Fuel	100/130 minimum grade aviation gasoline
Engine limits	For all operations, 2625 r.p.m. (260 hp.)
Airspeed limits	Never exceed 226 m.p.h. (197 knots) CAS Maximum structural cruising 167 m.p.h. (145 knots) CAS Maneuvering 115 m.p.h. (100 knots) CAS Flaps extended 110 m.p.h. (96 knots) CAS Landing gear extended 167 m.p.h. (145 knots) CAS Landing gear operation 124 m.p.h. (108 knots) CAS
C.G. range (landing) gear extended)	(+20.5) to (+24.4) at 2700 lb. (+17.5) to (+24.4) at 2200 lb. or less Straight line variation between points given

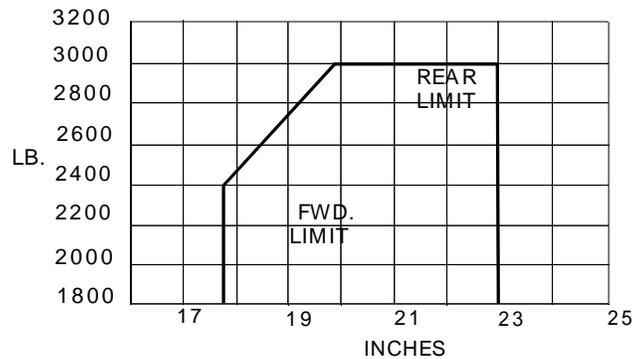


Empty weight C.G. range	None
Maximum weight	2700 lb.
No. of seats	4 (2 at +20, 2 at +53)
Maximum baggage	186 lb. (+84). (See loading schedule).
Fuel capacity	Main wing tanks 39.2 gal. (+29). See item 112 for auxiliary tank and NOTE 1 for data on system fuel.
Oil capacity	12 qt. (-35), 7 qt. usable. See NOTE 1 for data on system oil.
Control surface movements (within $\pm 1^\circ$)	Elevator trim tab Up 12° Down 29° Elevator Up 22° Down 15° Aileron Up 20° Down 20° Rudder Right 22° Left 22° Flaps Down 46°
Serial Nos. eligible	4106 thru 4228
Required equipment	Items 5 or 6, 107, 108, 201(c) or (d), 202(a) or (c), 205(a), (b) or (e) and (c) or (d) or 205(f) and (g), 401(d) and 403

IV - Model 14-19-3A, 4 PCLM (Normal Category), Approved March 1, 1963

Engine	Continental IO-470-F	
Fuel	100/130 minimum grade aviation gasoline	
Engine limits	For all operations, 2625 r.p.m. (260 hp.)	
Airspeed limits	Never exceed	226 m.p.h. (197 knots) CAS
	Maximum structural cruising	190 m.p.h. (165 knots) CAS
	Maneuvering	142 m.p.h. (123 knots) CAS
	Flaps extended	120 m.p.h. (104 knots) CAS
	Landing gear extended	167 m.p.h. (145 knots) CAS
	Landing gear operation	140 m.p.h. (122 knots) CAS

C.G. range (landing gear extended)	(+19.8) to (+23.0) at 3000 lb.
	(+17.75) to (+23.0) at 2350 lb. or less
	Straight line variation between points given



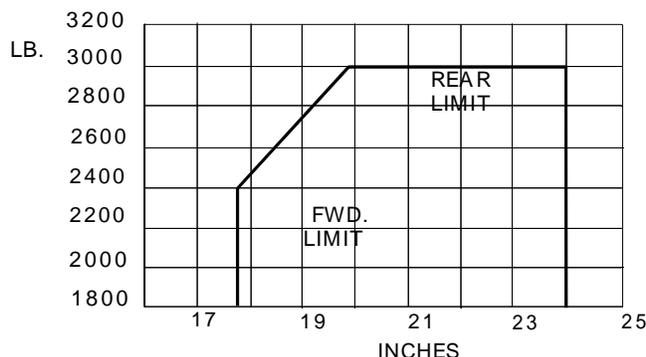
Empty weight C.G. range	None	
Maximum weight	3000 lb.	
No. of seats	4 (2 at +20, 2 at +53)	
Maximum baggage	186 lb. (+84). (See loading schedule).	
Fuel capacity	58 gal. usable (2 wing tanks 19 gal. each at +29, and 1 auxiliary tank in fuselage 20 gal. at +72). See item 113 for optional auxiliary tanks in outboard wing panels and NOTE 1 for data on system fuel.	
Oil capacity	12 qt. (-35), 7 qt. usable. See NOTE 1 for data on system oil.	
Control surface movements (within $\pm 1^\circ$)	Elevator trim tab	Up 7° Down 34.5°
	Elevator	Up 22° Down 15°
	Aileron	Up 20° Down 20°
	Rudder	Right 22° Left 22°
	Flaps	Down 46°
Serial Nos. eligible	4229 thru 4342	
Required equipment	Items 7, 107, 108, 201(c) or (d), 202(a) or (c), 205(f) and (h), 401(e) and 403	

V - Model 17-30, 4 PCLM (Normal Category), Approved September 23, 1966

Engine	Continental IO-520-D	
Fuel	100/130 minimum grade aviation gasoline	
Engine limits	Takeoff: 2850 r.p.m. (300 hp.) (5 min. maximum)	
	Max. continuous operation: 2700 r.p.m (285 hp.)	
Airspeed limits	Never exceed	226 m.p.h. (197 knots) CAS
	Maximum structural cruising	190 m.p.h. (165 knots) CAS
	Maneuvering	142 m.p.h. (123 knots) CAS
	Flaps extended	120 m.p.h. (104 knots) CAS
	Landing gear extended	167 m.p.h. (145 knots) CAS
	Landing gear operation	140 m.p.h. (122 knots) CAS

V - Model 17-30 (cont'd)

C.G. range (landing gear extended) (+19.8) to (+24.0) at 3000 lb.
(+17.75) at 2400 lb. or less
Straight line variation between points given

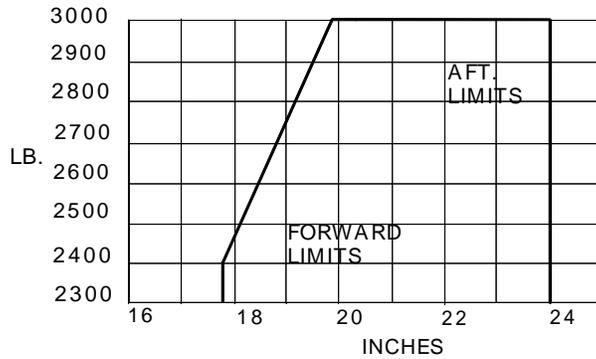


Empty weight C.G. range	None																									
Maximum weight	3000 lb. (See NOTE 4 for 3200 lb. airplanes)																									
No. of seats	4 (2 at +20, 2 at +53)																									
Maximum baggage	186 lb. (+84), 35 lb. min. (See loading schedule).																									
Fuel capacity	58 gal. usable (2 wing tanks, 19 gal. ea. at +29, and 1 auxiliary tank in fuselage 20 gal. at +72). See item 113 for optional auxiliary tanks in outboard wing panels and NOTE 1 for data on system fuel.																									
Oil capacity	12 qt. (-41), 6.3 qt. usable. See NOTE 1 for data on system oil.																									
Control surface movements (within $\pm 1^\circ$)	<table border="0"> <tr> <td>Elevator trim tab</td> <td>Up</td> <td>7°</td> <td>Down</td> <td>34.5°</td> </tr> <tr> <td>Elevator</td> <td>Up</td> <td>22°</td> <td>Down</td> <td>15°</td> </tr> <tr> <td>Aileron</td> <td>Up</td> <td>20°</td> <td>Down</td> <td>20°</td> </tr> <tr> <td>Rudder</td> <td>Right</td> <td>22°</td> <td>Left</td> <td>22°</td> </tr> <tr> <td>Flaps</td> <td></td> <td></td> <td>Down</td> <td>46°</td> </tr> </table>	Elevator trim tab	Up	7°	Down	34.5°	Elevator	Up	22°	Down	15°	Aileron	Up	20°	Down	20°	Rudder	Right	22°	Left	22°	Flaps			Down	46°
Elevator trim tab	Up	7°	Down	34.5°																						
Elevator	Up	22°	Down	15°																						
Aileron	Up	20°	Down	20°																						
Rudder	Right	22°	Left	22°																						
Flaps			Down	46°																						
Serial Nos. eligible	30001 thru 30262 excluding 30004																									
Required equipment	Items 8 or 9 or 10 or 11, 101(d) or (f), 107(c) or (d) or (g), 108(b), 110(c), 111(a), 201(d), 202(c), 205(f) and (h), 301(c) or 304(b), 302(f) or (g), 401(f) and 403.																									

VI - Model 17-31TC, 4 PCLM (Normal Category), Approved February 20, 1969

Engine	Lycoming IO-540-G1E5, with two (2) Rajay Model 315A10-2 Turbochargers per STC SE6WE	
Fuel	100/130 minimum grade aviation gasoline	
Engine limits	Non turbo charged: all operations 2575 RPM (290 hp.) Turbo charged: all operations 2400 RPM 27.0 in. Hg (250 hp) Turbocharger used only with throttle full open Minimum turbocharger - 2200 RPM	
Maximum operating Altitude	24,000 ft with oxygen	12,000 ft. without oxygen
Airspeed limits	Never exceed 226 m.p.h. (197 knots) CAS	
Below 15,000 ft.	Maximum structural cruising	190 m.p.h. (165 knots) CAS
	Maneuvering	142 m.p.h. (123 knots) CAS
	Flaps extended	120 m.p.h. (104 knots) CAS
	Landing gear extended	167 m.p.h. (145 knots) CAS
	Landing gear operation	140 m.p.h. (122 knots) CAS
Above 15,000 ft. Same as below 15,000 ft. except	Never exceed	200 m.p.h. (174 knots) CAS
	Maximum structural cruising	165 m.p.h. (144 knots) CAS
C.G. range (landing gear extended)	(+19.8) to (+24.0) at 3000 lb. (+17.75) to (+24.0) at 2400 lb. or less Straight line variation between points given	

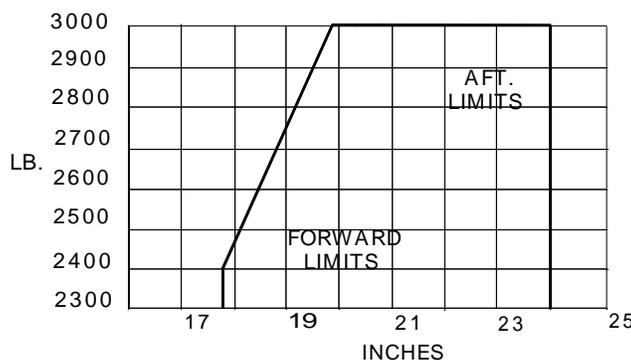
VI - Model 17-31TC (cont'd)



Empty weight C.G. range	None		
Maximum weight	3000 lb. (See NOTE 4 for 3200 lb. airplanes)		
No. of seats	4 (2 at +20, 2 at +53)		
Maximum baggage	166 lb. max. (+84), 35 lb. min. (See loading schedule).		
Fuel capacity	72 gal. usable (2 wing tanks, 19 gal. ea. at +29, and 2 auxiliary tanks in wing, 17 gal. each at +29). See NOTE 1 for data on unusable fuel.		
Oil capacity	12 qt. (-42), 9 1/4 qt. usable. See NOTE 1 for data on undrainable oil.		
Control surface movements (within $\pm 1^\circ$)	Elevator trim tab	Up 7°	Down 34.5°
	Elevator	Up 22°	Down 15°
	Aileron	Up 20°	Down 20°
	Rudder	Left 22°	Right 22°
	Flaps		Down 46°
Serial Nos. eligible	31001 thru 31003		
Required equipment	Items 12, 101(e), 107(e), 107(f) or (g), 108(c), 111(a), 113, 114, 201(e), 202(d), 205(b) and (j), 302(g), 304, 401(g) and 403. Item 404 is required for flight above 12,000 ft.		

VII - Model 17-31, 4 PCLM (Normal Category), Approved April 29, 1969.

Engine	Lycoming IO-540-G1B5 (except IO-540-G1E5 for S/N 32-1 only)		
Fuel	100/130 minimum grade aviation gasoline		
Engine limits	All operations 2575 RPM (290 hp)		
Airspeed limits	Never exceed	226 m.p.h.	(197 knots) CAS
	Maximum structural cruising	90 m.p.h.	(165 knots) CAS
	Maneuvering	142 m.p.h.	(123 knots) CAS
	Flaps extended	120 m.p.h.	(104 knots) CAS
	Landing gear extended	167 m.p.h.	(145 knots) CAS
	Landing gear operation	140 m.p.h.	(122 knots) CAS
C.G. range (landing gear extended)	(+19.8) to (+24.0) at 3000 lb.		
	(+17.75) TO (+24.0) at 2400 lb. or less		
	Straight line variation between points given		



VII - Model 17-31 (cont'd)

Empty weight C.G. range	None																									
Maximum weight	3000 lb. (See NOTE 4 for 3200 lb. airplanes)																									
No. of seats	4 (2 at +20, 2 at +53)																									
Maximum baggage	166 lb. max. (+84), 35 lb. min. (See loading schedule).																									
Fuel capacity	58, 72 or 92 gal. (2 wing tanks, 19 gal. each at +29), plus [item 112 (20 gal. at +72) or item 113 (2-17 gal. each at +29)] or [items 112 and 113 (92 gal.)]. See NOTE 1 for data on unusable fuel.																									
Oil capacity	12 qt. total (-42), 9 1/4 qt. usable. See NOTE 1 for data on undrainable oil.																									
Control surface movements (within -1°)	<table> <tr> <td>Elevator trim tab</td> <td>Up</td> <td>7°</td> <td>Down</td> <td>34.5°</td> </tr> <tr> <td>Elevator</td> <td>Up</td> <td>22°</td> <td>Down</td> <td>15°</td> </tr> <tr> <td>Aileron</td> <td>Up</td> <td>20°</td> <td>Down</td> <td>20°</td> </tr> <tr> <td>Rudder</td> <td>Left</td> <td>22°</td> <td>Right</td> <td>22°</td> </tr> <tr> <td>Flaps</td> <td></td> <td></td> <td>Down</td> <td>46°</td> </tr> </table>	Elevator trim tab	Up	7°	Down	34.5°	Elevator	Up	22°	Down	15°	Aileron	Up	20°	Down	20°	Rudder	Left	22°	Right	22°	Flaps			Down	46°
Elevator trim tab	Up	7°	Down	34.5°																						
Elevator	Up	22°	Down	15°																						
Aileron	Up	20°	Down	20°																						
Rudder	Left	22°	Right	22°																						
Flaps			Down	46°																						
Serial Nos. eligible	32-1 thru 32-14																									
Required equipment	Items 12, 101(e), 107(e), 107 (g), 108(c), 112 or 113, 111(b), 114, 201(e), 202(d), 205(b) and (j), 302(g), 304(a), 401(h) and 403.																									

Specifications Pertinent to All Models

Datum	Leading edge of Rib No. 1 (23.5 in. outboard of airplane center line). For reference: (1) Datum is 10.75 in. forward of fuselage station 2; (2) Forward face of firewall is 17.05 in. forward of datum, when aircraft is leveled.
Leveling means	Lugs at fuselage stations 2 and 3 in cabin on right side (wing spar station).
Certification basis	<p>Model 14-19: Part 03 of the Civil Air Regulations dated December 15, 1946</p> <p>Model 14-19-2: Part 03 of the Civil Air Regulations dated December 15, 1946 as amended by 03-1 through 03-4</p> <p>Model 14-19-3: Part 03 of the Civil Air Regulations dated December 15, 1946 as amended by 03-1 thru 03-4; plus amendment 3-4 (paragraphs 3.80, 3.84A, 3.85a, 3.87, 3.112(c), 3.120 and 3.124(a) only) and amendment 3-6 to CAR 3 dated November 1, 1949</p> <p>Model 14-19-3A: Same as Model 14-19-3 plus amendments 3-7 and 3-13 (paragraph 3.74 only) to CAR 3 dated November 1, 1949 and amendment 3-2 (paragraph 3.75(c) only) to CAR 3 dated May 15, 1956</p> <p>Model 17-30: Same as Model 14-19-3A</p> <p>Model 17-31: Same as Model 14-19-3A</p> <p>Model 17-31TC: Same as Model 17-31 plus amendment 3-5 paragraph 3.638(a) only) to CAR 3 dated May 15, 1956</p> <p>Type Certificate No. 1A3 issued September 26, 1949</p>
Production basis	None. Prior to original certification of each aircraft an FAA representative must perform a detailed inspection for workmanship, materials and conformity with the approved technical data, and a check of the flight characteristics.

Equipment: A plus (+) or minus (-) sign preceding the weight of an optional item indicates the net weight change when that item is installed.

Propellers and Propeller Accessories

	<u>14-19</u>	<u>14-19-2</u>	<u>14-19-3</u>	<u>14-19-3A</u>	<u>17-30</u>	<u>17-31TC</u>	<u>17-31</u>
1. (a) Propeller - Koppers Aeromatic, hub model 220-1, blade model 0-74A, Parts list Assembly 4329-1. Installed in accordance with Koppers Co. Adjustment Instructions and Operating Limitations No. 31 Pitch settings at 30 in. sta. Low 12.5° Static r.p.m. at maximum permissible throttle setting not over 2500, not under 2450. No additional tolerance permitted. 51 lb. (-58)	x						
(b) Koppers Aeromatic Altitude Control Assembly 4349-L 11 lb. (-50)	x						
2. Propeller - Hartzell controllable							
(a) Hub model HC-12x20-8, blade model 8428-6 Pitch settings at 30 in. sta. Low 9.2°, high 21.8° Diameter not over 78 in., not under 75 in. 68 lb. (-58)	x						
(b) Hub model HC-12x20-8C, blade model 8433-6 Pitch settings at 30 in. sta. Low 11°, high 22° Diameter not over 78 in., not under 76.5 in. 61 lb. (-58)	x						
(c) Hartzell propeller control 1 lb. (-6)	x						
3. Propeller - Hartzell Constant Speed							
(a) Hub model HC-82XF-1, blade model 8433-6 Pitch settings at 30 in. sta. Low 12-1/2°, high 25-1/2° Diameter not over 78.5 in., not under 78 in. 62 lb. (-58)		x					
(b) Governor, Woodward D210105 or D210340 4 lb. (-49)		x					
(c) Spinner, Hartzell 835-3 3 lb. (-58)		x					
4. Propeller - McCauley Constant Speed							
(a) Hub model 2A36C18,, blade model 90M-12 Pitch settings at 36 in. sta. Low 10°, high 23° Diameter not over 78 in., not under 76 in. 62 lb. (-58) Supplement to Item 401(b) dated July 11, 1957 required		x					x

<u>Propellers and Propeller Accessories (contd.)</u>	<u>14-19</u>	<u>14-19-2</u>	<u>14-19-3</u>	<u>14-19-3A</u>	<u>17-30</u>	<u>17-31TC</u>	<u>17-31</u>
(b) Governor, Woodward D210105 or D210345 4 lb. (-49)		x					
(c) Spinner and dome kit, McCauley AK8053-21 4 lb. (-58)		x					
5. Propeller - McCauley							
(a) Hub model B2A36C31, blade model 90M-8 Pitch settings at 36 in. sta. Low 11°, high 27.3° Diameter not over 82 in., not under 80 in. 60 lb. (-57.5)				x			
(b) Governor, Woodward D210105 or D210345 4 lb. (-49.5)							x
(c) McCauley spinner installation 3 lb. (-57.5)							x
(1) Kit AK8053-21 (McCauley B-2792) adapter ring or 0752004-5 bulk-head required with hub models in items 5(d) and 5(e)							
(2) D-2771 spinner installation (eligible with hub models in items 5(d) and 5(e) only)							
(d) Hub model D2A36C31, blade model 90M-8 Pitch settings at 36 in. sta. Low 11°, high 26.3° Diameter not over 82 in., not under 80 in. 60 lb. (-57.5) Revision to item 401(d) dated May 10, 1960, required							x
(e) Hub model D2A36C33, blade model 90M-8 Pitch settings at 36 in. sta. Low 10.8°, high 25.8° Diameter not over 82 in., not under 80 in. 60 lb. (-57.5) Revision to item 401(d) dated May 10, 1960, required							x
6. Propeller - Hartzell Constant Speed							
(a) Hub model HC-A2XF-1, blade model 8433-2 or -4 Pitch settings at 30 in. sta. Low 14°, high 27° Diameter not over 82 in., not under 80 in. 63 lb. (-57) Revision to item 401(d) dated November 24, 1959 required							x
(b) Governor, Woodward D210105 or D210340 4 lb. (-49)							x

<u>Propellers and Propeller Accessories</u> (cont'd.)	<u>14-19</u>	<u>14-19-2</u>	<u>14-19-3</u>	<u>14-19-3A</u>	<u>17-30</u>	<u>17-31TC</u>	<u>17-31</u>
(c) Spinner, Hartzell 835-13 4 lb. (-58)			x				
7. Propeller - Hartzell Constant Speed							
(a) Hub model HC-C2YF-1A, blade model 8468-4 Pitch settings at 30 in. sta. Low 13.4°, high 31° Diameter not over 80 in., not under 80 in. 51 lb. (-57)			x	x			
(b) Governor, Woodward H210452G 3 lb. (-49)			x	x			
(c) Spinner and dome - Hartzell 835-23 5 lb. (-58)			x	x			
8. Propeller - McCauley Constant Speed							
(a) Hub model D3A32C90, blade model 82NC-4 Pitch settings at 30 in. sta. Low 11.7±.2°, high 28.1±.5° Diameter not over 78 in., not under 76 in. 64 lb. (-63.5)				x	x		
(b) Governor, Woodward Model P210452G 3 lb. (-55)				x	x		
(c) Spinner and dome - McCauley model D3669 or D3867 5 lb. (-64)				x	x		
9. Propeller - McCauley Constant Speed							
(a) Hub model D2A34C58, blade model 90AT-10 Pitch settings at 36 in. sta. Low 8.2±0.1°, high 27.3±.5° Diameter not over 80 in., not under 78 in. 53 lb. (-63.5) Revision 1 to item 401(f) dated May 18, 1967 required						x	
(b) Governor, Woodward Model P210452G 3 lb. (-55)						x	
(c) Spinner and dome-McCauley Model D2771 or D3766 4.5 lb. (-64)						x	
10. Propeller - Hartzell Constant Speed							
(a) Hub model HC-C3YF-1, blade model 8468-8R Pitch settings at 30 in. sta. Low 10.0°, high 32.5° Diameter not over 78 in., not under 76 in. 76 lb. (-63.5) Revision 7 to item 401(f) dated August 10, 1968 required						x	
(b) Governor, Woodward P210452 3 lb. (-55)						x	
(c) Spinner and dome - Hartzell model C3535 4 lb. (-64)						x	

<u>Propellers and Propeller Accessories (cont'd.)</u>	<u>14-19</u>	<u>14-19-2</u>	<u>14-19-3</u>	<u>14-19-3A</u>	<u>17-30</u>	<u>17-31TC</u>	<u>17-31</u>
11. Propeller - Hartzell Constant Speed							
(a) Hub model HC-C2YF-1, blade model 8475-6 Pitch settings at 30 in. sta. Low 11.1°, high 36.2° Diameter not over 78 in., not under 76 in. 53 lb. (-63.5) Revision to item 401(f) dated August 10, 1968 required					x		
(b) Governor, Woodward Model P210452 3 lb. (-55)					x		
(c) Spinner and dome - Hartzell model C3533 4 lb. (-64)					x		
12. Propeller - Hartzell Constant Speed							
(a) Hub model HC-C3YR-1, blade model 468-6R Pitch settings at 30 in. sta. Low 13°, high 38° Diameter not over 80 in., not under 78 in. 75 lb. (-64)						x	x
(b) Governor, Woodward Model B210460 3 lb. (-55)						x	x
(c) Spinner and dome - Hartzell model C3552 4.5 lb. (-64)						x	x

Engine and Engine Accessories - Fuel and Oil Systems

101. (a) Starter, Delco-Remy model 1109652 18 lb. (-21)	x						
(b) Starter, Delco-Remy model 1109678 18 lb. (-21)		x	x	x			
(c) Starter, Delco-Remy model 1109684 18 lb. (-21)			x	x			
(d) Starter, Delco-Remy model 1108249 or 1109926 18 lb. (-21) 18 lb. (-27)					x		
(e) Starter-Prestolite model MZ4206 18 lb. (-51.5)						x	x
(f) Starter-Prestolite model MCL6501, CMC P/N 634592 18 lb. (-27)					x		
102. Fuel pump, AC Type AH No. 1539722 3 lb. (-20)	x						
103. Oil Cooler, Heat Exchangers, Inc. No. 102C 7 lb. (-45)	x						
104. Auxiliary fuel tank 25 gal. Eligible only when installed in accordance with Bellanca dwg. 18046 and 18175 12 lb. (+77) See NOTE 2(c) for placard required	x						

<u>Engines and Engine Accessories-Fuel (cont'd.) and Oil Systems</u>	<u>14-19</u>	<u>14-19-2</u>	<u>14-19-3</u>	<u>14-19-3A</u>	<u>17-30</u>	<u>17-31TC</u>	<u>17-31</u>
105. Auxiliary fuel tank 14 gal. Eligible only when installed in accordance with Bellanca dwg. 18183 and 18184 8 lb. (+70) See NOTE 2(d) for placard required	x	x					
106. Auxiliary fuel tanks, 32.5 gal.: One 14 gal. tank 8 lb. (+70) One 18.5 gal. tank 9 lb. (+77) eligible only when installed in accordance with Bellanca dwg. 18207 and 18199 and Airplane Flight Manual is revised to include pages 4 and 4(a) dated July 3, 1951 See NOTE 2(e) for placard required	x						
107. Fuel pumps							
(a) Engine-driven, Lear ROMEC RD-7420-A1 3 lb. (-20)		x					
(b) Hand emergency, AN-4009-D2 3 lb. (+2)		x					
(c) Electric Auxiliary fuel pump, Weldon 4020A2A 4 lb. (+6.5)			x	x	x		
(d) Electric auxiliary fuel pump, Bendix 480531 2 lb. (+18)					x		
(e) Engine driven fuel pump, Titan 4101B68, Type G6 2.5 lb. (+23.5)						x	x
(f) Electric auxiliary fuel pump, Lear ROMEC P2688-D 4 lb. (+18)						x	
(g) Electric auxiliary fuel pump, Airborne Mfg. Co. 286-9 4 lb. (+18)					x	x	x
(h) Engine-drive, Lear ROMEC RG17980D 2.5 lb. (-23.5)						x	x
108. (a) Oil radiator, Continental Motors P/N 8520912 5 lb. (-49)		x	x	x			
(b) Oil radiator, GMC Model AP13AV10-02 5 lb. (-55)					x		
(c) Oil radiator, Harrison Radiator Div. GMC, Model AP13AV06-01, P/N 8534108 5 lb. (-20.5)						x	x
109. Vacuum pump, Pesco B-11 4 lb. (-20)		x	x	x			
110. Hydraulic pumps							
(a) New York Air Brake model 67B025 2 lb. (-20)		x	x	x			
(b) Pesco No. 1P-677 2 lb. (-20)		x	x	x			

<u>Engines and Engine Accessories-Fuel</u> (cont'd.) <u>and Oil Systems</u>	<u>14-19</u>	<u>14-19-2</u>	<u>14-19-3</u>	<u>14-19-3A</u>	<u>17-30</u>	<u>17-31TC</u>	<u>17-31</u>
(c) Eastern Industries model 102-129 or 1235HBG							
2 lb. (-20)	x	x	x	x			
2 lb. (-26)						x	
111. (a) Dry vacuum pump, Airborne Mechanisms, Model 10-113-A2, 113A5 or 200 CW							
4 lb. (-20)		x	x	x			
4 lb. (-26)						x	
(b) Dry vacuum pump, Airborne Mechanisms Model 200 CCW							
4 lb. (-26)						x	x
112. Auxiliary fuel tank 20 gal. Installed in accordance with Bellanca dwg. 19643		x	x	x	x		x
11 lb. (+72)							
See NOTE 2(f) for placard required For the 14-19-2 only Flight Manual Supplement dated February 27, 1970 is required							
Revision to item 401(f) dated April 10, 1968 required						x	
113. Outboard wing auxiliary fuel tanks: (17 gal. each) Installed in accordance with Bellanca dwg. 192500				x	x	x	x
39 lb. (+29)							
See NOTE 2(g) for placard required Revision to Item 401(e) dated April 10, 1968 required				x			
Revision to Item 401(f) dated May 18, 1967 required						x	
114. Oil filter, AC. PMA OF-81-A, P/N 6437032							
2.5 lb. (-26)						x	x

Landing Gear

201. Two main wheel-brake assemblies, 6.00-6, Type III							
(S/N prior to 2071) (+8)	x						
(S/N 2071 thru 4105) (+6)	x	x					
(S/N 4106 thru 4342) (+32)			x	x			
(S/N 30001 and up) (+38)					x		
(S/N 31001 and up) (+38)						x	
(S/N 32-1 and up) (+38)							x
(a) Goodrich model 605MD Brake assembly No. D-2-112 Wheel assembly No. D-3-105-MD 15 lb.	x						
(b) Firestone							
Wheel assembly No. DFA180		x					
7 lb. (+6)							
Brake assembly No. CFA252		x					
3 lb. (+6)							
(c) Goodrich model 14-1132 Wheel assembly No. 3-958			x	x			
7 lb. (+38)							

<u>Landing Gear</u> (cont'd)	<u>14-19</u>	<u>14-19-2</u>	<u>14-19-3</u>	<u>14-19-3A</u>	<u>17-30</u>	<u>17-31TC</u>	<u>17-31</u>
Brake assembly No. 2-747 3 lb. (+38) Eligible only with Goodrich master cylinders model 87-87 and Bellanca P/N's 19503-10 Inboard and 19503-20 Outboard Rudder Pedal shafts, 19503-1 brackets on 19504 Rudder Pedal Torque tubes.		x	x				
(d) Goodyear tubeless PD932-2 Wheel assembly 9532111 or 9532673 11 lb. (+38) Brake assembly 9532278 or 9532181 6 lb. (+38) Eligible only with Paramount master cylinders, model VHR .750, Bellanca P/N 19588 Inboard and 19589 Outboard Rudder Pedal shafts, 19592 brackets on 19504 Rudder Pedal Torque tubes for 14-19-3; 195268 Inboard and 195272 Outboard Rudder Pedal Shafts for 14-19-3A and 17-30			x	x	x		
(e) Goodyear tube type PD932-2 wheel assembly 9532522 11 lb. (+38) Brake assembly 9532278 or 9532181 6 lb. (+38)						x	x
(f) Cleveland Wheel assy. No. 40-75E 11 lb. (+38) Cleveland Brake assy. No. B-30-52M 6 lb. (+38)						x	x
202. Two main wheel tires, 6-ply rating, Type III							
(S/N prior to 2071) (+8)	x						
(S/N 2071 thru 4105) (+6)	x	x					
(S/N 4106 thru 4342) (+38)			x	x			
(S/N 30001 and up) (+38)					x		
(S/N 31001 and up) (+38)						x	x
(a) 6.00-6 Tires and Tubes 17 lb. (+8) 6.00-6 Tires and Tubes 20 lb. (+8)	x	x					
(b) 7.00-6 Tires and Tubes 19 lb. (+6)	x						
(c) 6.00-6 Tubeless 20 lb. (+38)			x	x	x		
(d) 6.00-6 Tires and Tubes 20 lb. (+38)					x	x	x
204. Tail wheel assembly							
(a) Firestone model 206-8B, swivel 6.0 x 2.0 3 lb. (+186)	x	x					
(b) Maule model SFS-12, swivel 6.00 x 2.50 4 lb. (+186) x 4 lb. (+181)							x
Either (a) or (b) per Bellanca dwg. 18016							

<u>Landing Gear (cont'd)</u>	<u>14-19</u>	<u>14-19-2</u>	<u>14-19-3</u>	<u>14-19-3A</u>	<u>17-30</u>	<u>17-31TC</u>	<u>17-31</u>
(c) Maule hub and axle model SFS-P8, General Tire, 8.00, SC per Bellanca dwg. 18222. Use act. wt. chg.	x						
(d) Maule model P-8 hub and tire 3 lb. (+186)		x					
205. Nose wheel assembly 6.00-6 Type III							
(a) Goodrich model D3609, MD-1 wheel assembly 4 lb. (-40.5)				x			
(b) Goodyear PD941-1 wheel assembly 9532186 5 lb. (-40.5)				x			
5 lb. (-46.5)					x	x	x
(c) One nose wheel tire, 6-ply and tube 10 lb. (-40.5)				x			
(d) One nose wheel tire, 4-ply and tube 9 lb. (-40.5)				x			
(e) Firestone wheel assembly DFA180 4 lb. (-40.5)				x			
(f) Goodyear PD941 wheel assembly 9532112 5 lb. (-40.5)				x	x		
5 lb. (-46.5)					x		
(g) One nose wheel tubeless tire, 4-ply 9 lb. (-40.5)				x			
(h) One nose wheel tubeless tire, 6-ply rating, 15 x 6.00-6, Type III 9 lb. (-40.5)					x		
9 lb. (-46.5)					x		
(i) One nose wheel tube type tire, 6-ply 9 lb. (-46.5)					x	x	x
(j) Cleveland wheel assy. 40-76C 11 lb. (+38)					x	x	x

Electrical Equipment

301. Generator

(a) 12 v. 25 a. Delco-Remy 1101882 16 lb. (-21)	x						
(b) 12 v. 25 a. Delco-Remy 1101892 16 lb. (-21)		x					
(c) 12 v. 50 a. Delco-Remy 1101912 16 lb. (-21)				x	x		
16 lb. (-27)					x		

302. Batteries

(a) 12 v. 34 a. hr. Bowers B-34 26 lb. (+156)	x						
(b) 12 v. 33 a. hr. Reading R-331 28 lb. (+156)	x						
(c) 12 v. 34 a. hr. Exide 6TAS-9B 34 lb. (+156)				x			
(d) 12 v. 33 a. hr. Exide Type AC-69-1 wt. 27 lb. plus 6.5 lb. ballast 34 lb. (+156)				x			

	14-19	14-19-2	14-19-3	14-19-3A	17-30	17-31TC	17-31
302. Batteries (cont'd)							
(e) 12 v. 33 a. hr. Exide type AC-66 wt. 27 lb. plus 6.5 lb. ballast 34 lb. (+156)			x				
(f) 12 v. 34 a. hr. Exide Type AC-78 wt. 28 lb. plus 5.5 lb. ballast 34 lb. (+156)		x					
28 lb. (+86.5) or (+19.5)				x			
28 lb. (+86.5)					x	x	x
(g) 12 v. 35 a. hr. Rebat R-35 28 lb. (+86.5)					x	x	x
(Model 17-30, S/N 30210 an up)							
303. G.E. 4509 landing light and 4503 taxi light in left wing per Bellanca dwg. 18182 (dwg. 19235 for 14-19-3; dwg. 192513 for 14-19-3A and 17-30)	x	x	x	x	x	x	x
2 lb. (+9)							
304. Alternator ¹							
(a) 12 v. 40 a. Prestolite ALE-8406 13 lb. (-52.5)						x	x
(b) 12 v. 50a. Prestolite ALY 8402-10A 13 lb. (-27.0)					x		
(S/N 30202 and up)							
305. Supplementary Lights							
Whelen Strobe Lights A429, A430					x	x	x
Installed per Bellanca dwg. 197263							
2 lb. (+185)							

Interior Equipment

401. (a) FAA Approved Airplane Flight Manual dated February 6, 1950	x						
(b) FAA Approved Airplane Flight Manual dated January 17, 1957 (for aircraft with two valve fuel system)		x					
(c) FAA Approved Airplane Flight Manual revised August 7, 1959 (for aircraft with one valve fuel system)		x					
(d) FAA Approved Airplane Flight Manual dated September 1, 1959			x				
(e) FAA Approved Airplane Flight Manual dated March 1, 1963 with Revision No. 1 dated July 25, 1963 (this AFM eligible only until November 22, 1969), or FAA Approved Airplane Flight Manual dated August 11, 1966 with Revision No. 5 dated October 26, 1968				x			
(f) FAA Approved Airplane Flight Manual dated September 21, 1966 with Revision No. 4 dated August 28, 1968					x		
(g) FAA Approved Airplane Flight Manual dated February 20, 1969						x	
(h) FAA Approved Airplane Flight Manual dated April 29, 1969							x

<u>Interior Equipment</u> (cont'd)	14-19	14-19-2	14-19-3	14-19-3A	17-30	17-31TC	17-31
402. Flares (5 one-minute, International) 17 lb. (+86)	x	x	x	x	x	x	x
403. Stall warning indicator, Safe Flight Model R		x	x	x	x	x	x
404. Oxygen System, Sky-Ox Kit SK1001-4b-TV, Installed in accordance with Bellanca dwg. 196795 45 lb. (+86)						x	x

NOTE 1. Current weight and balance report, including list of equipment included in certificated weight empty, and loading instructions, must be in each aircraft at the time of original certification. A copy of the approved loading instructions should be posted inside the baggage compartment at all times.

The Model 14-19-2 certificated weight empty and corresponding center of gravity location must include unusable fuel of 25 lb. at +29 (included in total fuel capacity), and unusable oil of 9 lb. at -35 (included in total oil capacity).

The Models 14-19-3 and 14-19-3A certificated weight empty and corresponding center of gravity location must include unusable fuel of 25 lb. at +29 and unusable oil of 9 lb. at -35.

The Model 17-30 certificated empty weight and corresponding center of gravity location must include unusable fuel of 25 lb. at +29 and unusable oil of 11 lb. at -41.

For the Models 14-19-3A and 17-30 with optional outboard wing panel auxiliary fuel tanks add unusable fuel of 24 lb. to the above certificated weights for these models.

The Model 17-31TC certificated empty weight and corresponding center of gravity location must include unusable fuel of 26 lb. at +29 and undrainable oil of 3.7 lb. at -42.

The Model 17-31 certificated empty weight and corresponding center of gravity location must include unusable fuel of 26 lb. at +29 (item 113) and 1 lb. at +72 (item 112) and undrainable oil of 3.0 lb. at -42.

NOTE 2. The following placards must be displayed in addition to those listed in the limitations section of the Airplane Flight Manual:

- (a) In front of and in clear view of the pilot:
 - (1) Models 14-19 and 14-19-2
"This airplane must be operated in compliance with operating limitations in the FAA Approved Airplane Flight Manual."
 - (2) Models 14-19-3, 14-19-3A and 17-30
"This airplane must be operated as a normal category airplane in compliance with the approved Airplane Flight Manual."
- (b) On left side of pilot's storm window:
Models 14-19 and 14-19-2
"Do not open above 110 m.p.h."
- (c) On or adjacent to the auxiliary fuel tank selector valve when item 104 auxiliary fuel tank is installed:
 - (1) "Auxiliary tank, 25 gal. - Use in level flight only."
 - (2) "Caution: use fuel from only one tank at a time and keep valves in 'OFF' position when not in use."
- (d) On or adjacent to the auxiliary fuel tank selector valve, when item 105 auxiliary fuel tank is installed:
 - (1) "Auxiliary tank, 14 gal. - Use in level flight only."
 - (2) "Caution: (for two valve fuel system) - use fuel from only one tank at a time and keep valve in 'OFF' position when not in use."

- (e) On or adjacent to fuel tank selector valve, when item 106 auxiliary fuel tanks are installed:
 - (1) "Auxiliary tanks - Use in level flight only - 14 gal. rear, 18.5 gal. auxiliary."
 - (2) "Caution: use fuel from only one tank at a time and keep valves in 'OFF' position when not in use." (Required for two valve fuel system only).
- (f) On or adjacent to the fuel tank selector valve when item 112, auxiliary fuel tank is installed:

"Auxiliary tank 20 gal. - use in level flight only."
- (g) On or adjacent to the fuel tank selector valve when item 113, outboard wing auxiliary fuel tanks are installed:

"Left auxiliary tank 17 gal. - use in level flight only. Right auxiliary tank 17 gal. - use in level flight only. Fuselage auxiliary tank 20 gal. - use in level flight only. The fuel remaining in the tank when the gage reads zero cannot be used safely in flight."

NOTE 3. No life limited structural components.

NOTE 4. The following airplanes may be operated at the weights and center of gravity ranges shown below when Bellanca Kit No. SK-1024 is installed.

Model 17-30	Serial Nos. 30001 thru 30262
Model 17-31	Serial Nos. 32-1 thru 32-14
Model 17-31TC	Serial Nos. 31001 thru 31003

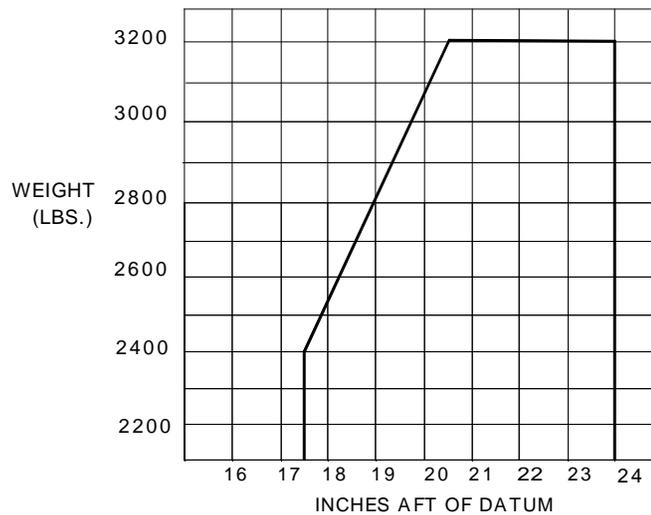
C.G. Range (Landing gear extended)	(+20.6) to (+24.0) at 3200 lb. (+17.75) to (+24.0) at 2400 lb. or less Straight line variation between points given
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Empty wt. C.G. range None

Maximum weight 3200 lb.

No. of seats 4 (2 at +20, 2 at +53)

Maximum baggage	Model 17-30: 186 lb. max. (+84), 35 lb. min.
	Models 17-31 and 17-31TC: 166 lb. max. (+84), 35 lb. min.
	(See Loading Schedule)



NOTE 5. Model 17-30, Serial Number 30004 as originally approved under Type Certificate number 1A3 is now converted to Model 17-30ATC, Serial Number 30004 and approved under Type Certificate number A18CE

.....END.....