

FEDERAL AVIATION AGENCY

*SAVE*

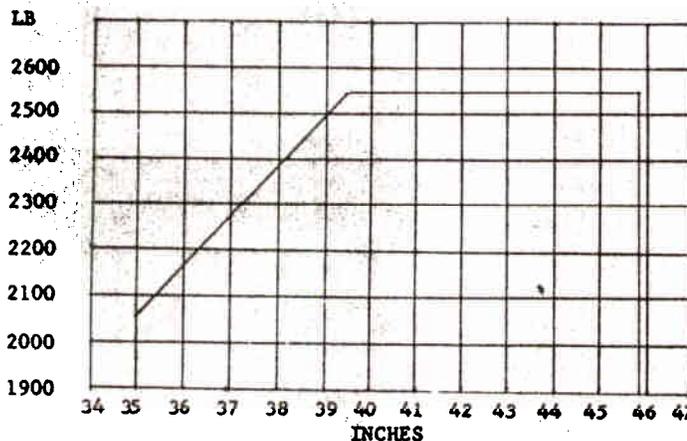
3A13  
 Revision 15  
 CESSNA  
 182  
 182A  
 182B  
 182C  
 182D  
 182E  
 182F  
 March 15, 1963

AIRCRAFT SPECIFICATION NO. 3A13

Manufacturer Cessna Aircraft Company  
 Wichita, Kansas

I - Model 182, 4 PCLM (Normal Category), Approved March 2, 1956

Engine Continental O-470-L  
 Fuel \*80 min. octane aviation gasoline  
 Engine limits \*For all operations, 2600 r.p.m. (230 h.p.)  
 Airspeed limits \*Maneuvering 122 m.p.h. (106 knots) True Ind.  
 \*Max. structural cruising 160 m.p.h. (139 knots) True Ind.  
 \*Never exceed 184 m.p.h. (160 knots) True Ind.  
 \*Flaps extended 100 m.p.h. ( 87 knots) True Ind.  
 C.G. range \*(+39.5) to (+45.8) at 2550 lb.  
 (+35.0) to (+45.8) at 2050 lb. or less  
 Straight line variation between points given



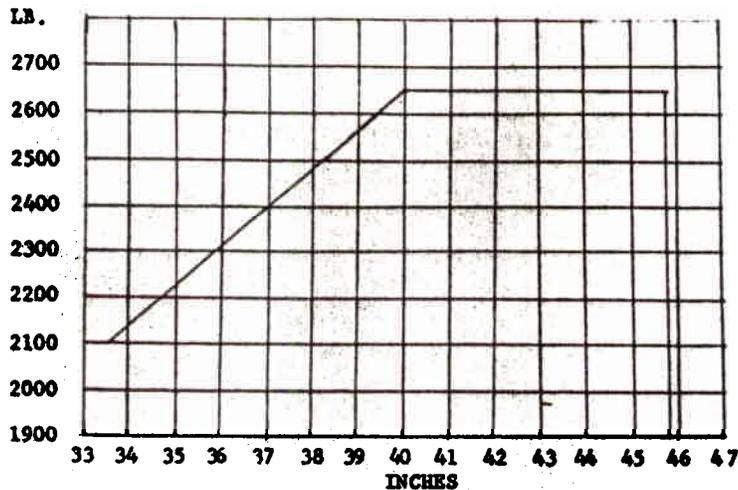
Empty weight C.G. range None  
 Maximum weight \*2550 lb.  
 No. seats 4 (2 at +36, 2 at +70)  
 Maximum baggage 120 lb. (+95)  
 Fuel capacity 60 gal. total, 55 gal. usable (Two 30 gal. tanks in wings) (+48)  
 See NOTE 1 for weight of unusable fuel.  
 Oil capacity 3 gal. (-15) (Includes 9 lb. unusable)  
 Control surface movements  
 Wing flaps  
 Takeoff Retracted 0°  
 1st notch 10°  
 Landing 2nd notch 20°  
 3rd notch 30°  
 4th notch 40°  
 Ailerons Up 20° Down 15°  
 Adj. stabilizer Up 1°30' Down 8°30'  
 Elevator Up 24° Down 23°  
 With stabilizer full down  
 Rudder Right 24° Left 24°  
 Serial Nos. eligible 613 and 33000 thru 33842

**Required equipment**

In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed:  
1(a), (b), (c); 102, 103, 201(a), 202(a), 205(a), 206(a), 401

**II - Model 182A, 4PCLM (Normal Category), Approved December 7, 1956**

Engine Continental O-470-L  
 Fuel \*80 min. octane aviation gasoline  
 Engine limits \*For all operations, 2600 r.p.m. (230 hp.)  
 Airspeed limits \*Maneuvering 122 m.p.h. (106 knots) True Ind.  
 \*Max. structural cruising 160 m.p.h. (139 knots) True Ind.  
 \*Never exceed 184 m.p.h. (160 knots) True Ind.  
 \*Flaps extended 100 m.p.h. ( 87 knots) True Ind.  
 C.G. range \*(+40.0) to (+45.8) at 2650 lb.  
 (+33.5) to (+45.8) at 2100 lb. or less  
 Straight line variation between points given



Empty wt. C.G. range None  
 Maximum weight \*2650 lb.  
 No. seats 4 (2 at +36, 2 at +70)  
 Maximum baggage 120 lb. (+95)  
 Fuel capacity 65 gal. total, 55 gal. usable (Two 32.5 gal. tanks in wings) (+48)  
 See NOTE 1 for weight of unusable fuel  
 Oil capacity 3 gal. (-15) (Includes 9 lb. unusable)  
 Control surface Wing flaps

Takeoff	Retracted	0°
	1st notch	10°
Landing	2nd notch	20°
	3rd notch	30°
	4th notch	40°
Ailerons	Up	20°
Adj. stabilizer	Up	1°30'
Elevator	Up	24°
with stabilizer full down	Down	15°
	Down	8°30'
	Down	23°
Rudder	Right	24°
	Left	24°

Serial Nos. eligible  
 Required equipment

33843 to 34999, incl., 51001 thru 51556  
 In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed:  
 1(a), (b), (c); 102, 103, 201(a), 202(b), 205(a), 206(a), 401

**III - Model 182B, 4 PCLM (Normal Category), Approved August 22, 1958**

Engine Continental O-470-L  
 Fuel \*80 min. octane aviation gasoline

Engine limits	*For all operations, 2600 r.p.m. (230 hp.)	
Airspeed limits	*Maneuvering	122 m.p.h. (106 knots) True Ind.
	*Max. structural cruising	160 m.p.h. (139 knots) True Ind.
	*Never exceed	184 m.p.h. (160 knots) True Ind.
	*Flaps extended	100 m.p.h. ( 87 knots) True Ind.
C.G. range	*(+40.0) to (+45.8) at 2650 lb. (+33.5) to (+45.8) at 2100 lb. or less Straight line variation between points given Refer to diagram under Section II	
Empty wt. C.G. range	None	
Maximum weight	*2650 lb.	
No. of seats	4 (2 at +36, 2 at +70)	
Maximum baggage	120 lb. (+95)	
Fuel capacity	65 gal. total, 55 gal. usable (Two 32.5 gal. tanks in wings) (+48) See NOTE 1 for weight of unusable fuel	
Oil capacity	3 gal. (-15) (Includes 9 lb. unusable)	
Control surface movements	Wing flaps	Takeoff Retracted 0° 1st notch 10° Landing 2nd notch 20° 3rd notch 30° 4th notch 40°
	Ailerons	Up 20° Down 15°
	Adj. stabilizer	Up 1°30' Down 8°30'
	Elevator	Up 24° Down 23°
	with stabilizer full down	
	Rudder	Right 24° Left 24°
Serial Nos. eligible	34754, 51557 thru 52358	
Required equipment	In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed: 1(a), (b), (c); 102, 103, 201(a), 202(b), 205(a), 206(a), 401	

IV - Model 182C, 4 PCLM (Normal Category), Approved July 8, 1959  
Model 182D, 4 PCLM (Normal Category), Approved June 14, 1960

Engine	Continental O-470-L	
Fuel	*80 min. octane aviation gasoline	
Engine limits	*For all operations, 2600 r.p.m. (230 hp.)	
Airspeed limits	*Maneuvering	122 m.p.h. (106 knots) True Ind.
	*Max. structural cruising	160 m.p.h. (139 knots) True Ind.
	*Never exceed	184 m.p.h. (160 knots) True Ind.
	*Flaps extended	100 m.p.h. ( 87 knots) True Ind.
C.G. range	*(+40.0) to (+45.8) at 2650 lb. (+33.5) to (+45.8) at 2100 lb. or less Straight line variation between points given Refer to diagram under Section II	
Empty wt. C.G. range	None	
Maximum weight	2650 lb.	
No. of seats	4 (2 at +36, 2 at +70)	
Maximum baggage	120 lb. (+95)	
Fuel capacity	*65 gal. total, 55 gal. usable (Two 32.5 gal. tanks in wings) (+48) See NOTE 1 for weight of unusable fuel	
Oil capacity	3 gal. (-15) (Includes 9 lb. unusable)	
Control surface movements	Wing flaps	Takeoff 0°, 10°, 20° Landing 30°, 40°
	Ailerons	Up 20° Down 15°
	Adj. stabilizer	Up 1° Down 8°45'
	Elevator	Up 25° Down 23°
	with stabilizer full down	
	Rudder	Right 24° Left 24°
	(Measured parallel to W.L.)	

Serial Nos. eligible Model 182C: 631, 52359 thru 53007  
 Model 182D: 31623, 18253008 thru thru 18253598  
 Required equipment In addition to the pertinent basic equipment specified in CAR 3, the following items of equipment must be installed:  
 1(a), (b), (c); 102, 103, 201(a), 202(b), 205(a), 206(a), 401

V - Model 182E, 4 PCLM (Normal Category), Approved June 27, 1961  
Model 182F, 4 PCLM (Normal Category), Approved August 1, 1962

Engine	Continental O-470-L or O-470-R		
Fuel	*80/87 min. grade aviation gasoline		
Engine limits	*For all operations, 2600 r.p.m. (230 hp.)		
Airspeed limits	*Maneuvering	128 m.p.h. (111 knots)	True Ind.
	*Max. structural cruising	160 m.p.h. (139 knots)	True Ind.
	*Never exceed	193 m.p.h. (168 knots)	True Ind.
	*Flaps extended	110 m.p.h. ( 95 knots)	True Ind.
C.G. range	*(+38.4) to (+47.4) at 2800 lb.		
	*(+33.0) to (+47.4) at 2250 lb. or less		
	Straight line variation between points given.		
Empty weight C.G. range	None		
Maximum weight	*2800 lb.		
No. seats	4 (2 at +36, 2 at +71)		
Maximum baggage	120 lb. (+97)		
Fuel capacity	65 gal. total, 60 gal. usable (Two 32.5 gal. tanks in wings) (+48) See NOTE 1 for weight of unusable fuel		
Oil capacity	3 gal. (-15) (Includes 9 lb. unusable)		
Control surface movements	Wing flaps	40°	
	Elevator tab	Up 25°	Down 15°
	Ailerons	Up 20°	Down 15°
	Elevator (relative to stabilizer)	Up 26°	Down 17°
	Rudder	Right 24°	Left 24°

Serial Nos. eligible Model 182E: 182-53599 thru 182-54423  
 Model 182F: 634 and 182-54424 and up  
 Required equipment In addition to the pertinent required basic equipment specified in CAR 3, the following items of equipment must be installed:  
 2(a), (b), (c); 102, 103, 201(b) 202(e), 205(b), 206(b), 401

Specifications Pertinent to All Models

Datum	Front face to firewall
Leveling means	Upper door sill
Certification basis	Type Certificate No. 3A13 (CAR 3 dated November 1, 1949, including amendments 3-1 thru 3-12). Type certificate issued under delegation option provisions of Part 410 of the Regulations of the Administrator.
Production basis	Production Certificate No. 4 issued and DMCB authorized to issue airworthiness certificate under delegation option provisions of Part 410 of the Regulations of the Administrator.

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

Approval for the installation of all items of equipment listed herein has been obtained by the aircraft manufacturer except those items preceded by two asterisks (\*\*). This symbol denotes that approval has been obtained by someone other than the aircraft manufacturer. An item so marked may not have been manufactured under an FAA monitored or approved quality control system, and therefore conformity must be determined if the item is not identified by a Form FAA-186, PMA or other evidence of FAA production approval.

Propellers and Propeller Accessories (Excepting deicing equipment)

1. Hartzell constant speed propeller  
 (a) Hub HC82XF-1 or HCA2XF-1 or BHCA2XF-1, blades 8433-2 64 lb. (-40)  
 Diameter: Not over 82", not under 80"  
 Pitch settings at 30" sta.: low 12°, high 24°

- 1. Hartzell constant speed propeller (continued)
  - (b) Propeller spinner, Cessna No. 0752006 4 lb. (-40)
  - (c) Propeller governor, Woodward 210065, 210105, 210155 or 210340 4 lb. (-34)  
(Not eligible on O-470-R engine installation)
- 2. McCauley constant speed propeller
  - (a) McCauley hub, 2A36C, blades 90M-8 63 lb. (-40)  
Diameter: not over 82", not under 80"  
Pitch settings at 36" sta.: low 10.5°, high 22°
  - (b) Propeller spinner, Cessna 0752004 4 lb. (-40)
  - (c) Propeller governor, Woodward 210065, 210109, 210155, 210345 or 210452 4 lb. (-34)
- 3. Hartzell constant speed propeller
  - (a) Hub BHC-C2YF-1 blade 8468-2 50 lb. (-40)  
Diameter: not over 82", not under 80"  
Pitch settings at 30" sta.: low 13°, high 24°
  - (b) Propeller spinner, Cessna No. 0752619 4 lb. (-40)
  - (c) Propeller governor, Woodward 210105AF, 210340 or 210451 4 lb. (-34)
- 4. McCauley constant speed propeller
  - (a) McCauley Hub 2A34C, blades 90A-8 52 lb. (-40)  
Diameter: not over 82", not under 80"  
Pitch settings at 36" sta.: low 10.5°, high 21.5°
  - (b) Propeller spinner, Cessna 0752004 4 lb. (-40)
  - (c) Propeller governor, Woodward 210065, 210105, 210155, 210345, 210452 4 lb. (-34)

Engine and Engine Accessories - Fuel and Oil Systems

- 101. Starter
  - (a) Delco-Remy 1109668 or 1109471 14 lb. (-4)
  - (b) Delco-Remy 1108249 19 lb. (-4)
- 102. Carburetor air filter 1 lb. (-15)
- 103. Engine oil cooler (Continental 625012) with adapter 3 lb. (-33)
- 104. Engine oil cooler (Continental 537084) with adapter 7 lb. (-33)
- \*\*105. 18 gal. auxiliary fuel tank installed in accordance with Javelin Aircraft Company, 9175 E. Douglas, Wichita, Kansas, Installation Instructions dated September 15, 1955 and dwgs. 782-1, 782-2 and 787. 24 lb. (+99)  
(See dwg. 782-1 for required placards and NOTE 1 for data on unusable fuel.) (Not eligible on Model 182E)
- 106. Engine oil cooler (Continental 630050) with adapter 7 lb. (-33)

Landing Gear

- 201. Two main wheel-brake assemblies, 6.00-6, Type III
  - (a) Goodyear model LF6HBD (6F6HBD also eligible) 13 lb. (+60)  
Wheel assembly No. 511960S  
Brake assembly No. 9530839
  - (b) Goodyear wheel and brake assembly 16 lb. (+60)  
Wheel assembly No. 9532111  
Brake assembly No. 9532113
  - (c) Goodyear wheel and brake assembly 16 lb. (+60)  
Wheel assembly No. 9532522  
Brake assembly No. 9541936
- 202. (a) Two main wheel 4-ply rating tires, 6.00-6, Type III (with regular tubes) (Model 182) 17 lb. (+60)
- (b) Two main wheel 6-ply rating tires, 6.00-6, Type III (with regular tubes) 17 lb. (+60)
- (c) Two main wheel 6-ply rating tires (tubeless), 6.00-6, Type III, Sidewall inflatable 15 lb. (+60)
- 205. (a) One nose wheel, 5.00-5, Goodyear No. 9520653 3 lb. (-7.5)
- (b) One nose wheel, 5.00-5, Goodyear No. 9532102 3 lb. (-7.5)
- (c) One nose wheel, 5.00-5, Goodyear No. 9532926 3 lb. (-7.5)
- 206. (a) One nose wheel, 6-ply rating tire, 5.00-5, Type III (with regular tube) 7 lb. (-7.5)
- (b) One nose wheel, 6-ply rating tire (tubeless), 5.00-5, Type III, Sidewall inflatable 5 lb. (-7.5)

210. Three-speed fairings (Cessna dwg. 0742410)	12 lb.	(+48.5)
<u>Electrical Equipment</u>		
301. Battery - Reading R-33 or Cessna 0712604, 12 v., 33AH	28 lb.	(+114)
302. Generator		
(a) Delco-Remy 35A (1101892)	16 lb.	(-5)
(b) Delco-Remy 50A (1101895)	16 lb.	(-5)
303. Landing lights, G.E. 4509	4 lb.	(+32)
304. Voltage Regulator		
(a) Delco-Remy, 35 a. (1118704)	2 lb.	(-1)
(b) Delco-Remy, 50 a. (1118713)	2 lb.	(-1)
305. Rotating beacon (Cessna dwg. 0700031)	2 lb.	(+217)
<u>Interior Equipment</u>		
401. Stall warning indicator	2 lb.	(+15)
402. Blind flying kit, Cessna dwg. 0700006	5 lb.	(+18)
403. Stretcher installation, Cessna dwg. 0511003	17 lb.	(+95 stowed location)
404. Rudder bungee installation, Cessna dwg. 0713097 Eligible on Serial Nos. 34754 and up	2 lb.	(+13)
<u>Miscellaneous (not listed above)</u>		
601. Stabilizer abrasion boots, Cessna dwg. 0332136-5 installed per Cessna dwg. 0732000	2 lb.	(+206)
602. Flare installation, Cessna dwg. 0511007-1	18 lb.	(+117)

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 and at all times thereafter (except in the case of air carrier operators having an approved weight control system).

The certificated weight empty and corresponding center of gravity location must include unusable fuel at 30 lb. at (+46) on Models 182, 182E and 182F, and 60 lb. at (+46) on Models 182A, 182B, 182C and 182D, and unusable oil at 9 lb. at (-15). When item 105, 18 gal. auxiliary fuel tank is installed, an additional 3 lb. unusable fuel at (+99) must be included.

NOTE 2. The following placards must be displayed in locations as indicated:

A. Applicable to Model 182 only:

- (1) In full view of the pilot:
  - (a) "This airplane must be operated as a Normal Category airplane in compliance with operating limitations stated in form of placards, markings and manuals. No acrobatic maneuvers including spins approved.

Flight Maneuvering Load Factors

Flaps up	+3.8	-1.5
Flaps down	+3.5	
Maximum design weight		2550 lb."
(b) "Both tanks on for takeoff and landing"		
(c) "Flaps - Pull to extend		
Takeoff		Retracted 0°
1		1st notch 10°
		2nd notch 20°
Landing		3rd notch 30°
		4th notch 40°"

- (2) In the baggage compartment:
  - "Maximum baggage 120 lb. For additional loading instructions see Weight and Balance Data."
- (3) In addition to the above placards, the prescribed operating limitations indicated by "\*" under Section I must be displayed by permanent markings, or reports (Weight and Balance Report).

NOTE 2. (Continued)

B. Applicable to Models 182A, 182B, 182C and 182D:

(1) In full view of the pilot:

(a) "This airplane must be operated as a Normal Category airplane, in compliance with operating limitations stated in form of placards, markings and manuals. No acrobatic maneuvers including spins approved.

Flight Maneuvering Load Factors

Flaps up	+3.8	-1.5
Flaps down	+3.5	
Maximum design weight		2650 lb.
(b) "Both tanks on for takeoff and landing"		
(c) "Flaps - Pull to extend		
Takeoff		Retracted 0°
		1st notch 10°
		2nd notch 20°
		3rd notch 30°
		4th notch 40°"
Landing		

(2) In the baggage compartment:

"Maximum baggage 120 lb. For additional loading instructions see Weight and Balance Data."

(3) In addition to the above placards, the prescribed operating limitations indicated by "\*" under Section II, III or IV must be displayed by permanent markings, placards, or reports (Weight and Balance Report).

C. Applicable to Model 182E and 182F:

(1) In full view of the pilot:

"This airplane must be operated as a normal category airplane in compliance with the operating limitations stated in the form of placards, markings, and manuals. No acrobatic maneuvers including spins approved.

Flight Maneuvering Load Factors

Flaps up	+3.8	-1.52
Flaps down	+3.5	
Maximum design weight		2800 lb.
Reference weight and balance data for loading instructions."		
(2) On the fuel selector valve plate:		
"Both off. Left tank level flight only 31 gal.		
Both on for landing and takeoff 60 gal. Right tank level flight only 31 gal."		
(3) On the control lock:		
"Control lock - Remove before starting engine."		
(4) On the baggage door:		
"Maximum baggage 120 lb. For additional loading instructions, see weight and balance data."		
(5) In addition to the above placards, the prescribed operating limitations indicated by "*" under Section V, must be displayed by permanent markings, placards, or reports (Weight and Balance Report).		

... END ...