

1 - Model 525, CitationJet, (Normal Category), Approved October 15, 1992, continued

Airspeed limitations (cont'd)

| | |
|---|--|
| V _{mca} (Minimum control speed) Air | 92 KIAS (91 KCAS) |
| V _{mcg} (Minimum control speed) Ground | |
| 525-0001 through 525-0359 | 95 KIAS (93 KCAS) |
| 525-0360 and On | 93 KIAS (93 KCAS) |
| V _{LO} (landing gear operating) | 186 KIAS (185 KCAS) |
| V _{LE} (landing gear extended) | 186 KIAS (185 KCAS) |
| V _{SB} (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 _I (0.70 MACH calibrated) |
| Maximum tire ground speed | 165 knots |

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 243.94 in. aft of datum (22.00% 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 10,400 lb. or less.

Applicable to airplanes S/N 525-0360 and On:

Forward Limits: Linear variation from 244.13 in. aft of datum (22.27% 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 10,600 lb. or less.

Landing Gear retracting moment (+157.9) 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 and On |
|-----------|----------------------------------|------------------------|
| Takeoff | 10,400 lb. | 10,600 lb. |
| Landing | 9,700 lb. | 9,800 lb. |
| Zero Fuel | 8,400 lb. | 8,400 lb. |
| Ramp | 10,500 lb. | 10,700 lb. |

1 - Model 525, CitationJet, (Normal Category), Approved October 15, 1992, continued

| | | |
|--|---|--|
| 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 eight (two crew plus six passenger seats) | |
| Maximum Baggage | Nose compartment 425 lb. (+ 74.0 in. aft of datum) | |
| | Aft cabin 100 lb. (+265.0 in. aft of datum) | |
| | Tailcone 325 lb. (+350.0 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) +253.05 in. aft of datum | |
| Oil Capacity (usable) | Tank mounted on each engine: 2.5 quarts usable each engine; +312.30 in. aft of datum; (see NOTE 1) | |
| Maximum Operating Altitude | 41,000 ft. | |
| Control Surface Movements | Elevator Up 20 +0/-1 degrees | |
| | | 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./Apr. 15 +1/-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 +/-1 degrees | |
| | (Ref to Engine Long. axis) | |
| | Thrust Attenuators Deploy 54 +/-1 degrees | |
| | (Ref to Engine Long. axis) | |
| | See Airplane Maintenance Manual for rigging instructions. | |
| Serial Nos. Eligible | 525-0001 and up | |
| Datum | 94.0 in. forward of the front face of the forward pressure bulkhead. | |

1 - Model 525, CitationJet, (Normal Category), Approved October 15, 1992, 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 | 39.8 lb. at +257.9 in. |
| Full oil | 18.0 lb. at +312.3 in. |
| Hydraulic Fluid | 27.5 lb. at +265.0 in. |
| Anti-ice Fluid | 3.4 lb. at +91.5 in. |

NOTE 2. Airplanes must be operated according to the FAA Approved Airplane Flight Manual (AFM), part number 525FM14 (or later approved revision). Required placards and markings are listed in Chapter Eleven (11) of Maintenance Manual, part number 525MM08 (or later revision).

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

NOTE 4. All replacement seats (crew and passenger), although they may comply with TSO C39, must also be demonstrated to comply with FAR 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 FAR 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. Airplanes being exported to France must conform to Cessna Drawings 6390300 and 4711113 or 4711114. Airplanes being exported to Germany must conform to Cessna Drawings 6390350 and 4711113 or 4711114. Configurations approved by the French DGAC and the German LBA are considered to be identical except for items provided in compliance with national operating rules.

1 - Model 525, CitationJet, (Normal Category), Approved October 15, 1992, continued

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

| | |
|----------------------------------|---|
| S/N 525-0001 through 525-0358 | 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 and On | Airplanes that have received factory installation* of optional Ametek AM-250 copilot's altimeter; and Airplanes that have received factory installation* of optional Collins Pro Line 21 copilot's altimeter; and Airplanes that have accomplished Cessna Service Bulletin SB525-34-40. |

* 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.

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

Engines Two Williams-Rolls FJ44-2C turbofans

Fuel Commercial kerosene Jet A, Jet A-1, or JP-8. MIL-I-27686 anti-icing additive must be blended into the aircraft fuel in concentrations not less than 0.060 percent or more than 0.15 percent by volume.

Engine Limits Static thrust standard day, sea level

Takeoff 2,400 lb.

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

N₁ (fan) 105.3% (100% = 17,245 r.p.m.)

N₂ (Gas Gen.) 98.8% (100% = 41,200 r.p.m.)

Max. permissible interturbine gas temperatures:

Takeoff 820 Degrees C

Max. Continuous 805 Degrees C

Transient (starting 15 sec.) 1000 Degrees C

Airspeed limitations

V_{mo} (maximum operating)

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

8,000 ft. to 29,500 ft. 275 KIAS

(Varies linearly between 274 KCAS and 272 KCAS)

M_{mo} above 29,500 ft. 0.72 M₁ (0.707 Mach calibrated)

V_a (maneuvering sea level at 12,375 lb.) 205 KIAS (205 KCAS)

See AFM for variations with weight and altitude.

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) | 92 KIAS (93 KCAS) |
| 15 degrees (takeoff & approach) | 87 KIAS (88 KCAS) |
| VmCG (Minimum control speed) Ground | 89 KIAS (90 KCAS) |
| V _{LO} (landing gear operating) | |
| Extend | 250 KIAS (250 KCAS) |
| Retract | 200 KIAS (199 KCAS) |
| V _{LE} (landing gear extended) | 275 KIAS (270 KCAS) |
| V _{SB} (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 variation from 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.; 277.99 in. aft of datum (21.00% MAC) at 7,500 lb. or less.

Aft Limits: 283.72 in. aft of datum (29.00% MAC) at 12,375 lb. or less.

Landing Gear retracting moment (+406.9) in-lb.

Empty Wt. C.G. Range None

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

| | | |
|-----------------|-----------|------------|
| Maximum Weights | Takeoff | 12,375 lb. |
| | Landing | 11,500 lb. |
| | Zero Fuel | 9,300 lb. |
| | Ramp | 12,500 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)

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

| | | | |
|----------------------------|--|-------------------------------------|-----------------------|
| Maximum Baggage | 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) | |
| 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; +288.70 in. aft of datum (see NOTE 1 for unusable) | | |
| Oil Capacity (usable) | Tank mounted on each engine: 2.3 quarts usable each engine; +364.3 in. aft of datum (see NOTE 1) | | |
| Maximum Operating Altitude | 45,000 ft. | | |
| 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./Appr. | 15 +/- 1 degrees |
| | | Landing | 35 +/- 1 degrees |
| | | Ground | 60 +/- 2 degrees |
| Speed Brakes - Upper | Up | 0 to 49 +/- 2 degrees | |
| | - Lower | Down | 0 to 68 +/- 2 degrees |
| Thrust Attenuators | Stow | -4.5 +/- 0.3 degrees | |
| | (Ref. to Engine Long. axis) | | |
| Thrust Attenuators | Deploy | 65 +/- 1 degrees | |
| | (Ref. to Engine Long. axis) | | |
| | 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) Part 23 of the Federal Aviation Regulations effective February 1, 1965, as amended by Amendments 23-1 through 23-40;
 - (a) Additions:

FAR §§ 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;

FAR §§ 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;

FAR §§ 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;

FAR §§ 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;

FAR §§ 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;

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

FAR §§ 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;
- (2) FAR Part 36 effective December 1, 1969, Noise Standards, as amended by Amendments 36-1 through 36-22.
- (3) FAR 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.

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

- (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, 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, minimum control speed, trim, static longitudinal stability, static directional and lateral stability, stall, 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 FAR § 23.181(b).
- (6) Equivalent level of safety as follows:
 - (a) Number ACE-00-01: FAR §§ 23.1305(c)(2), (c)(5), and 23.1549(a) through (d), direct reading, digital only displays for the high-pressure turbine speed (N₂), and fuel flow indications.
 - (b) Number ACE-99-07: FAR § 23.841(b)(6), Cabin Pressurization – High Altitude Takeoff and Landing Operations.
 - (c) Number ACE-00-05; FAR § 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 FAR §§ 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 the Federal Aviation Regulations. The Model 525A is defined by Cessna Airplane Assembly Drawing Number 6300001.

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.

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 xx, 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 | 76.7 lb. at +297.20 in. |
| Full oil | 13.9 lb. at +364.3 in. |
| Hydraulic Fluid | 18.9 lb. at +278.0 in. |
| Anti-ice Fluid | 3.4 lb. at +91.5 in. |

NOTE 2. Airplanes must be operated according to the FAA Approved Airplane Flight Manual (AFM), part number 525AFM00 (or later approved revision). Required placards and markings are listed in Chapter Eleven (11) of Maintenance Manual, part number 525AMM00 (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 FAR §§ 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 FAR 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.

--END--