

型号认可数据单

TYPE VALIDATION DATA SHEET

No: VTC-073A

改版 (Revision): 0

型号 (Type): 525

批准人 (Approved by):

周凯施

日期 (Date): 2005-1-4

本型号认可数据单, 作为型号认可证 No. VTC-073A 的一部分, 规定一些条件和限制, 在此条件和限制下, 获得本型号认可证的产品满足中国民用航空规章的适航要求。

This Type Validation Data Sheet, which is part of Validation of Type Certificate No. VTC-073A, prescribes the conditions and limitations under which the product(s) for which the Validation of Type Certificate was granted meet(s) the airworthiness requirements of Chinese Civil Aviation Regulation.

型号合格证持有人:

Type Certificate Holder:

Cessna Aircraft Company

P. O. Box 7704

Wichita, Kansas 67277

型号

Models

525

美国联邦航空局型号合格证 No. A1WI 颁发日期: 1992 年 10 月 15 日; CAAC 型号认可证 No. VTC-073A 颁发日期: 1997 年 11 月 12 日。

型号合格证数据单 No. A1WI, 改版 11, 颁发日期: 2001 年 7 月 9 日。CAAC 型号认可数据单 No. VTC-073A, 改版 0, 颁发日期: 2005 年 1 月 4 日。

FAA Type Certificate No. A1WI, Date of Issue: October 15, 1992; CAAC Validated Type Certificate No. VTC-073A, Date of Issue: November 12, 1997.

Type Certificate Data Sheet No. A1WI, Revision 11, Issue Date: July 9, 2001; CAAC Validated Type Certificate Datasheet No. VTC-073A, Date of Issue: January 4, 2005.

型号数据

Type Data:

525 型, CitationJet, (正常类), FAA 于 1992 年 10 月 15 日批准, CAAC 于 1997 年 11 月 12 日认可。

Model 525, CitationJet, (Normal Category), Approved October 15, 1992 by FAA, validated November 12, 1997 by CAAC.

发动机

Engine

两台 Williams International, L.L.C. 的 FJ44-1A 涡扇发动机

Two Williams International, L.L.C. FJ44-1A turbofans

燃油

商用美元 Jet A, Jet A-1, Jet B, JP-4, JP-5, 或 JP-8. MIL-I-27686 必须

按体积比不小于 0.010%和不大于 0.15%在航空器燃油中使用防冰添加剂。

Fuel

Commercial kerosene Jet A, Jet A-1, Jet B, JP-4, JP-5, or JP-8. MIL-I-27686 or MIL-I-85470 anti-icing additive must be blended into the aircraft fuel in concentrations not less than 0.010 percent or more than 0.15 percent by volume.

发动机限制

标准日海平面静推力:

起飞 1900 磅

最大允许的发动机转子使用速度 (起飞和最大连续):

N1 (风扇) 104.4% (100% = 17,245 RPM)

N2 (燃气发生器) 99.3% (100% = 41,200RPM)

最大允许的涡轮间燃气温度:

起飞 820°C

最大连续 796°C

瞬间 (起动 5 秒) 1000°C

Engine Limits

Static thrust standard day, sea level

Takeoff 1900 lb.

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

N1(fan) 104.4% (100% = 17,245 r.p.m.)

N2 (Gas Gen.) 99.3% (100% = 41,200 r.p.m.)

Max. permissible interturbine gas temperatures:

Takeoff 820 Degrees C

Max. continuous 796 Degrees C

Transient (starting 5 sec.) 1000 Degrees C

空速限制

Vmo (最大使用)

海平面到 30,500 英尺 263 KIAS (260 KCAS)

MMO 高于 30,500 英尺 0.71M_t (0.70 校准马赫数)

Va (海平面机动)

10,400 磅 (525-0001 至 525-0359) 187 KIAS (185 KCAS)

10,600 磅 (525-0360 及以后) 184KIAS (182KCAS)

随重量、高度的变化见 AFM

Vb (最大突风强度时速度) 217 KIAS (215 KCAS)

VFE (襟翼放下)

15 度 (起飞和进近) 200 KIAS (198 KCAS)

35 度 (着陆) 161 KIAS (160 KCAS)

60 度 (地面襟翼) 空中禁止

Vmca (最小操纵速度) 空中 92 KIAS (91 KCAS)

Vm_{cg} (最小操纵速度) 地面
525-0001 至 525-0359 95 KIAS (93 KCAS)

525-0360 及以后	93 KIAS (93 KCAS)
V _{LO} (起落架操作)	186 KIAS (185 KCAS)
V _{LE} (起落架放下)	186 KIAS (185 KCAS)
V _{SB} (速度刹车打开)	有襟翼或无襟翼的任何速度
最大自动驾驶操作速度	
海平面到 30,500 英尺	263 KIAS (260KCAS)
高于 30,500 英尺	0.71 M _I (0.70 校准马赫数)
最大轮胎地面速度	165 节

Airspeed Limits

V _{mo} (maximum operating)	
Sea level to 30,500 ft.	263 KIAS (260 KCAS)
M _{mo} above 30,500 ft.	0.71 M _I (0.70 Mach calibrated)
V _a (maneuvering sea level)	
10,400 lb. (525-0001 through 525-0359)	187 KIAS (185 KCAS)
10,600 lb. (525-0360 and On)	184 KIAS (182 KCAS)
See AFM for variations with weight and altitude.	
V _b (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 _{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

重心范围: (起落架放下) 设计重心限制

适用于飞机 S/N 525-0001 至 525-0359:

前限制: 从 10,400 磅时的基准线后方 244.13 英寸 (22.27% MAC) 线性变化到 8,800 磅时的基准线后方 242.43 英寸 (19.81% MAC); 从 8,800 磅时的基准线后方 242.43 英寸 (19.81% MAC) 线性变化到 7,700 磅时的基准线后方 240.14 英寸 (16.50% MAC); 在 7,700 磅或以下时为基准线后

方 240.14 英寸 (16.50% MAC)。

后限制: 在 10,400 磅或以下时为基准线后方 248.78 英寸 (29.00% MAC)。

适用于飞机 S/N 525-0360 及以后:

前限制: 从 10,600 磅时的基准线后方 244.13 英寸 (22.27% MAC) 线性变化到 8,800 磅时的基准线后方 242.43 英寸 (19.81% MAC); 从 8,800 磅时的基准线后方 242.43 英寸 (19.81% MAC) 线性变化到 7,700 磅时的基准线后方 240.14 英寸 (16.50% MAC); 在 7,700 磅或以下时为基准线后方 240.14 英寸 (16.50% MAC)。

后限制: 在 10,600 磅或以下时为基准线后方 248.78 英寸 (29.00% MAC)。

起落架收上力臂为 (+157.9) 英寸磅。

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.

空机时重心范围 无
Empty Weight C.G. None
Range

平均气动弦长 69.078 英寸 (MAC 的前缘在基准线后部 228.745 英寸)
MAC 69.078 in. (L.E. of MAC at +228.745 in. aft of datum)

最大重量	S/N 525-0001 至	
	525-0359	S/N 525-0359 及以后
起飞	10,400 磅	10,600 磅
着陆	9,700 磅	9,800 磅
零燃油	8,400 磅	8,400 磅
停机坪	10,500 磅	10,700 磅
Maximum Weight	S/N 525-0001 though	
	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.
所有飞行最小机组	（驾驶舱设备/布置限制见注释 5）	
	一名驾驶员（在左座）加上 FAA 批准的飞机飞行手册的限制章节中包含的运营设备清单类别（KOEL）中规定的附加设备	
	或	
	一名驾驶员和一名副驾驶	
Minimum Crew	(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	
<u>座位数</u>	最大 8 位（2 名机组加 6 名乘客座椅）	
<u>Number of Seats</u>	Maximum eight (two crew plus six passenger seats)	
<u>最大行李</u>	机鼻舱	425 磅（基准线后方+74.0 英寸）
	后舱	100 磅（基准线后方+265.0 英寸）
	尾锥	325 磅（基准线后方+350.0 英寸）
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)
<u>燃油量（可用）</u>	总的可用燃油3220磅（477加仑）。两个各有1610磅（238.5加仑）可用燃油的机翼油箱。（不可用燃油见注释1）	
	基准线后部+253.05英寸	
<u>Fuel Capacity</u> (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	

<u>滑油量（可用）</u>	装于每台发动机的滑油箱： 每台发动机 2.5 夸脱可用； 基准线后部 +312.30 英寸；（见注释 1）		
<u>Oil Capacity</u> (usable)	Tank mounted on each engine: 2.5 quarts usable each engine; +312.30 in. aft of datum; (see NOTE 1)		
最大使用高度 Maximum Operating Altitude	41,000英尺 41,000 ft.		
<u>操纵面位移</u>	升降舵	向上	20+1/-1
		向下	15+/-1
	升降舵调整片（安定面在+1°）	向上	12+/-1
		向下	20+/-1°
	方向舵（垂直于铰链）	向右	30+/-1
		向左	30+/-1
	方向舵配平片	向右	20+/-1
		向左	20+/-1
	副翼	向上	23.5+/-1
		向下	20.5+/-1
	副翼调整片	向上	20+/-1
		向下	18+/-1
	襟翼	向上	0+/-1
		起飞/进近	15+/-1
		着陆	35+/-1
		地面	60+/-1
	速度刹车—上面	向上	0到49+/-2
	—下面	向下	0到68+/-2
	反推衰减器	未作动	-6+/-1度
	（相对发动机长轴）		
	反推衰减器	作动	54+/-1
	（相对发动机长轴）		
	调整指南见飞机维修手册		
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./Appr.	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.			
适用的序号	525-0001 及以后		
Serial Nos. Eligible	525-0001 and up		
基准	前增压隔框前表面的前方 94.0 英寸处。		
Datum	94.0 in. forward of the front face of the forward pressure bulkhead.		
调平方法	纵向—FS 151.00 后方左侧上地板面。 横向—FS152 后方左侧和右侧上地板面		
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.		
<u>FAA 型号合格审定基础</u>	(1) 联邦航空条例 23 部，修正案 23-1 至 23-38 和 23-40； (2) FAR 36 部，1969 年 12 月 1 日生效，修正案 36-1 至 36-18； (3) FAR 34 部，1990 年 9 月 10 日生效； (5) 以下专用条件： (a) 23-ACE-55，有关以下附加要求： 排烟，电子系统防闪电和高强度辐射电磁场（HIRF）和闪电，电子飞行仪表指示，反推衰减系统，发动机灭火系统，性能（包括起飞，起飞速度，加速—停止，起飞航迹，起飞距离和起飞加速，起飞飞行航迹，一发不工作爬升，最小操纵速度，配平，纵向静稳定性，横航向静稳定性，失速，失速警告，振动和抖振，高速特性，空速指示系统，静压系统，最大使用速度限制，最小飞行机组，使用限制，使用程序，性能信息，空速指示，对自然层流翼型的影响，定义，AFM 批准的信息。 (6) 以下豁免 (a) 给予豁免 No. 5759，高于 18,000 英尺时使用放松的“荷兰滚”阻尼准则代替 FAR 23.181(b)的阻尼准则。 (7) 以下等效安全（适用于飞机 S/N 525-0360 及以上装有 Collins Proline 21 发动机仪表电子指示的飞机）： (a) ACE-00-01: FAR 23.1305(c)(2), (c)(5), 和 23.1549(a)至(d), 高压涡轮速度 (N2) 和燃油流量指示的直接阅读和只有数字式的指示。		

- (8) 已经按照 FAR 23.1416 和 23.1419 演示防冰。

申请 FAA 型号合格证日期为 1990 年 2 月 14 日。型号合格证 A1WI 于 1992 年 10 月 15 日颁发，制造人用联邦航空条例 21 部的 DOA 程序获得。525 型由赛斯纳飞机机组装图 6300000 定义。

Certification Basis
of FAA

- (1) Federal Aviation Regulation Part 23, as amended by Amendments 23-1 through 23-38, and 23-40;
- (2) Part 36 of the Federal Aviation Regulation effective December 1, 1969, as amended by Amendments 36-1 through 36-18;
- (3) Part 34 of the Federal Aviation Regulations effective September 10, 1990;
- (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, 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.
- (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 FAR § 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: 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.
- (8) Compliance with ice protection has been demonstrated in accordance with FAR §§ 23.1416 and 23.1419.

Application for FAA 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 the Federal Aviation Regulations. The Model 525 is defined by Cessna Airplane Assembly Drawing Number

6300000.

CAAC 认可审定基础

Validation Basis of CAAC

CAAC 接受 FAA 审定基础作为认可审定基础。申请 CAAC 型号认可证日期为 1997 年 2 月 17 日。

CAAC accepts FAA Certification Basis as Validation Basis.
Application for CAAC validated type certificate dated February 17, 1997.

生产基础

Production Basis

颁发生产许可证 PC-4，授权 DOA 制造人 No. DOA-230428-CE (CE-3) 按照联邦航空条例 21 部的 DOA 程序颁发适航证。

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.

设备

Equipment

相关适航规章（见认可审定基础）中规定的基本要求设备必须被安装于审定的航空器。

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

注释1

带有包括在审定空重内的设备清单的当前重量和平衡信息以及装载指南必须在飞机初始审定时被提供给每架飞机的FAA批准的飞机飞行手册（AFM）中。

审定空重和相应的重心位置必须包括：

不可用燃油	39.8磅， +257.9英寸处
全部滑油	18.0磅， +312.3英寸处
液压油	27.5磅， +265.0英寸处
防冰液	3.4磅， +91.5英寸处

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.

注释2

飞机必须按照FAA批准的飞机飞行手册（AFM），件号525FM14（或以后批准的改版）运行。要求的标牌和标记列于维修手册，件号525MM08

	(或以后的改版)的第11章。
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).
注释3	检查, 强制报废寿命信息, 和其他持续适航要求见维修手册第4章“适航性限制”。
NOTE 3.	See Maintenance Manual, Chapter Four (4), "Airworthiness Limitations" for inspections, mandatory retirement life information, and other requirements for continued airworthiness.
注释4	所有更换座椅(机组和旅客), 即使他们可能符合TSO C39, 必须也还要表明符合FAR 23.321, 23.395, 23.561, 23.562, 和23.785。
	所有座椅(机组和旅客)的泡沫椅垫构造不可以被更改。对泡沫构造或刚度的任何偏离必须用试验表明符合上述FAR 23部的条款。
	右侧侧向座椅安全带必须由从右向左打开的锁扣, 左侧侧向厕所安全带应有从左向右打开的锁扣, 以防止锁扣因自身惯性导致打开。任何其他构型必须通过动态试验验证。
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.
注释5	按一名驾驶员的最小机组运营的批准基于在FAA审定试验过程中评估的驾驶舱设备安装和布置。在没有得到相关适航审定部门的批准之前, 不能对安装的驾驶舱设备或布置(EFIS, 自动驾驶, 电子设备, 等)进行重要的更改, 除非被批准的MMEL允许,
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 relevant aircraft certification authority.