





**I - Model 525, (Normal Category), Approved October 15, 1992 (continued)**

## Airspeed limitations

V <sub>mo</sub> (maximum operating)	
Sea level to 30,500 ft.	263 KIAS (260 KCAS)
M <sub>mo</sub> above 30,500 ft.	0.71 M <sub>I</sub> (0.70 Mach calibrated)
V <sub>a</sub> (maneuvering sea level)	
10,400 lb. (525-0001 through 525-0359)	183 KIAS (182 KCAS)
10,600 lb. (525-0360 through 525-0599)	185 KIAS (184 KCAS)
<i>See AFM for variations with weight and altitude.</i>	
10,700 lb. (525-0600 and On)	186 KIAS (185 KCAS)
<i>See AFM for variations with weight and altitude.</i>	
V <sub>b</sub> (speed for max. gust intensity)	217 KIAS (215 KCAS)
Fe (Flaps extended)	
15 degrees (takeoff & approach)	200 KIAS (198 KCAS)
35 degrees (landing)	161 KIAS (160 KCAS)
60 degrees (ground flaps)	prohibited in flight
V <sub>mca</sub> (Minimum control speed) Air	
(525-0001 through 525-0599)	92 KIAS (91 KCAS)
(525-0600 and On) Flaps 0	86 KIAS (87 KCAS)
(525-0600 and On) Flaps 15	77 KIAS (80 KCAS)
V <sub>m</sub> cg (Minimum control speed) Ground	
525-0001 through 525-0359	95 KIAS (93 KCAS)
525-0360 through 525-0599	93 KIAS (93 KCAS)
525-0600 and On	89 KIAS (92 KCAS)
V <sub>LO</sub> (landing gear operating)	
Extending (525-0001 and On)	186 KIAS (185 KCAS)
Retracting(525-0001 through 525-0457)	186 KIAS (185 KCAS)
Retracting(525-0458 and On)	175 KIAS (174 KCAS)
V <sub>LE</sub> (landing gear extended)	186 KIAS (185 KCAS)
V <sub>SB</sub> (speed brakes extended)	Any speed with or without flaps
Maximum autopilot operating speed	
Sea level to 30,500 ft.	263 KIAS (260 KCAS)
Above 30,500 ft.	0.71 M <sub>I</sub> (0.70 MACH calibrated)
Maximum tire ground speed	165 knots

**I - Model 525, (Normal Category), Approved October 15, 1992 (continued)**

C.G. Range (Landing Gear Extended) Design C.G. Limits:

Applicable to airplanes S/N 525-0001 through 525-0359:

Forward Limits: Linear variation from 244.14 in. aft of datum (22.29% MAC) at 10,500 lb. to 244.04 in. aft of datum (22.14% MAC) at 10,400 lb. to 242.43 in. aft of datum (19.81% MAC) at 8,800 lb.; Linear variation from 242.43 in. aft of datum (19.81% MAC) at 8,800 lb. to 240.14 in. aft of datum (16.50% MAC) at 7,700 lb.; 240.14 in. aft of datum (16.50% MAC) at 7,700 lb. or less.

Aft Limits: 248.78 in. aft of datum (29.00 % MAC) at 10,500 lb. or less.

Applicable to airplanes S/N 525-0360 through 525-0599):

Forward Limits: Linear variation from 244.34 in. aft of datum (22.58% MAC) at 10,700 lb. to 244.24 in. aft of datum (22.43% MAC) at 10,600 lb. to 242.43 in. aft of datum (19.81% MAC) at 8,800 lb.; Linear variation from 242.43 in. aft of datum (19.81% MAC) at 8,800 lb. to 240.14 in. aft of datum (16.50% MAC) at 7,700 lb.; 240.14 in. aft of datum (16.50% MAC) at 7,700 lb. or less.

Aft Limits: 248.78 in. aft of datum (29.00 % MAC) at 10,700 lb. or less.

Applicable to airplanes S/N 525-0600 and On):

Forward Limits: Linear variation from 244.44 in. aft of datum (22.72% MAC) at 10,800 lb. to 244.34 in. aft of datum (22.58% MAC) at 10,700 lb. to 242.43 in. aft of datum (19.81% MAC) at 8,800 lb.; Linear variation from 242.43 in. aft of datum (19.81% MAC) at 8,800 lb. to 240.14 in. aft of datum (16.50% MAC) at 7,700 lb.; 240.14 in. aft of datum (16.50% MAC) at 7,700 lb. or less.

Aft Limits: 248.43 in. aft of datum (28.50 % MAC) at 10,800 lb. or less.

Landing Gear retracting moment (+632.65) in-lb.

Empty Wt. C.G. Range None

MAC 69.078 in. (L.E. of MAC at +228.745 in. aft of datum)

Maximum Weight	S/N 525-0001 through 525-0359	S/N 525-0360 through 525-0599	S/N 525-0600 and On
Takeoff	10,400 lb.	10,600 lb.	10,700 lb.
Landing	9,700 lb.	9,800 lb.	9,900 lb.
Zero Fuel	8,400 lb.	8,400 lb.	8,400 lb.
Ramp	10,500 lb.	10,700 lb.	10,800 lb.

Minimum Crew for all Flights (see note 5 for cockpit equipment/arrangement restrictions): One pilot (in the left pilot seat) plus additional equipment as specified in the Kinds of Operations Equipment List (KOEL) contained in the Limitations Section of the FAA Approved Airplane Flight Manual

OR

One pilot and one copilot

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No. of Seats	Maximum eight (two crew plus six passenger seats)	
Maximum Baggage	(525-0001 through 525-0599)	
	Nose compartment	400 lb. ( + 74.0 in. aft of datum)
	Aft cabin	100 lb. ( +270.70 in. aft of datum)
	Tailcone	325 lb. ( +356.50 in. aft of datum)
	(525-0600 and On)	
	Nose compartment	400 lb. ( + 74.0 in. aft of datum)
	Tailcone	325 lb. ( +356.50 in. aft of datum)
Fuel Capacity (usable)	Total usable fuel 3220 lb. (477 gal). Two wing tanks with 1,610 lbs. (238.5 gal) usable each; (see NOTE 1 for unusable) +252.99 in. aft of datum	
Oil Capacity (usable)	(525-0001 through 525-0599) - Tank mounted on each engine: 2.0 quarts usable each engine; +312.30 in. aft of datum; (see NOTE 1)	
	(525-0600 and On) - Tank mounted on each engine: 3.4 quarts usable each engine; +314.74 in. aft of datum; (see NOTE 1)	
Maximum Operating Altitude	41,000 ft.	
Control Surface Movements		
Elevator	Up	20 +0/-1 degrees (525-0001 through 525-0599)
	Up	18.5 +0/-1 degrees (525-0600 and On)
	Down	15 +/-1 degrees
Elevator Trim Tab	Up	12 +/-1 degrees
	Down	20 +/-1 degrees
Rudder	Right	30 +/-1 degrees
	Left	30 +/-1 degrees
Rudder Trim Tab	Right	20 +/-1 degrees
	Left	20 +/-1 degrees
Aileron	Up	23.5 +/-1 degrees
	Down	20.5 +/-1 degrees
Aileron Trim Tab	Up	20 +/-1 degrees
	Down	18 +/-1 degrees
Wing Flap	Up	0 +/-1 degrees
	T.O./Appr.	15 +/-1 degrees
	Land	35 +/-1 degrees
	Ground	60 +/-1 degrees
Speed Brakes - Upper	Up	0 to 49 +/-2 degrees
Speed Brakes - Lower	Down	0 to 68 +/-2 degrees
Thrust Attenuators	Stow	-6 +/-1degrees (525-0001 through 525-0599)
	(Ref to Engine Long. axis)	
Thrust Attenuators	Deploy	54 +/-1 degrees (525-0001 through 525-0599)
	(Ref to Engine Long. axis)	
Thrust Attenuators not applicable (525-0600 and On)		
See Airplane Maintenance Manual for rigging instructions.		

**I - Model 525, (Normal Category), Approved October 15, 1992 (continued)**

Serial Nos. Eligible	525-0001 and up
Datum	94.0 in. forward of the front face of the forward pressure bulkhead.
Leveling Means	Longitudinal - Left hand upper floorboard aft of FS 151.00. Lateral - Left hand and right hand upper floorboard aft of FS 152.00.

**Certification Basis - Model 525:**

- (1)(a) (525-0001 through 525-0599)  
Title 14, Part 23 of the Code of Federal Regulations effective February 1, 1965, as amended by Amendments 23-1 through 23-38, and 23-40;
- (1)(b) (525-0600 and On)  
Title 14, Part 23 of the Code of Federal Regulations effective February 1, 1965, as amended by Amendments 23-1 through 23-38, and 23-40; except the following paragraphs applicable for Engines and FADECs:  
  
14 CFR 23.611, 23.777, 23.779, 23.781, 23.865, 23.867, 23.901, 23.903, 23.939, 23.943, 23.951, 23.955, 23.961, 23.973, 23.1011, 23.1013, 23.1019, 23.1021, 23.1041, 23.1043, 23.1045, 23.1091, 23.1093, 23.1103, 23.1111, 23.1121, 23.1123, 23.1141, 23.1143, 23.1145, 23.1163, 23.1181, 23.1182, 23.1183, 23.1189, 23.1191, 23.1193, 23.1195, 23.1203, 23.1301, 23.1305, 23.1309, 23.1337, 23.1521, 23.1549, 23.1583 as amended through Amendment 23-1 through 23-38, and 23-40 through 23-54.
- (2)(a) (525-0001 through 525-0599)  
Part 36 of Title 14 of the Code of Federal Regulations effective December 1, 1969, as amended by Amendments 36-1 through 36-18
- (2)(b) (525-0600 and On)  
Part 36 of Title 14 of the Code of Federal Regulations effective December 1, 1969, as amended by Amendments 36-1 through 36-25
- (3)(a) (525-0001 through 525-0599)  
Part 34 of Title 14 of the Code of Federal Regulations effective September 10, 1990;
- (3)(b) (525-0600 and On)  
14 CFR Part 34 effective September 10, 1990, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes, as amended by Amendments 34-1 through 34-3.
- (4) Compliance with the Noise Control Act of 1972;
- (5) Special Conditions as follows:  
(a) 23-ACE-55, additional requirements for:  
Smoke evacuation, protection of electronic systems from lightning and high intensity radiated electromagnetic fields (HIRF) and lightning, electronic flight instrument displays, thrust attenuating systems (thrust attenuating systems not applicable 525-0600 and On), engine fire extinguishing system, performance, including takeoff, takeoff speeds, accelerate-stop, takeoff path, takeoff distance and takeoff run, takeoff flight path, climb one engine inoperative, landing, balked landing, climb, minimum control speed, trim, static longitudinal stability, demonstration of static longitudinal stability, static directional and lateral stability, wings level stall, turning flight and accelerated stalls, stall warning, vibration and buffeting, high speed characteristics, airspeed indicating system, static pressure system, maximum operating speed limit, minimum flight crew, operating limitations, operating procedures, performance information, airspeed indicator, effects of contamination on Natural Laminar Flow airfoils, definitions, and AFM approved information.

**I - Model 525, (Normal Category), Approved October 15, 1992 (continued)****Certification Basis - Model 525: (continued)**

- (6) Exemption as follows:
  - (a) Exemption No. 5759 granted to use a relaxed "Dutch Roll" damping criteria above 18,000 feet in lieu of damping criteria of 14 CFR § 23.181(b).
- (7) Equivalent level of safety as follows (Applicable to airplanes S/N 525-0360 and On equipped with Collins Proline 21 electronic displays of engine instruments):
  - (a) Number ACE-00-01: 14 CFR §§ 23.1305(c)(2), (c)(5), and 23.1549(a) through (d), direct reading, digital only displays for the high-pressure turbine speed (N<sub>2</sub>), and fuel flow indications.
- (8) Compliance with ice protection has been demonstrated in accordance with 14 CFR §§ 23.1416 and 23.1419.

Application for type certificate dated February 14, 1990. Type Certificate A1WI issued October 15, 1992, obtained by the manufacturer using Delegation Option Authorization Procedures of Part 21 of Title 14 of the Code of Federal Regulations. The Model 525 is defined by Cessna Airplane Assembly Drawing Number 6300000.

**Production Basis:**

Production Certificate No. 4 issued and Delegation Option Authorization No. DOA-230428-CE (CE-3) authorized to issue Airworthiness Certificates under Delegation Option Authorization Procedures of Part 21 of Title 14 of the Code of Federal Regulations.

The Basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification.

- NOTE 1. Current weight and balance information, including list of equipment included in certificated empty weight, and loading instructions are provided for each airplane in the FAA Approved Airplane Flight Manual (AFM) at the time of original certification.

The certificated empty weight and corresponding center of gravity location must include:

Unusable fuel (525-0001 and On)	30.64 lb. at +260.19 in.
Full oil (525-0001 through 525-0599)	15.5 lb. at +312.3 in.
Full oil (525-0600 and On)	16.6 lb. at +314.74 in.
Hydraulic Fluid (525-0001 through 525-0599)	27.5 lb. at +265.0 in.
Hydraulic Fluid (525-0600 and On)	16.78 lb. at +266.9 in.
Anti-ice Fluid (525-0001 and On)	3.4 lb. at +91.5 in.

- NOTE 2. Airplanes must be operated according to the FAA Approved Airplane Flight Manual (AFM), part number 525FM-00 (or later approved revision for serials 0001 through 0359) , 525FMA-00 (or later approved revision for serials 0360 through 0599) , 525FMB-00 (or later approved revision for serials 0600 and On). Required placards and markings are listed in Chapter Eleven (11) of Maintenance Manual, part number 525MM00 (or later approved revision for serials 0001 and On).

- NOTE 3. See Maintenance Manual, Chapter Four (4), "Airworthiness Limitations" for inspections, mandatory retirement life information, and other requirements for continued airworthiness.

**I - Model 525, (Normal Category), Approved October 15, 1992 (continued)**

NOTE 4. All replacement seats (crew and passenger), although they may comply with TSO C39, must also be demonstrated to comply with 14 CFR §§23.321, 23.395, 23.561, 23.562, and 23.785.

The foam cushion buildup of all seats (crew and passenger) may not be altered. Any deviations in the foam construction or stiffness must be demonstrated by test to comply with the listed 14 CFR 23 paragraphs.

The RH side facing seat lap belt shall have a buckle which opens from right to left and the LH side facing belted toilet lap belt shall have a buckle which opens from left to right, thereby preventing the buckle's own inertia from causing it to open. Any other configuration must be verified by dynamic test.

NOTE 5. Approval for operation with a minimum crew of one pilot is based upon the cockpit equipment installation and arrangement evaluated during FAA certification testing. No significant changes may be made to the installed cockpit equipment or arrangement (EFIS, autopilot, avionics, etc.), except as permitted by the approved MMEL, without prior approval from the responsible Aircraft Certification Office.

NOTE 6: Certain airplane Serial Numbers meet the initial airworthiness requirements for operation in Reduced Vertical Separation Minimum (RVSM) airspace.

	S/N 525-0001 through 525-358	Airplanes that have accomplished Cessna Service Bulletin SB525-34-41.
	S/N 525-0359	Received factory installation of Dual Ametek AM-250 altimeters.
	S/N 525-0360 through 525-0599	Airplanes that have received factory installation* of optional Ametek AM-250 copilot's altimeter; or Airplanes that have received factory installation* of optional Collins Pro Line 21 copilot's Air Data Computer and Primary Flight Display; or Airplanes that have accomplished Cessna Service Bulletin SB525-34-40.
	S/N 525-0600 and On	All airplanes are equipped with Collins Pro Line 21 dual Air Data Computers and pilot's and copilot's Primary Flight Displays as standard equipment.

\* Equipment installed by the Cessna factory will be identified in the individual airplane equipment list.

Each operator must obtain RVSM operating approval directly from the FAA.

NOTE 7: The Model 525 (525-0600 and On) is approved for One Engine Inoperative 10 minutes thrust capability with the Williams International FJ44-1AP engine, per FAA Policy Memo "Guidance of Engine Operation at Takeoff Thrust/Power for Ten-Minutes in a One-Engine Inoperative Situation for Cessna Model 525 Airplane" Project AT4020WI-A, dated April 27, 2005, from Standards Office, Small Airplane Directorate and Standards Office, Engine and Propeller Directorate

**II - Model 525A, (Normal Category), Approved June 21, 2000**

Engines	Two Williams International L.L.C. FJ44-2C turbofans (525A-0001 through 525A-0299) Two Williams International, L.L.C. FJ44-3A-24 turbofans (525A-0300 and On)	
Fuel	Commercial kerosene Jet A, Jet A-1, Jet B, JP-4, JP-5, or JP-8. (525A-0001 through 525A-0299) Commercial kerosene Jet A, Jet A-1, JP-5, JP-8, or Jet 3. (525A-0300 and On)	
Engine Limits Static thrust standard day, sea level		
Takeoff (525A-0001 through 525A-0299)		2,400 lb.
Takeoff (525A-0300 and On)		2,490 lb.
Max. permissible engine rotor operating speeds (Takeoff and Maximum Continuous):		
N <sub>1</sub> (fan) (525A-0001 through 525A-0299)		105.2% (100% = 17,245 r.p.m.)
N <sub>2</sub> (Gas Gen.) (525A-0001 through 525A-0299)		98.8% (100% = 41,200 r.p.m.)
N <sub>1</sub> (fan) (525A-0300 and On)		102.78% (100% = 18,000 rpm)
N <sub>2</sub> (Gas Gen.) (525A-0300 and On)		100.00% (100% = 41,200 rpm)
Max. permissible interturbine gas temperatures:		
Takeoff (525A-0001 through 525A-0299)		820 Degrees C
Max. Continuous (525A-0001 through 525A-0299)		805 Degrees C
Transient (starting 15 sec.) (525A-0001 through 525A-0299)		1000 Degrees C
Takeoff (525A-0300 and On)		877 Degrees C (5 min, 10 min OEI)
Max. continuous (525A-0300 and On)		840 Degrees C
Transient (starting 15 sec.) (525A-0300 and On)		1000 Degrees C
Airspeed limitations		
V <sub>mo</sub> (maximum operating)		
Sea level to 8,000 ft. (525A-0001 and On)		260 KIAS (260 KCAS)
8,000 ft. to 29,300 ft. (525A-0001 through 525A-0299)		275 KIAS
(Varies linearly between 274 KCAS and 272 KCAS)		
8,000 ft. to 29,124 ft. (525A-0300 and On)		278 KIAS
(Varies linearly between 277 KCAS and 275 KCAS)		
M <sub>mo</sub> above 29,300 ft. (525A-0001 through 525A-0299)		0.72 M <sub>I</sub> (0.707 Mach calibrated)
M <sub>mo</sub> above 29,124 ft. (525A-0300 and On)		0.737 M <sub>I</sub> (0.722 Mach calibrated)
V <sub>a</sub> (maneuvering sea level, 12,375 lb.) (525A-0001 through 525A-0299)		197 KIAS (197 KCAS)
V <sub>a</sub> (maneuvering sea level, 12,500 lb.) (525A-0300 and On)		196 KIAS (196 KCAS)
	<i>See AFM for variations with weight and altitude.</i>	

**II - Model 525A, (Normal Category), Approved June 21, 2000 (continued)**

## Airspeed limitations (continued)

Vb (speed for max. gust intensity)	217 KIAS (217 KCAS)
Fe (Flaps extended)	
15 degrees (takeoff & approach)	200 KIAS (199 KCAS)
35 degrees (landing)	161 KIAS (160 KCAS)
60 degrees (ground flaps)	prohibited in flight
Maximum speed with flaps failed to 60 degrees (ground flaps) (Emergency Only)	140 KIAS (140 KCAS)
Vmca (Minimum control speed) Air	
0 degrees (takeoff) (525A-0001 through 525A-0299)	89 KIAS (90 KCAS)
15 degrees (takeoff & approach) (525A-0001 through 525A-0299)	81 KIAS (82 KCAS)
0 degrees (takeoff) (525A-0300 and On)	83 KIAS (84 KCAS)
15 degrees (takeoff & approach) (525A-0300 and On)	76 KIAS (77 KCAS)
Vmcg (Min control speed) Ground (525A-0001 through 525A-0299)	89 KIAS (90 KCAS)
Vmcg (Min control speed) Ground (525A-0300 and On)	79 KIAS (80 KCAS)
V <sub>LO</sub> (landing gear operating)	
Extend	200 KIAS (199 KCAS)
Retract	200 KIAS (199 KCAS)
V <sub>LE</sub> (landing gear extended) (525A-0001 through 525A-0299)	200 KIAS (199 KCAS)
V <sub>LE</sub> (landing gear extended) (525A-0300 and On)	200 KIAS (199 KCAS)
V <sub>SB</sub> (speed brakes extended)	Any speed with or without flaps
Maximum autopilot operating speed	Any normal operating speed
Maximum tire ground speed	165 knots

## C.G. Range (Landing Gear Extended) Design C.G. Limits

## Applicable to airplanes S/N 525A-0001 through 525A-0299:

Forward Limits: Linear variation from 277.03 in. aft of datum (19.66% MAC) at 12,500 lb. to 276.89 in. aft of datum (19.46% MAC) at 12,375 lb. to 273.33 in. aft of datum (14.50% MAC) at 9,200 lb.; 273.33 in. aft of datum (14.50% MAC) at 9,200 lb. to 8,500 lb.; Linear variation from 273.33 in. aft of datum (14.50% MAC) at 8,500 lb. to 277.99 in. aft of datum (21.00% MAC) at 7,500 lb.

Aft Limits: 283.72 in. aft of datum (29.00% MAC) at 12,500 lb. or less.

## Applicable to airplanes S/N 525A-0300 and On:

Forward Limits: Linear variation from 277.17 in. aft of datum (19.86% MAC) at 12,625 lb. to 277.03 in. aft of datum (19.66% MAC) at 12,500 lb. to 273.33 in. aft of datum (14.50% MAC) at 9,200 lb.; 273.33 in. aft of datum (14.50% MAC) at 9,200 lb. to 8,500 lb.; Linear variation from 273.33 in. aft of datum (14.50% MAC) at 8,500 lb. to 277.99 in. aft of datum (21.00% MAC) at 7,500 lb.; 277.99 in. aft of datum (21.00% MAC) at 7,500 lb.

Aft Limits: 283.73 in. aft of datum (29.00% MAC) at 12,625 lb. or less.

Landing Gear retracting moment (+687.27) in-lb.

Empty Wt. C.G. Range

None

MAC

71.720 in (L.E. of MAC at +262.926 in. aft of datum)

**II - Model 525A, (Normal Category), Approved June 21, 2000 (continued)**

Maximum Weights	S/N 525A-0001 through 525A-0299	S/N 525A-0300 and On
Takeoff	12,375 lb.	12,500 lb.
Landing	11,500 lb.	11,525 lb.
Zero Fuel	9,300 lb.	9,700 lb.
Ramp	12,500 lb.	12,625 lb.

Minimum Crew for all Flights (see note 5 for cockpit equipment/arrangement restrictions):

One pilot (in the left pilot seat) plus additional equipment as specified in the Kinds of Operations Equipment List (KOEL) contained in the Limitations Section of the FAA Approved Airplane Flight Manual

OR

One pilot and one copilot

No. of Seats Maximum ten (two crew plus eight passenger seats)

Maximum Baggage (525A-0001 through 525A-0299)

Nose compartment	400 lb. (+ 74.0 in. aft of datum)
Aft cabin	100 lb. (+301.7 in. aft of datum)
Tailcone	600 lb. (+384.60 in. aft of datum)

(525A-0300 and On)

Nose compartment	400 lb. (+ 74.0 in. aft of datum)
Tailcone	600 lb. (+384.60 in. aft of datum)

Fuel Capacity (usable) Total usable fuel 3,961 lb. (586.8 gal).  
Two wing tanks with 1,980.5 lb. (293.4 gal) usable each;  
+288.68 in. aft of datum (see NOTE 1 for unusable)

Oil Capacity (usable) (525A-0001 through 525A-0299) Tank mounted on each engine: 2.0 quarts usable each engine; +364.3 in. aft of datum (see NOTE 1)

(525A-0300 and On) Tank mounted on each engine: 3.75 quarts usable each engine; +371.44 in. aft of datum (see NOTE 1)

Maximum Operating Altitude 45,000 ft.

**II - Model 525A, (Normal Category), Approved June 21, 2000 (continued)**

## Control Surface Movements

Elevator	Up	18.5 +/- 0.5 degrees
	Down	15 +/- 1 degrees
Elevator Trim Tab	Up	9 +/- 1 degrees
	Down	23 +/- 1 degrees
Rudder	Right	35 +/- 1 degrees
	Left	35 +/- 1 degrees
Rudder Trim Tab	Right	20 +/- 1 degrees
	Left	20 +/- 1 degrees
Aileron	Neutral position (TE Up)	2.0 +/- 0.5 degrees
	Up from neutral	23.5 +/- 1 degrees
	Down from neutral	20.5 +/- 1 degrees
Aileron Trim Tab	Up	20 +/- 1 degrees
	Down	18 +/- 1 degrees
Wing Flap	Up	0 +/- 1 degrees
	T.O./Apr.	15 +/- 1 degrees
	Landing	35 +/- 1 degrees
	Ground	60 +/- 2 degrees
Speed Brakes - Upper	Up	0 to 49 +/- 2 degrees
Speed Brakes - Lower	Down	0 to 68 +/- 2 degrees
Thrust Attenuators	Stow	-4.5 +/- 0.3 degrees(525A-0001 through 525A-0299)
	(Ref. to Engine Long. axis)	
Thrust Attenuators	Deploy	65 +/- 1 degrees(525A-0001 through 525A-0299)
	(Ref. to Engine Long. axis)	
Thrust Attenuators	not applicable (525A-0300 and On)	

See Airplane Maintenance Manual for rigging instructions

Serial Nos. Eligible                    525A-0001 and up

Datum                                        94.0 in. forward of the front face of the forward pressure bulkhead.

**II - Model 525A, (Normal Category), Approved June 21, 2000 (continued)**

## Leveling Means

Lateral – Place 525A Leveling Tool across inboard crew seat rails at approximately FS 148. Ensure Leveling Tool is parallel to fuselage station plane and is resting solidly on seat rails. Position inclinometer on Leveling Tool with base parallel to the long axis of the Leveling Tool.

Longitudinal - Place 525A Leveling Tool across inboard crew seat rails at approximately FS 148. Ensure Leveling Tool is parallel to fuselage station plane and is resting solidly on seat rails. Position inclinometer on Leveling Tool with base perpendicular to the long axis of the Leveling Tool at BL 0.

**Certification Basis - Model 525A:**

## (1) (525A-0001 and On)

Part 23 of Title 14 of the Code of Federal Regulations effective February 1, 1965, as amended by Amendments 23-1 through 23-40; except for additional paragraphs listed, and for paragraphs for Engines and FADECs only as amended by Amendments 23-1 through 23-54:

## (a) Additions: (525A-0001 and On)

14 CFR §§ 23.331, 23.351, 23.421, 23.423, 23.425, 23.427, 23.939, and 23.1163 as amended by Amendments 23-1 through 23-42;

14 CFR §§ 23.943, 23.951, 23.957, 23.961, 23.967, 23.991, 23.993, 23.997, 23.999, 23.1001, 23.1011, 23.1019, 23.1041, 23.1061, 23.1189, 23.1322, 23.1357, 23.1391, 23.1393, 23.1395, 23.1443, and 23.1445 as amended by Amendments 23-1 through 23-43;

14 CFR §§ 23.179, 23.305, 23.321, 23.361, 23.397, 23.479, 23.485, 23.613, 23.615, 23.621, 23.731 and 23.1549 as amended by Amendments 23-1 through 23-45;

14 CFR §§ 23.335, 23.337, 23.341, 23.343, 23.345, 23.347, 23.371, 23.393, 23.399, 23.415, 23.441, 23.443, 23.455, 23.457, 23.473, 23.499, 23.561, 23.571, 23.572, 23.611, 23.629, 23.673, and 23.725 as amended by Amendments 23-1 through 23-48;

14 CFR §§ 23.677, 23.723, 23.785, 23.787, 23.791, 23.853, 23.855, 23.1303, 23.1307, 23.1321, 23.1351, 23.1353, 23.1361, and 23.1401 as amended by Amendments 23-1 through 23-49;

14 CFR §§ 23.233, 23.235, 23.1555, and 23.1589 as amended by Amendments 23-1 through 23-50;

14 CFR §§ 23.901, 23.903, 23.929, 23.963, 23.965, 23.1013, 23.1043, 23.1143, 23.1183, 23.1191, and 23.1337 as amended by Amendments 23-1 through 23-51;

## (b) Addition for Engines and FADECs only (525A-0300 and On)

14 CFR §§ 23.777, 23.779, 23.865, 23.867, 23.901, 23.903, 23.955, 23.973, 23.1041, 23.1045, 23.1091, 23.1093, 23.1103, 23.1121, 23.1123, 23.1141, 23.1145, 23.1181, 23.1193, 23.1305, 23.1309, 23.1521, and 23.1583, as amended by Amendments 23-1 through 23-54; for Engine and FADEC installation only.

## (2)(a) (525A-0001 through 525A-0299)

14 CFR Part 36 effective December 1, 1969, Noise Standards, as amended by Amendments 36-1 through 36-22.

**II - Model 525A, (Normal Category), Approved June 21, 2000 (continued)****Certification Basis - Model 525A: (continued)**

- (2)(b) (525A-0300 and On)  
14 CFR Part 36 effective December 1, 1969, Noise Standards, as amended by Amendments 36-1 through 36-25.
- (3) 14 CFR Part 34 effective September 10, 1990, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes, as amended by Amendments 34-1 through 34-3.
- (4) Special Conditions as follows:
  - (a) 23-ACE-55, additional requirements for:  
Smoke evacuation, protection of electronic systems from lightning and high intensity radiated electromagnetic fields (HIRF) and lightning, electronic flight instrument displays, thrust attenuating systems (thrust attenuating systems not applicable 525A-0300 and On), engine fire extinguishing system, performance, including takeoff, takeoff speeds, accelerate-stop, takeoff path, takeoff distance and takeoff run, takeoff flight path, climb one engine inoperative, landing, balked landing, climb, minimum control speed, trim, static longitudinal stability, demonstration of static longitudinal stability, static directional and lateral stability, wings level stall, turning flight and accelerated stalls, stall warning, vibration and buffeting, high speed characteristics, airspeed indicating system, static pressure system, maximum operating speed limit, minimum flight crew, operating limitations, operating procedures, performance information, airspeed indicator, effects of contamination on Natural Laminar Flow airfoils, definitions, and AFM approved information.
  - (b) 23-102-SC, High Altitude Operation (45,000 feet). Additional requirements for Ventilation, Air conditioning, Pressurized cabins, Oxygen equipment and supply, Supplemental oxygen, Oxygen distribution and equipment. (See NOTE 6.)
- (5) Exemption: Exemption number 5759 granted to use a relaxed "Dutch Roll" damping criteria above 18,000 feet in lieu of damping criteria of 14 CFR § 23.181(b).
- (6) Equivalent level of safety as follows:
  - (a) Number ACE-00-01: 14 CFR §§ 23.1305(c)(2), (c)(5), and 23.1549(a) through (d), direct reading, digital only displays for the high-pressure turbine speed (N<sub>2</sub>), and fuel flow indications.
  - (b) Number ACE-99-07: 14 CFR § 23.841(b)(6), Cabin Pressurization – High Altitude Takeoff and Landing Operations.
  - (c) Number ACE-00-05; 14 CFR § 23.841(a), to allow small temporary cabin altitude excursions above 15,000 feet in the event of any probable pressurization system failure."
- (7) Compliance with ice protection has been demonstrated in accordance with 14 CFR §§ 23.1416 and 23.1419.

Application to amend type certificate dated May 14, 1998. Type Certificate A1WI amended June 21, 2000, obtained by the manufacturer using Delegation Option Authorization Procedures of Part 21 of Title 14 of the Code of Federal Regulations. The Model 525A is defined by Cessna Airplane Assembly Drawing Number 6300001.

**Production Basis:**

Production Certificate No. 4 issued and Delegation Option Authorization No. DOA-230428-CE (CE-3) authorized to issue Airworthiness Certificates under Delegation Option Authorization Procedures of Part 21 of Title 14 of the Code of Federal Regulations.

The Basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification.

**II - Model 525A, (Normal Category), Approved June 21, 2000 (continued)**

NOTE 1. Current weight and balance information, including list of equipment included in certificated empty weight, and loading instructions are provided for each airplane in the FAA Approved Airplane Flight Manual (AFM) at the time of original certification.

The certificated empty weight and corresponding center of gravity location must include:

Unusable fuel (525A-0001 and On)	76.7 lb. at +300.13 in.
Full oil (525A-0001 through 525A-0299)	15.07 lb. at +364.3 in.
Full oil (525A-0300 and On)	18.40 lb. at + 371.44 in.
Hydraulic Fluid (525A-0001 through 525A-0299)	18.9 lb. at +278.0 in.
Hydraulic Fluid (525A-0300 and On)	25.9 lb. at +296.08 in.
Anti-ice Fluid (525A-0001 and On)	3.4 lb. at +91.5 in.

NOTE 2. Airplanes must be operated according to the FAA Approved Airplane Flight Manual (AFM), part number 525AFM-04 (or later approved revision for Serials -0001 through -0299); 525AFMA-00 (or later approved revision for Serials -0300 and On). Required placards and markings are listed in Chapter Eleven (11) of Maintenance Manual, part number 525AMM-05 (or later approved revision).

NOTE 3. See Maintenance Manual Chapter Four (4), "Airworthiness Limitations" for mandatory component retirement life information.

NOTE 4. All replacement seats (crew and passenger), although they may comply with TSO C39, must also be demonstrated to comply with 14 CFR §§ 23.321, 23.395, 23.561, 23.562, and 23.785.

The foam cushion buildup of all seats (crew and passenger) may not be altered. Any deviations in the foam construction or stiffness must be demonstrated by test to comply with the listed 14 CFR 23 paragraphs.

The RH side facing seat lap belt shall have a buckle which opens from right to left and the LH side facing belted toilet lap belt shall have a buckle which opens from left to right, thereby preventing the buckle's own inertia from causing it to open. Any other configuration must be verified by dynamic test.

NOTE 5. Approval for operation with a minimum crew of one pilot is based upon the cockpit equipment installation and arrangement evaluated during FAA certification testing. No significant changes may be made to the installed cockpit equipment or arrangement (EFIS, autopilot, avionics, etc.), except as permitted by the approved MMEL, without prior concurrence from the responsible Aircraft Certification Office.

NOTE 6. Model 525A airplanes have been approved for high altitude operations (altitudes above 41,000 feet), by Special Conditions. Any modifications to the pressure vessel must be approved in accordance with the requirements as shown in the certification basis. This includes modifications which could result in a pressure vessel opening, either through crack-growth or antenna loss, greater than 3.00 sq. in.

NOTE 7. Certain airplane Serial Numbers meet the initial airworthiness requirements for operation in Reduced Vertical Separation Minimum (RVSM) airspace.

S/N 525A-0001 through 525A-0299	Airplanes that have received factory installation * of optional Ametek AM-250 copilot's altimeter or; Airplanes that have received factory installation * of optional Collins Pro Line 21 copilot's Air Data Computer and Primary Flight Display; or Airplanes that have accomplished Cessna Service Bulletin SB525A-34-01.
S/N 525A-0300 And On	All airplanes are equipped with Collins Pro Line 21 dual Air Data Computers and pilot's and copilot's Primary Flight Displays as standard equipment.

**II - Model 525A, (Normal Category), Approved June 21, 2000 (continued)**

NOTE 7. (continued)

\*Equipment installed by the Cessna factory will be identified in the individual airplane equipment list.

Each operator must obtain RVSM operating approval directly from the FAA.

NOTE 8. The Model 525A (525A-0300 And On) is approved for One Engine Inoperative 10 minutes thrust capability with the Williams International FJ44-3A-24 engine, per FAA Policy Memo "Guidance of Engine Operation at Takeoff Thrust/Power for Ten-Minutes in a One-Engine Inoperative Situation for Cessna Model 525A Airplane" Project AT4141WI-A, dated September 8, 2005, from Standards Office,- Small Airplane Directorate and Standards Office, Engine and Propeller Directorate.

**III - Model 525B, (Commuter Category), Approved October 15, 2004**

Engines Two Williams International, L.L.C. FJ44-3A turbofans

Fuel Commercial kerosene Jet A, Jet A-1, JP-5, JP-8, or Jet 3.

Engine Limits Static thrust standard day, sea level

Takeoff 2,820 lb.

Max. permissible engine rotor operating speeds (Takeoff and Maximum Continuous):

N<sub>1</sub>(fan) 102.78% (100% = 18,000 r.p.m.)

N<sub>2</sub> (Gas Gen.) 100.00% (100% = 41,200 r.p.m.)

Max. permissible interturbine gas temperatures:

Takeoff 877 Degrees C (5 min, 10 min OEI)

Max. continuous 840 Degrees C

Transient (starting 15 sec.) 1000 Degrees C

Airspeed limitations

V<sub>mo</sub> (maximum operating)

Sea level to 8,000 ft. 260 KIAS (257 KCAS)

8,000 ft. to 29,300 ft. 278 KIAS (275 KCAS)

M<sub>mo</sub> above 29,300 ft. 0.737 M<sub>I</sub> (0.72 MACH calibrated)

V<sub>a</sub> (maneuvering sea level at 13,870 lb.) 207 KIAS (205 KCAS)

*See AFM for variations with weight and altitude.*

V<sub>b</sub> (speed for max. gust intensity) 230 KIAS (227 KCAS)

Fe (Flaps extended)

15 degrees (takeoff & approach) 200 KIAS (198 KCAS)

35 degrees (landing) 161 KIAS (160 KCAS)

55 degrees (ground flaps) prohibited in flight

Maximum speed with flaps failed to 55 degrees 140 KIAS (139 KCAS)

(ground flaps) (Emergency Only)

**III - Model 525B, (Commuter Category), Approved October 15, 2004 (continued)**

## Airspeed limitations (cont'd)

V <sub>MCA</sub> (Minimum control speed) Air	
0 degrees (takeoff)	88 KIAS (88 KCAS)
15 degrees (takeoff & approach)	81 KIAS (81 KCAS)
V <sub>MCG</sub> (Minimum control speed) Ground	89 KIAS (88 KCAS)
V <sub>LO</sub> (landing gear operating)	
Extend	250 KIAS (195 KCAS)
Retract	200 KIAS (195 KCAS)
V <sub>LE</sub> (landing gear extended)	250 KIAS (195 KCAS)
V <sub>SB</sub> (speed brakes extended)	Any speed with or without flaps
Maximum autopilot operating speed	Any normal operating speed
Maximum tire ground speed	162.4 knots

## C.G. Range (Landing Gear Extended) Design C.G. Limits:

Forward Limits: Linear variation from 298.90 in. aft of datum (21.20% MAC) at 14,070 lb. to 293.90 in. aft of datum (14.50% MAC) at 9,700 lb.; 293.90 in. aft of datum (14.50% MAC) at 9,700 lb. to 9,000 lb.; linear variation from 293.90 in. aft of datum (14.50% MAC) at 9,000 lb. to 298.70 in. aft of datum (21.00% MAC) at 8,000 lb.

Aft Limits: 304.70 in. aft of datum (29.00% MAC) at 14,070 lb. to 13,000 lb.; linear variation from 304.70 in. aft of datum (29.00% MAC) at 13,000 lb. to 302.50 in. aft of datum (26.00% MAC) at 8,000 lb.

Landing Gear retracting moment +518.64 in-lb.

Empty Wt. C.G. Range None

MAC 74.817 in. (L.E. of MAC at +283.01 in. aft of datum)

Maximum weights	Takeoff	13,870 lb.
	Landing	12,750 lb.
	Zero Fuel	10,510 lb.
	Ramp	14,070 lb.

Minimum Crew for all Flights (see Note 5 for cockpit equipment/arrangement restrictions):

One pilot (in the left pilot seat) plus additional equipment as specified in the Kinds of Operations Equipment List (KOEL) contained in the Limitations Section of the FAA Approved Airplane Flight Manual

OR

One pilot and one copilot

No. of Seats Maximum ten (two crew plus eight passenger seats)

Maximum Baggage

Nose Compartment	400 lb. (+74.00 in. aft of datum)
Aft cabin	100 lb. (+330.20 in. aft of datum)
Tailcone	600 lb. (+414.60 in. aft of datum)

**III - Model 525B, (Commuter Category), Approved October 15, 2004 (continued)**

Fuel Capacity (usable)	Total usable fuel 4,710 lb. (703 gal) Two wing tanks with 2355 lbs. (351 gal) usable each; +310.25 in. aft of datum (see NOTE 1 for unusable)		
Oil Capacity (usable)	Tank mounted on each engine: 3.75 US quarts usable each engine; +401.44 in. aft of datum; (see NOTE 1)		
Maximum Operating Altitude	45,000 ft.		
Control Surface Movements	Elevator	Up	20.5 ± 0.5 degrees
		Down	15.0 ± 1.0 degrees
	Elevator Trim Tab	Up	9.0 ± 1.0 degrees
		Down	17.0 ± 1.0 degrees
	Rudder	Right	27.0 ± 1.0 degrees
		Left	27.0 ± 1.0 degrees
	Rudder Trim Tab	Right	20.0 ± 1.0 degrees
		Left	20.0 ± 1.0 degrees
	Aileron	Up	23.5 ± 1.0 degrees
		Down	20.5 ± 1.0 degrees
	Aileron Trim Tab	Up	20.0 ± 1.0 degrees
		Down	18.0 ± 1.0 degrees
	Wing Flap	Up	0 ± 1.0 degrees
		T.O./Appr.	15 ± 1.0 degrees
		Land	35 ± 1.0 degrees
	Speed Brakes	- Upper Up	0 to 49.0 ± 2.0 degrees
- Lower Down		0 to 68.0 ± 2.0 degrees	
	See Airplane Maintenance Manual for rigging instructions.		
Serial Nos. Eligible	525B-0001 and up		
Datum	94.0 in. forward of the front face of the forward pressure bulkhead.		
Leveling Means	Lateral – Place 525 Leveling Tool across inboard crew seat rails at approximately FS 148. Ensure Tool is parallel to fuselage station plane and is resting solidly on seat rails. Position inclinometer on Leveling Tool with base parallel to the long axis of the Leveling Tool. Adjust the main gear jack to level aircraft.		
	Longitudinal – Place 525 Leveling Tool across inboard crew seat rails at approximately FS 148. Ensure Tool is parallel to fuselage station plane and is resting solidly on seat rails. Position inclinometer on Leveling Tool with base perpendicular to the long axis of the Leveling Tool. Adjust the nose gear jack to level aircraft.		

**III - Model 525B, (Commuter Category), Approved October 15, 2004 (continued)****Certification Basis – Model 525B:**

- (1) Part 23 of Title 14 of the Code of Federal Regulations effective February 1, 1965, as amended by Amendments 23-1 through 23-54;
  - (a) Exceptions:
    - 14 CFR §§ 23.773, 23.775, 23.807(e), 23.865, 23.933, 23.1309, 23.1311, 23.1419, 23.1431, 23.1441, 23.1451, and 23.1453 as amended through Amendment 23-40;
    - § 23.1309 as amended through Amendment 23-49 for the engine FADEC installation only;
    - § 23.562 for emergency landing dynamic conditions for each seat/restraint system.
- (2) 14 CFR Part 34 of the Code of Federal Regulations effective September 10, 1990, as amended by amendment 34-1 through 34-3;
- (3) 14 CFR Part 36 of the Code of Federal Regulations effective December 1, 1969, as amended by amendment 36-1 through 36-25;
- (4) Special Conditions as follows:
  - (a) 23-ACE-55, paragraphs 2, 3, 4, and 37.
  - (b) 23-102-SC, High Altitude Operation (45,000 feet). Additional requirements for Ventilation, Air conditioning, Pressurized cabins, Oxygen equipment and supply, Supplemental oxygen, Oxygen distribution and equipment. (See NOTE 6.)
  - (c) 23-145-SC, Flight Performance, Flight Characteristics, and Operating Limitations. Special Conditions SC 23.51 Takeoff speeds; SC 23.63 Climb: General; SC 23.67 Climb: One engine inoperative; SC 23.149 Minimum control speed; SC 23.161 Trim; SC 23.173 Static longitudinal stability; SC 23.177 Static directional and lateral stability; SC 23.201 Wings level stall; SC 23.203 Turning flight and accelerated turning stalls; SC 23.251 Vibration and buffeting; SC 23.253 High speed characteristics; SC 23.1505 Airspeed limitations; SC 23.1545 Airspeed indicator; SC 23.1583 Operating limitations; and SC 23.1585 Operating procedures.
- (5) Exemption as follows:
  - (a) Exemption No. 7981 to permit certification in the Commuter category.
  - (b) Exemption No. 8323 for use of a relaxed “Dutch Roll” damping criteria above 18,000 feet in lieu of damping criteria of 14 CFR § 23.181(b).
- (6) Equivalent level of safety as follows:
  - (a) Number ACE-00-01A: 14 CFR §§ 23.1305(c)(2), (c)(5), and 23.1549(a) through (d), direct reading, digital only displays for the high-pressure turbine speed (N<sub>2</sub>), and fuel flow indications.
  - (b) Number ACE-99-07A: 14 CFR § 23.841(b)(6), Cabin Pressurization – High Altitude Takeoff and Landing Operations.
  - (c) Number ACE-00-05A: 14 CFR § 23.841(a), to allow small temporary cabin altitude excursions above 15,000 feet in the event of any probable pressurization system failure.
  - (d) Number ACE-02-18: 14 CFR § 23.783(f)(1), Passenger Entry Door Opening Dimensions.
  - (e) Number ACE-02-20: 14 CFR § 23.815(b), Cabin Aisle Width.
  - (f) Number ACE-03-07: 14 CFR § 23.853(d)(2) No Smoking Placard Lettering Size.
  - (g) Number ACE-04-06: 14 CFR § 23.1447(e) Passenger Oxygen Dispensing Units.
- (7) 14 CFR § 23.1311 Electronic display instrument systems not complied with. This requirement is addressed in Special Condition 23-ACE-55, Paragraph 4.
- (8) Compliance with ice protection has been demonstrated in accordance with 14 CFR § 23.1416 and 23.1419. (See Note 9).

**III - Model 525B, (Commuter Category), Approved October 15, 2004 (continued)**

Application to amend type certificate was dated February 7, 2002. Type Certificate A1WI amended October 15, 2004, obtained by the manufacturer using Delegation Option 'Authorization Procedures of Part 21 of Title 14 of Code of Federal Regulations. The Model 525B is defined by Cessna Assembly Drawing Number 6300300.

**Production Basis:**

Production Certificate No. 4 issued and Delegation Option Authorization Manufacturer No. DOA-230428-CE (CE-3) authorized to issue Airworthiness Certificates under Delegation Option Authorization Procedures of Part 21 of the Federal Aviation Regulations.

**Equipment:**

The Basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification.

NOTE 1. Current weight and balance information, including list of equipment included in certificated empty weight, and loading instructions are provided for each airplane in the FAA Approved Airplane Flight Manual (AFM) at the time of original certification.

The certificated empty weight and corresponding center of gravity location must include:

Unusable fuel	49.68 lb. at +296.80 in.
Full oil	18.40 lb. at +401.44 in.
Hydraulic Fluid	15.09 lb. at +318.44 in.
Anti-ice Fluid	3.40 lb. at +91.5 in.

NOTE 2. Airplanes must be operated according to the FAA Approved Airplane Flight Manual (AFM), part number 525BFM-00 (or later approved revision). Required placards and markings are listed in Chapter Eleven (11) of Maintenance Manual, part number 525BMM00 (or later revision).

NOTE 3. See Maintenance Manual, Chapter Four (4), "Airworthiness Limitations" for mandatory component retirement life information.

NOTE 4. All replacement seats (crew and passenger), although they may comply with TSO C39, must also be demonstrated to comply with 14 CFR §§ 23.321, 23.395, 23.561, 23.562, and 23.785.

The foam cushion buildup of all seats (crew and passenger) may not be altered. Any deviations in the foam construction or stiffness must be demonstrated by test to comply with the listed 14 CFR 23 paragraphs.

The RH side facing seat lap belt shall have a buckle which opens from right to left and the LH side facing belted toilet lap belt shall have a buckle which opens from left to right, thereby preventing the buckle's own inertia from casing it to open. Any other configuration must be verified by dynamic test.

NOTE 5. Approval for operation with a minimum crew of one pilot is based upon the cockpit equipment installation and arrangement evaluated during FAA certification testing. No significant changes may be made to the installed cockpit equipment or arrangement (EFIS, autopilot, avionics, etc.), except as permitted by the approved MMEL, without prior concurrence from the responsible Aircraft Certification Office.

**III - Model 525B, (Commuter Category), Approved October 15, 2004 (continued)**

NOTE 6. Model 525B airplanes have been approved for high altitude operations (altitudes above 41,000 feet), by Special Conditions. Any modifications to the pressure vessel must be approved in accordance with the requirements as shown in the certification basis. This includes modifications which could result in a pressure vessel opening, either through crack-growth or antenna loss, greater than 3.00 sq. in.

NOTE 7. Airplane Serial Numbers identified below meet the airworthiness requirements for operation in Reduced Vertical Separation Minimum (RVSM) airspace.

S/N 525B-0001 and On	All airplanes are equipped with Collins Pro Line 21 dual Air Data Computers and pilot's and copilot's Primary Flight Displays as standard equipment.
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Each operator must obtain RVSM operating approval directly from the FAA.

NOTE 8. The Model 525B is approved for One Engine Inoperative 10 minutes thrust capability with the Williams International FJ44-3A engine, per FAA Policy Memo "Guidance of Engine Operation at Takeoff Thrust/Power for Ten-Minutes in a One-Engine Inoperative Situation for Cessna Model 525B Airplane (Project AT3268WI-A)", dated April 14, 2004, from Standards Office Small Airplane Directorate and Standards Office, Engine and Propeller Directorate.

NOTE 9. Flight into known icing is approved for the following Serial Number effectivity. S/N 525B-0001; S/N 525B-0002 thru -0012 incorporating Cessna Service Bulletin SB525B-30-01; and S/N 525B-0013 and On.

**IV - Model 525C, (Commuter Category), Approved March 12, 2010**

Engines Two Williams International, L.L.C. FJ44-4A turboprops

Fuel Commercial kerosene Jet A, Jet A-1, JP-5, and JP-8.

Engine Limits Static thrust standard day, sea level

Takeoff 3,621 lb.

Max. permissible engine rotor operating speeds (Takeoff and Maximum Continuous):

N <sub>1</sub> (fan)	104.76%	(100% = 16,360 r.p.m.)
Transient (2 minute operational limit)	105.76%	
N <sub>2</sub> (Gas Gen.) Max continuous	100.86%	(100% = 37,450 r.p.m.)
Transient (2 minute operational limit)	101.59%	

Max. permissible interturbine gas temperatures:

Takeoff	855 Degrees C (5 min, 10 min OEI)
Max. continuous	835 Degrees C
Transient (starting 15 sec.)	1000 Degrees C
Transient (starting 30 sec.)	900 Degrees C

Airspeed limitations

V <sub>mo</sub> (maximum operating)	
Sea level to 8,000 ft.	260 KIAS (261 KCAS)
8,000 ft. to 28,000 ft.	305 KIAS (306 KCAS)
M <sub>mo</sub> above 28,000 ft.	0.77 M <sub>I</sub> (0.774 MACH calibrated)
V <sub>a</sub> (maneuvering sea level at 16,950 lb.)	195 KIAS (195 KCAS)
<i>See AFM for variations with weight and altitude.</i>	
V <sub>b</sub> (speed for max. gust intensity)	232 KIAS (233 KCAS up to 40,060 ft)
	0.77 M <sub>I</sub> (0.774 MACH calibrated)
	above 40,060 ft



**IV - Model 525C, (Commuter Category), Approved March 12, 2010 (continued)**

## Airspeed limitations (cont'd)

V <sub>FE</sub> (Flaps extended)	
15 degrees (takeoff & approach)	200 KIAS (200 KCAS)
35 degrees (landing)	160 KIAS (160 KCAS)
V <sub>MCA</sub> (Minimum control speed) Air	
0 degrees (takeoff)	94 KIAS (94 KCAS)
15 degrees (takeoff & approach)	85 KIAS (85 KCAS)
V <sub>MCG</sub> (Minimum control speed) Ground	88 KIAS (88 KCAS)
V <sub>LO</sub> (landing gear operating)	
Extend	200 KIAS (200 KCAS)
Retract	200 KIAS (200 KCAS)
V <sub>LE</sub> (landing gear extended)	200 KIAS (200 KCAS)
V <sub>SB</sub> (speed brakes extended)	Any speed with or without flaps
Maximum autopilot operating speed	Any normal operating speed
Maximum tire ground speed	165 knots

## C.G. Range (Landing Gear Extended) Design C.G. Limits:

Forward Limits: Linear from 312.06 in. aft of datum (21.0% MAC) at 9,500 lb. to 306.65 in. aft of datum (14.5% MAC) at 10,500 lb. to 306.65 in. aft of datum (14.5% MAC) at 13,250 lb. to 307.31 in. aft of datum (15.3% MAC) at 14,500 lb. to 307.98 in. aft of datum (16.1% MAC) at 15,250 lb. to 309.23 in. aft of datum (17.6% MAC) at 16,250 lb. to 310.72 in. aft of datum (19.4% MAC) at 17,070 lb.

Aft Limits: Linear from 317.06 in. aft of datum (27.0% MAC) at 9,500 lb. to 317.06 in. aft of datum (27.0% MAC) at 12,150 lb. to 316.23 in. aft of datum (26.0% MAC) at 13,000 lb. to 316.23 in. aft of datum (26.0% MAC) at 14,500 lb. to 317.89 in. aft of datum (28.0% MAC) at 15,750 lb. to 317.89 in. aft of datum (28.0% MAC) at 17,070 lb.

Landing Gear retracting moment -3386 in-lb.

Empty Wt. C.G. Range

None

MAC

83.290 in. (L.E. of MAC at +294.571 in. aft of datum)

Maximum weights

Takeoff	16,950 lb.
Landing	15,500 lb.
Zero Fuel	12,360 lb.
Ramp	17,070 lb.

Minimum Crew for all Flights (see Note 5 for cockpit equipment/arrangement restrictions):

One pilot (in the left pilot seat) with equipment as specified in the Kinds of Operations Equipment List (KOEL) contained in the Limitations Section of the FAA Approved Airplane Flight Manual

OR

One pilot and one copilot

No. of Seats

Maximum eleven (two crew plus nine passenger seats)

Maximum Baggage

Nose Compartment	400 lb. (+76.14 in. aft of datum)
Tailcone	600 lb. (+431.70 in. aft of datum)

**IV - Model 525C, (Commuter Category), Approved March 12, 2010 (continued)**

Fuel Capacity (usable)	Total usable fuel 5828 lb. (869.8 gal) Two wing tanks with 2914 lbs. (434.9 gal) usable each. +319.30 in. aft of datum (see NOTE 1 for unusable)			
Oil Capacity (usable)	Tank mounted on each engine: 4.8 US quarts usable each engine; +424.64 in. aft of datum; (see NOTE 1)			
Maximum Operating Altitude	45,000 ft.			
Control Surface Movements	Elevator	Up	25.5 ± 0.5 degrees	
		Down	12.0 ± 1.0 degrees	
	Elevator Trim Tab	Up	6.0 ± 1.0 degrees	
		Down	14.0 ± 1.0 degrees	
	Rudder	Right	32.0 ± 1.0 degrees	
		Left	32.0 ± 1.0 degrees	
	Rudder Trim Tab	Right	20.0 ± 1.0 degrees	
		Left	20.0 ± 1.0 degrees	
	Aileron	Up	23.5 ± 1.0 degrees	
		Down	20.5 ± 1.0 degrees	
	Aileron Trim Tab	Up	19.0 ± 1.0 degrees	
		Down	19.0 ± 1.0 degrees	
	Wing Flap	Up	0 ± 1.0 degrees	
		T.O./Appr.	15 ± 1.0 degrees	
		Land	35 ± 1.0 degrees	
	Speed Brakes (In-Air)	- Upper	Up	0 to 40.0 ± 2.0 degrees
		- Lower	Down	0 to 35.4 ± 2.5 degrees
Ground Spoilers	- Inboard	Up	55.0 ± 2.0 degrees	
	- Center	Up	55.0 ± 2.0 degrees	
	- Outboard	Up	55.0 ± 2.0 degrees	
	See Airplane Maintenance Manual for rigging instructions.			
Serial Nos. Eligible	525C-0001 and up			
Datum	94.0 in. forward of the front face of the forward pressure bulkhead.			
Leveling Means	Lateral – Place 525 Leveling Tool across inboard crew seat rails at approximately FS 145.5. Ensure Tool is parallel to fuselage station plane and is resting solidly on seat rails. Position inclinometer on Leveling Tool with base parallel to the long axis of the Leveling Tool. Adjust the main gear jack to level aircraft.			
	Longitudinal – Place 525 Leveling Tool across inboard crew seat rails at approximately FS 145.5. Ensure Tool is parallel to fuselage station plane and is resting solidly on seat rails. Position inclinometer on Leveling Tool with base perpendicular to the long axis of the Leveling Tool. Adjust the nose gear jack to level aircraft.			

**IV - Model 525C, (Commuter Category), Approved March 12, 2010 (continued)****Certification Basis:**

- (1) Part 23 of Title 14 of the Code of Federal Regulations Commuter Category as amended by Amendments 23-1 through 23-57, with exceptions addressed in Special Conditions, ELOS's, and Exemptions.

In addition, the installation of the Full Authority Dual-Channel Electronic Control (FADEC) system must comply with the requirements of Sec. 23.1309(a) through (e) as amended through Amendment 23-57.

- (2) 14 CFR Part 34 of the Code of Federal Regulations effective September 10, 1990, as amended by amendment 34-1 through 34-4;
- (3) 14 CFR Part 36 of the Code of Federal Regulations effective December 1, 1969, as amended by amendment 36-1 through 36-28;
- (4) Special Conditions as follows:
  - (a) 23-102-SC, High Altitude Operation (45,000 feet). Additional requirements for Ventilation, Air conditioning, Pressurized cabins, Oxygen equipment and supply, Supplemental oxygen, Oxygen distribution and equipment. (See NOTE 6.)
  - (b) 23-145-SC, Flight Performance, Flight Characteristics, and Operating Limitations.
  - (c) 23-234-SC, Single Point Refuel/Defuel System.
  - (d) 23-236-SC, Lithium Ion Battery Installation..
  - (e) 23-239-SC, High Fuel Temperature.
  - (f) 23-240-SC, Flight special conditions in lieu of 14 CFR § 23.161 (b)(2), Trim and § 23.181(a) and (d), Dynamic Stability.
- (5) Exemptions as follows:
  - (a) Exemption No. 9495 to permit modification of the airplane landing gear loads and associated airframe loads in lieu of 14 CFR §§ 23.473, 23.477, 23.479, 23.481, 23.483, 23.493, 23.723, 23.725, 23.726, 23.727, and C23.1 Appendix C of Title 14, Code of Federal Regulation.
  - (b) Exemption No. 9593 to permit for the installation of a multi-place side-facing couch, in lieu of 14 CFR § 23.562(a).
  - (c) Exemption No. 9906 to permit certification without a warning system indicating a failure of the pressure refueling automatic shutoff system as specified in the rule until August 1, 2010, in lieu of 14 CFR § 23.979(b)(2).
  - (d) Exemption No. 9920 for use of a relaxed "Dutch Roll" damping criteria above 18,000 feet in lieu of damping criteria of 14 CFR § 23.181(b).
  - (e) Exemption No. 9534 to permit certification in the commuter category, in lieu of 14 CFR § 23.3(d).
  - (f) Exemption No. 9997 to allow type certification with the current engine low pressure rotary group shaft speed (N1) and interstage turbine temperature (ITT) displays until April 30, 2011, in lieu of 14 CFR § 23.1549(a), (b), and (c).
  - (g) Exemption No. 9998 to allow type certification with the current engine oil pressure and temperature displays until April 30, 2011, in lieu of 14 CFR § 23.1321(b), 23.1549(a), (b), and (c).
- (6) Equivalent level of safety as follows:
  - (a) ELOS No. ACE-00-05B: 14 CFR § 23.841 (a), to allow small temporary cabin altitude excursions above 15,000 feet in the event of any probable pressurization system failure.
  - (b) ELOS No. ACE-08-01: 14 CFR § 23.1555(d)(1), Useable Fuel Capacity Marking.
  - (c) ELOS No. ACE-08-03A: 14 CFR § 23.841(b)(6), Cabin Pressurization — High Altitude Takeoff and Landing Operation.
  - (d) ELOS No. ACE-08-04: 14 CFR § 23.815(b), Cabin Aisle Width
  - (e) ELOS No. ACE-08-07: 14 CFR § 23.853(d)(2) No Smoking Placard Lettering Size.
  - (f) ELOS No. ACE-08-08: 14 CFR § 23.807(e), Emergency Exit Water Barrier.

- (g) ELOS No. ACE-09-07: 14 CFR § 23.1303(c) for a Direction Indicator (non-stabilized magnetic compass).

**IV - Model 525C, (Commuter Category), Approved March 12, 2010 (continued)****Certification Basis: (continued)**

(6) Equivalent level of safety as follows: (continued)

- (h) ELOS No. ACE-09-13: 14 CFR §§ 23.1305(a)(1), (2), (3), (c)(1), (2), (5), 23.1549(a), (b), (c), 23.1553, Digital Displays of Powerplant and Fuel System Instrumentation, Fuel Flow, N2 Indication and Fuel Quantity.
- (i) ELOS No. ACE-10-06: 14 CFR § 23.1236(b), Pitot Heat Indication System.

(7) Compliance with ice protection has been demonstrated in accordance with 14 CFR § 23.1416 and 23.1419.

Application for Type Certificate was first dated August 9, 2006, with a six month extension of the application period to February 9, 2010, requested and subsequently granted. This was followed by an additional extension request on January 11, 2010, to go with a new application date of May 31, 2007. An extension until May 31, 2010 was granted via FAA Memo dated January 22, 2010, and documented in FAA Letter L115W-10-161 dated February 19, 2010.

Type Certificate AIWI amended March 12, 2010, was obtained by the manufacturer using Organization Designation Authorization Procedures of Part 183 Subpart D of Title 14 of Code of Federal Regulations. The Model 525C is defined by Cessna Assembly Drawing Number 7100000.

**Production Basis:**

Production Certificate No. 4 issued and Organization Designation Authorization (ODA) No. ODA-100129-CE authorized to issue Airworthiness Certificates under Organization Designation Authorization Procedures of Part 21 of the Federal Aviation Regulations.

Until the Model 525C is added to the Production Limitation Record (PLR) for PC No. 4, the FAA Wichita Manufacturing Inspection District Office (MIDO) must issue the original airworthiness certification of each aircraft.

**Equipment:**

The Basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification.

NOTE 1. Current weight and balance information, including list of equipment included in certificated empty weight, and loading instructions are provided for each airplane in the FAA Approved Airplane Flight Manual (AFM) at the time of original certification.

The certificated empty weight and corresponding center of gravity location must include:

Unusable fuel	33.6 lb. at +313.44 in.
Full oil	24.16 lb. at +424.64 in.
Hydraulic Fluid	25.12 lb. at +355.49 in.

NOTE 2. Airplanes must be operated according to the FAA Approved Airplane Flight Manual (AFM), part number 525CFM-00 (or later approved revision). Required placards and markings are listed in Chapter Eleven (11) of Maintenance Manual, part number 525CMM00 (or later revision).

NOTE 3. See Maintenance Manual, Chapter Four (4), "Airworthiness Limitations" for mandatory component retirement life information.

NOTE 4. All replacement seats (crew and passenger), although they may comply with TSO C127, must also be demonstrated to comply with the installation requirements of 14 CFR §§ 23.561, 23.562, and 23.785. The seat cushion foam buildup of all seats (crew and passenger) may not be altered, unless the deviations in the foam construction or stiffness are shown to comply with the requirements of 14 CFR §§ 23.562.

The cabinets that are installed forward of the RH forward side-facing seat and of the LH aft belted toilet are an integral part of the certified seat and restraint system. These cabinets may not be structurally altered, unless the changes are shown to comply with the requirements of 14 CFR §§ 23.561, 23.562, and 23.785.

**IV - Model 525C, (Commuter Category), Approved March 12, 2010 (continued)**

- NOTE 5. Approval for operation with a minimum crew of one pilot is based upon the cockpit equipment installation and arrangement evaluated during FAA certification testing. No significant changes may be made to the installed cockpit equipment or arrangement (EFIS, autopilot, avionics, etc.), except as permitted by the approved MMEL, without prior concurrence from the responsible Aircraft Certification Office.
- NOTE 6. Model 525C airplanes have been approved for high altitude operations (altitudes above 41,000 feet), by Special Conditions. Any modifications to the pressure vessel must be approved in accordance with the requirements as shown in the certification basis. This includes modifications which could result in a pressure vessel opening, either through crack-growth or antenna loss, greater than 3.00 sq. in.
- NOTE 7. RVSM (Reduced Vertical Separation Minima): Per the approved Type Design, S/N 525C-0001 and on are considered to be compliant with the applicable RVSM aircraft approval requirements contained in 14 CFR 91, Appendix G ; however, operational approval to fly in RVSM airspace must still be granted by the cognizant Flight Standards organization and each operator must obtain RVSM operating approval directly from the FAA.
- NOTE 8. The Model 525C is approved for One Engine Inoperative 10 minutes thrust capability with the Williams International FJ44-4A engine, per FAA Policy Memo Policy Statement on Approval for 10-Minute Rated Takeoff Thrust/Power during Takeoff with One-Engine Inoperative (OEI) under 14 CFR Part 23 and 14 CFR Part 33 [PS-ANE33-ACE23-2006-1] , dated August 30<sup>th</sup>, 2006.
- NOTE 9. The System Safety Assessment process has identified mandatory maintenance actions, which must be performed at specific intervals to compensate for latent failures. A list of those actions is contained in report RL-525C-176, and cannot be changed without participation from the certifying ACO. This document has influenced certain maintenance actions documented in Airworthiness Limitations section (Chapter 4) of the maintenance manual. Those particular items cannot be changed without participation from the certifying ACO.
- NOTE 10. Instructions for Continued Airworthiness (ICA) are incomplete. The aircraft will be eligible for a standard airworthiness certificate or delivery, whichever occurs later, when the ICA are complete and accepted.

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