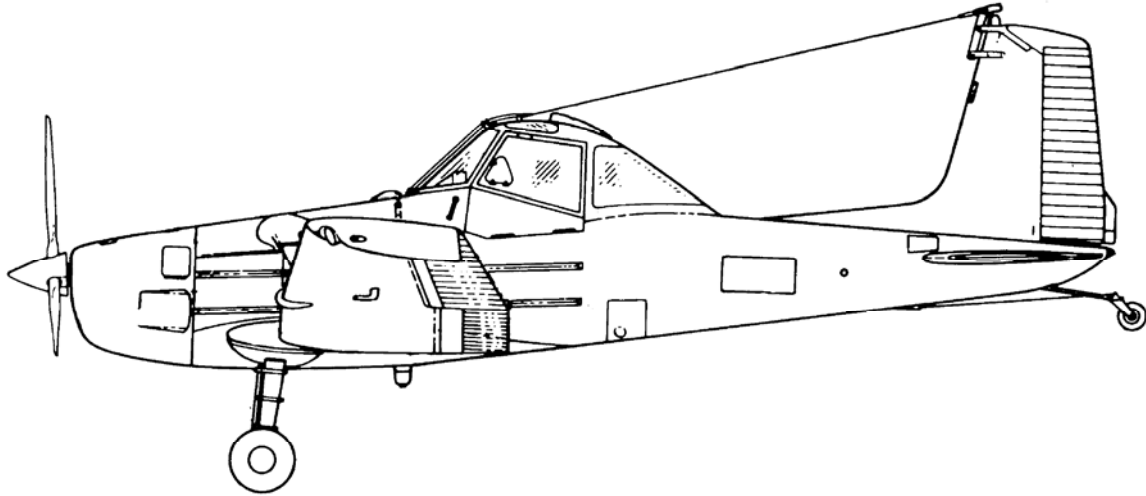


FAA APPROVED AIRPLANE FLIGHT MANUAL



APPROVED
Cessna Aircraft Co., Pawnee Div.
Delegation Option Manufacturer, CE-1
[Redacted] Executive Engineer

Date Aug. 30, 1979

CESSNA AIRCRAFT COMPANY

1980 MODEL A188B

THIS DOCUMENT MUST BE
CARRIED IN THE AIRPLANE
AT ALL TIMES.

Serial No. _____

Registration No. _____

THIS MANUAL INCLUDES THE MATERIAL REQUIRED TO BE
FURNISHED TO THE PILOT BY FAR PART 23 AND FAR PART 21
AND CONSTITUTES THE FAA APPROVED AIRPLANE FLIGHT
MANUAL.

COPYRIGHT © 1979

CESSNA AIRCRAFT COMPANY
WICHITA, KANSAS, USA

 Member of GAMA

1 OCTOBER 1979

**THIS MANUAL WAS PROVIDED FOR THE AIRPLANE
IDENTIFIED ON THE TITLE PAGE ON _____.
SUBSEQUENT REVISIONS SUPPLIED BY CESSNA
AIRCRAFT COMPANY MUST BE PROPERLY IN-
SERTED.**

CESSNA AIRCRAFT COMPANY, PAWNEE DIVISION

NOTE

An FAA Approved Airplane Flight Manual which is lost or destroyed may be replaced by contacting your Cessna Agricultural Dealer or writing directly to the Customer Services Department, Cessna Aircraft Company, Wichita, Kansas. An affidavit containing the owner's name, airplane serial number and registration number must be included in replacement requests since the FAA Approved Airplane Flight Manual is identified for specific airplanes only.

COVERAGE

The Flight Manual in the airplane at the time of delivery from Cessna Aircraft Company contains information applicable to the 1980 Model A188B airplane designated by the serial number and registration number shown on the Title Page of this manual.

REVISIONS

Changes and/or additions to this manual will be covered by revisions published by Cessna Aircraft Company. These revisions are distributed to all Cessna Dealers and to owners of U. S. Registered aircraft according to FAA records at the time of revision issuance.

Revisions should be examined immediately upon receipt and incorporated in this manual.

NOTE

It is the responsibility of the owner to maintain this manual in a current status when it is being used for operational purposes.

Owners should contact their Cessna Dealer whenever the revision status of their manual is in question.

A revision bar will extend the full length of new or revised text and/or illustrations added on new or presently existing pages. This bar will be located adjacent to the applicable revised area on the outer margin of the page.

All revised pages will carry the revision number and date on the applicable page.

The following Log of Effective Pages provides the dates of issue for original and revised pages, and a listing of all pages in the manual. Pages affected by the current revision are indicated by an asterisk (*) preceding the pages listed.

LOG OF EFFECTIVE PAGES

Dates of issue for original and revised pages are:

Original 1 October 1979

Revision 1 10 November 1980

Page	Date
------	------

Title	1 October 1979
-------------	----------------

Assignment Record ...	1 October 1979
-----------------------	----------------

*i.....	10 November 1980
---------	------------------

ii Blank	1 October 1979
----------------	----------------

*1 thru 4	10 November 1980
-----------------	------------------

5 thru 9	1 October 1979
----------------	----------------

*10	10 November 1980
-----------	------------------

1 October 1979

Revision 1 - 10 November 1980 /D1180-1-13FM

i/ (ii blank)

INTRODUCTION

This FAA Approved Airplane Flight Manual includes operating limitations, operating procedures and performance information necessary for the safe operation of the airplane, its engine, standard systems, standard equipment and certified replacement equipment.

OPERATING LIMITATIONS

The limitations included in this section have been approved by the Federal Aviation Administration. When applicable, limitations associated with optional Restricted Category systems or equipment will be presented in the form of placards and markings in the cockpit. Observance of these operating limitations is required by Federal Aviation Regulations.

Your Cessna is certified under FAA Type Certificate No. A9CE as Cessna Model No. A188B.

NOISE CHARACTERISTICS

This airplane has not been shown to comply with the noise limits in FAR Part 36 and must be operated in accordance with the noise operating limitation prescribed under FAR 91.56.

*AIRSPEED LIMITATIONS

NOTE

These limitations apply only to airplanes **without** dispersal equipment installed. For airplanes with dispersal equipment installed, the maximum approved operating speed is 121 MIAS (130 MIAS).

	SPEED	MCAS	MIAS	REMARKS
V _{NE}	Never Exceed Speed	181 (181)	182 (179)	Do not exceed this speed in any operation.
V _{NO}	Maximum Structural Cruising Speed	144 (144)	146 (144)	Do not exceed this speed except in smooth air, and then only with caution.
V _A	Maneuvering Speed: 3300 Pounds 2800 Pounds 2300 Pounds	116 (117) 104 (104) 95 (95)	118 (118) 107 (105) 98 (96)	Do not make full or abrupt control movements above this speed.
V _{FE}	Maximum Flap Extended Speed: 5° Flaps 10°-20° Flaps	119 (120) 107 (110)	121 (122) 109 (112)	Do not exceed these speeds with the given flap settings.
	Maximum Window Open Speed	138 (139)	140 (140)	Do not exceed this speed with vent windows open.

*Airspeed limitations enclosed in parentheses () are applicable to the airplane when it is equipped with a B2A34C205/90 DHA-4 threadless retention, 2-bladed, 86-inch diameter propeller.

*AIRSPEED INDICATOR MARKINGS

NOTE

These limitations apply only to airplanes **without** dispersal equipment installed. For airplanes with dispersal equipment installed, the maximum approved operating speed is 121 MIAS (130 MIAS).

MARKING	MIAS VALUE OR RANGE	SIGNIFICANCE
White Arc	62 - 109 (57 - 112)	Full Flap Operating Range. Lower limit is maximum normal category weight stall speed in landing configuration. Upper limit is maximum speed permissible with flaps extended.
Green Arc	67 - 146 (60 - 144)	Normal Operating Range. Lower limit is maximum normal category weight stall speed at most forward C.G. with flaps retracted. Upper limit is maximum structural cruising speed.
Yellow Arc	146 - 182 (144 - 179)	Operations must be conducted with caution and only in smooth air.
Red Line	182 (179)	Maximum speed for all normal category operations.

*Airspeed indicator value or range markings enclosed in parentheses () are applicable to the airplane when it is equipped with a B2A34C205/90 DHA-4 threadless retention, 2-bladed, 86-inch diameter propeller.

POWER PLANT LIMITATIONS

Engine Manufacturer: Teledyne Continental.

Engine Model Number: IO-520-D.

Engine Operating Limits for Takeoff and Continuous Operations:

1 October 1979

Revision 1 - 10 November 1980

**OPERATING
LIMITATIONS**

**CESSNA
MODEL A188B**

Maximum Power,
5 Minutes - Takeoff: 300 BHP rating.
Continuous: 285 BHP rating.
Maximum Engine Speed,
5 Minutes - Takeoff: 2850 RPM.
Continuous: 2700 RPM.
Maximum Cylinder Head Temperature: 460°F (238°C).
Maximum Oil Temperature: 240°F (116°C).
Oil Pressure, Minimum: 10 psi.
Maximum: 100 psi.
Fuel Pressure, Minimum: 3.5 psi.
Maximum: 19.5 psi (25.2 gal/hr).
Propeller Manufacturer: McCauley Accessory Division.
Propeller Model Number: D2A34C98/90AT-8.
Propeller Diameter, Maximum: 82 inches.
Minimum: 80.5 inches.
Propeller Blade Angle at 36 Inch Station, Low: 8.8°.
High: 25.8°.

NOTE

Two larger diameter two-bladed and a three-bladed propeller are also certified for use on this airplane.

POWER PLANT INSTRUMENT MARKINGS

INSTRUMENT	RED LINE	GREEN ARC	YELLOW ARC	RED LINE
	MINIMUM LIMIT	NORMAL OPERATING	CAUTION RANGE	MAXIMUM LIMIT
Tachometer	---	2200 - 2550 RPM	2700 - 2850 RPM	2850 RPM
Manifold Pressure	---	15 - 25 in.Hg	---	---
Oil Temperature	---	100° - 240°F	---	240°F
Cylinder Head Temperature	---	300° - 460°F	---	460°F
Fuel Flow (Pressure)	(3.5 psi)	7.0 - 17.0 gal/hr	---	25.2 gal/hr (19.5 psi)
Oil Pressure	10 psi	30 - 60 psi	---	100 psi
Fuel Quantity	E (1 Gal. Unusable Each Tank)	---	---	---

WEIGHT LIMITS

Maximum Takeoff Weight, Normal Category: 3300 lbs.

Maximum Takeoff Weight, Restricted Category, A188B (S/N 18803522 and on): 4000 lbs.

Maximum Takeoff Weight, Restricted Category, A188B (S/N 18803522T and on): 4200 lbs.

Maximum Landing Weight, Normal and Restricted Categories: 3300 lbs.

Maximum Hopper Load, A188B (S/N 18803522 and on) (200-gallon capacity): 1670 lbs.

Maximum Hopper Load, A188B (S/N 18803522T and on) (280-gallon capacity): 1800 lbs.

See Weight and Balance papers for empty weight of this airplane.

CENTER OF GRAVITY LIMITS

Center of Gravity Range, Normal Category:

Forward 39.0 inches aft of datum at 2300 lbs. or less with straight line variation to 41.0 inches aft of datum at 3300 lbs.

Aft: 45.5 inches aft of datum at all weights.

Center of Gravity Range, Restricted Category:

Forward: 39.0 inches aft of datum at 2300 lbs. or less with straight line variation to 41.0 inches aft of datum at 3300 lbs. and then a straight line variation to 39.7 inches aft of datum at 4000 lbs., A188B (S/N 18803522 and on), or to 39.3 inches aft of datum at 4200 lbs., A188B (S/N 18803522T and on).

Aft: A straight line variation from 45.5 inches aft of datum at 4000 lbs., A188B (S/N 18803522 and on), or from 45.2 inches aft of datum at 4200 lbs., A188B (S/N 18803522T and on), to 47.5 inches aft of datum at 2500 lbs., and then 47.5 inches aft of datum at all lower weights.

Reference Datum: Front face of firewall.

See Weight and Balance papers for empty C.G. of this airplane.

MANEUVER LIMITS

This airplane is certificated in the Normal and Restricted Categories. The normal category is applicable to aircraft intended for non-aerobatic operations. These include any maneuvers incidental to normal flying, stalls (except whip stalls), lazy eights, chandelles, and turns in which the angle of bank is not more than 60°.

Aerobatic maneuvers, including spins, are not approved.

FLIGHT LOAD FACTOR LIMITS (3300 Lbs.)

Flight Load Factors:

*Flaps Up: +3.8g, -1.52g.

*Flaps Down 5°: +2.5g.

*Flaps Down 10° - 20°: +2.0g.

*The design load factors are 150% of the above, and in all cases, the structure meets or exceeds design loads at a weight of 3300 lbs.

KINDS OF OPERATION LIMITS

The airplane is equipped for day VFR and may be equipped for night VFR operations. FAR Part 91 establishes the minimum required equipment for these operations. The reference to types of flight operations on the operating limitations placard reflects equipment installed at the time of Airworthiness Certificate issuance.

Flight into known icing conditions is prohibited.

FUEL LIMITATIONS

2 Standard Tanks: 27 U.S. gallons each.

Total Fuel: 54 U.S. gallons.

Usable Fuel (all flight conditions): 52 U.S. gallons.

Unusable Fuel: 2 U.S. gallons.

NOTE

Due to cross-feeding between fuel tanks, the tanks should be re-topped after each refueling to ensure maximum capacity.

Approved Fuel Grades (and Colors):

100LL Grade Aviation Fuel (Blue).

100 (formerly 100/130) Grade Aviation Fuel (Green).

OTHER LIMITATIONS (Normal and Restricted Categories)

FLAP LIMITATIONS

Normal Category:

Approved Takeoff Range: 0° to 20°.

Approved Landing Range: 0° to 20°.

Restricted Category:

Recommended Takeoff Setting: 10°.

TAIL WHEEL

The tail wheel must be locked for flight during Normal Category operations.

DOORS

Canopy doors must not be opened in flight.

SMOKING

Smoking is prohibited without an ashtray installation.

STROBE LIGHTS

Strobe lights must be turned off during night flight through haze.

AIR CONDITIONER

The air conditioner must be turned off for takeoff and landing.

AUXILIARY AIR VENT

The auxiliary air vent must be closed during loading and takeoff.

WINDOWS (NORMAL CATEGORY)

The vent windows must not be opened when airspeed exceeds 140 MIAS.

WING STRUT FAIRING LIMITATIONS

The airplane must not be flown when wing strut fairings have been damaged or removed.

OTHER LIMITATIONS (Restricted Category Only)

HYDRAULIC SPRAY SYSTEM

The hydraulic spray system must be turned off for takeoff and landing.

AUTOMATIC FLAGMAN

The automatic flagman must not be used when dispensing flammable material.

OPERATING PROCEDURES

Normal and emergency operating procedures for this airplane operating in the Normal Category are conventional in every respect. (Refer to Information Manual for additional information.)

PERFORMANCE INFORMATION

NORMAL CATEGORY PERFORMANCE

ALTITUDE LOSS DURING STALL

The altitude loss during a stall recovery during Normal Category operation may be as much as 140 feet.

DEMONSTRATED OPERATING TEMPERATURE

Satisfactory engine cooling has been demonstrated for this airplane in Normal Category operations with an outside air temperature 41°F above standard. This is not to be considered as an operating limitation. Reference should be made to Operating Limitations section for engine limitations.

PERFORMANCE INFORMATION

CESSNA
MODEL A188B

*AIRSPEED CALIBRATION

All data in the following chart is for operation of the airplane under the Normal Category.

3300 POUNDS

FLAPS UP													
MIAS	60	70	80	90	100	110	120	130	140	150	160	170	180
MCAS	56	66	77	87	97	108	118	128	138	148	159	169	179
	(60)	(69)	(79)	(89)	(99)	(109)	(119)	(129)	(139)	(150)	(160)	(171)	(182)
FLAPS 10°													
MIAS	60	70	80	90	100	110	---	---	---	---	---	---	---
MCAS	56	67	77	87	97	108	---	---	---	---	---	---	---
	(60)	(70)	(79)	(89)	(99)	(108)	---	---	---	---	---	---	---
FLAPS 20°													
MIAS	60	70	80	90	100	110	---	---	---	---	---	---	---
MCAS	56	67	77	87	97	107	---	---	---	---	---	---	---
	(60)	(70)	(79)	(89)	(99)	(108)	---	---	---	---	---	---	---

RESTRICTED CATEGORY PERFORMANCE

This airplane has demonstrated satisfactory operation in the Restricted Category at 1500 feet altitude under standard conditions at the following maximum weight:

A188B (S/N 18803522 and on) 4000 lbs.
A188B (S/N 18803522T and on) 4200 lbs.

NOTE

*For airplanes with dispersal equipment installed, the maximum approved operating speed is 121 MIAS (130 MIAS).

Additional performance information for the Normal and Restricted Categories is included in the Information Manual.

*Airspeeds enclosed in parentheses () are applicable to the airplane when it is equipped with a B2A34C205/90 DHA-4 threadless retention, 2-bladed, 86-inch diameter propeller.



D1180-1-13FM