

型号认可数据单
THE VALIDATION DATA SHEET

编号/NO: VTC0349A

版本/Revision: 1

型号/Type:

Bell 505

批准人/Approved By:



职位/Title: Director General

日期/Date: 2020-04-07

本数据单是型号认可证（编号：VTC0349A）的组成部分，它规定了符合中国民用航空局的适航要求所颁发此型号认可证的产品状态和限制。

This data sheet, which is part of Validation of Type Certificate (No: VTC0349A), prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Chinese Civil Aviation Regulation.

型号认可证持有人/Validation of Type Certificate Holder:

Bell Textron Canada Limited

12800, rue de l' Avenir

Mirabel, Quebec

第 1 部分 概述 (所有型别)

SECTION 1 GENERAL (ALL MODELS)

1. CAAC 认可数据单和型号合格证数据单

CAAC Validation Data Sheet and Type Certification Data Sheet

	中国民用航空局认可数据单号、版次和颁发日期 CAAC Validation Data Sheet Number, Revision and issuance date	型号合格证数据单号、版次和颁发日期 Type Certificate Data Sheet Number, Revision and issuance date
当前 Current	VTC0349A Revision 1 2020-04-07	H-112 Issue 4 2019-12-16
历史 History	VTC0349A Revision 0 2018-04-28	H-112 Issue 2 2018-04-03

2. 认可当局/Validation Authority:

中国民用航空局/CAAC

审定当局/Certification Authority:

加拿大运输部民航局/TCCA

3. 型号合格证持有人/Type Certificate Holder:

Bell Textron Canada Limited

12800, rue de l' Avenir

Mirabel, Quebec

4. 进口要求/Import Requirements:

为具备在中国运行的资格, 按本型号认可证制造的每架飞机必须具有一份出口适航证, 其上签注有出口国适航当局的审定声明, 即: 本架航空器符合 CAAC 所批准的型号设计并处于可安全运行的状态。

To be considered eligible for operation in China, each aircraft manufactured under this Validation of Type Certificate must be accompanied by a certificate of airworthiness for export endorsed by the export authority which states (in English language): "This aircraft conforms to its CAAC type design and is in a condition for safe operation."#

第 2 部分 型号数据

SECTION 2 TYPE DATA

1. 型号 505 (正常类旋翼航空器 – 见备注 1) 2016 年 12 月 19 日批准

1. Model 505 (Normal Category Rotorcraft – See NOTE 1) Approved December 19, 2016

I. 总则/General

1. 衍生型或型别/Variant or Model	505
适航类别/Airworthiness Category	正常类旋翼航空器/Normal Category Rotorcraft
型号合格证持有人/Type Certificate Holder	Bell Textron Canada Limited
	12800, rue de l' Avenir
	Mirabel, Quebec
2. TCCA 批准日期/TCCA Approved Date	2016 年 12 月 19 日/December 19, 2016
3. CAAC 批准日期/CAAC Approved Date	2018 年 04 月 28 日/April 28, 2018

II 技术特性和运行限制/Technical Characteristics and Operational Limitations

发动机 一台 SAFRAN (Turbomeca) Arrius 2R, CAAC VTC0200E (2018 年 03 月 30 日), VTCDS 版本 1, EASA 型号合格证: EASA.E.031。

Engine One SAFRAN (Turbomeca) Arrius 2R, CAAC VTC No. VTC0200E (2018-03-30), VTCDS Revision 1, EASA Type Certification: EASA.E.031.

燃油

Type	SPECIFICATION	
Kerosene	Canada	USA
Jet A, A-1,	CGSB 3.23	ASTM D1655
JP8	3-GP-23	MIL-DTL-83133
Wide Cut	CGSB 3.22	ASTM D1655
Jet B	CGSB 3.22	MIL-DTL-5624
JP4		
High Flash	3-GP-24	MIL-DTL-5624

JP5		
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燃油温度限制见旋翼航空器飞行手册。

Fuel

Type	SPECIFICATION	
Kerosene	Canada	USA
Jet A, A-1,	CGSB 3.23	ASTM D1655
JP8	3-GP-23	MIL-DTL-83133
Wide Cut	CGSB 3.22	ASTM D1655
Jet B	CGSB 3.22	MIL-DTL-5624
JP4		
High Flash	3-GP-24	MIL-DTL-5624
JP5		

See Rotorcraft Flight Manual for fuel temperature limitations.

滑油

对于已批准的发动机滑油，禁止品牌混用。已批准的传动及齿轮箱滑油型号，参考维护手册 BHT-505-MM。

Oil

For approved engine oil types, prohibition against mixing brands, and for approved transmission and gearbox oil types, refer to Maintenance Manual BHT-505-MM.

发动机限制

	扭矩	涡轮温度	气体压缩机转速
	<u>% (磅 英尺)</u>	<u>℃</u>	<u>% (转每分钟)</u>
起飞 (5 分钟)	100% (442.5 磅-英尺)	853℃	101.29% (54,817 转每分钟)
最大连续	92% (405.6 磅-英尺)	817℃	99.8% (54,011 转每分钟)

瞬态限制见旋翼航空器飞行手册

输出轴限制为 104% (5834 转每分钟)

Engine Limits

Torque Turbine Temp Gas Gen Speed

	<u>% (lb ft)</u>	<u>°C</u>	<u>% (RPM)</u>
Take-off (5 min.)	100% (442.5 lb-ft)	853°C	101.29% (54,817 rpm)
Max. Continuous	92% (405.6 lb-ft)	817°C	99.8% (54,011 rpm)

See Rotorcraft Flight Manual for transient limits.

Output shaft speed limit is 104% (5834 RPM)

传动限制

	<u>扭矩限制 %</u>
起飞	100
最大连续	90
瞬态	105

Transmission

	<u>Torque Limits %</u>
Take-off	100
Maximum Continuous	90
Transient	105

旋翼限制

<u>无动力</u>	<u>有动力</u>
最大 422 转每分钟 115%	最大 394 转每分钟 107%
最小 331 转每分钟 90%	最小 357 转每分钟 97%

标称旋翼转每分钟为 104% (383 转每分钟)

Rotor Limits

<u>Power Off</u>	<u>Power On</u>
Maximum 422 R.P.M. 115%	Maximum 394 R.P.M. 107%
Minimum 331 R.P.M. 90%	Minimum 357 R.P.M. 97%

Nominal Rotor RPM is 104% (383 RPM)

空速限制 (IAS)

V_{NE} (不可逾越速度) 最大 135 KIAS。

更多信息参见已批准出版物列表中的旋翼航空器飞行手册。

Airspeed limits (IAS)

V_{NE} (never exceed) MAX 135 KIAS.

For further information see Rotorcraft Flight Manual as listed in Approved Publications

最大重量 (质量)

基本航空器

1669.2 公斤 (3680 磅) 内部载荷。

2029.8 公斤 (4475 磅) 外部载荷。

Maximum Weight (Mass)

Basic Aircraft

1669.2 kg (3680 lb.) Internal loading.

2029.8 kg (4475 lb.) External loading

重心限制

参见旋翼航空器飞行手册 (见备注 3)。

C.G. Limits

Refer to Rotorcraft Flight Manual (See NOTE 3).

基准

505 站 0 基准为直升机机头前 96 厘米 (37.8 英寸)。

Datum

Model 505 Station 0 datum is 96 cm (37.8 in.) forward of the nose of the helicopter.

水平测量措施

分度器或水平仪放在机组或乘客地板或座位导轨上, 纵向和横向同时放置。

Levelling Means

Protractor or level placed on the crew or passenger floor or seat rails, both longitudinally and laterally.

最小机组

1 名驾驶员。

Minimum Crew	1 pilot.
最大成员数	5 人（含机组）
Maximum Occupants	5 (includes crew)
最大货物	装载方案参见旋翼航空器飞行手册。
Maximum Cargo	Refer to Rotorcraft Flight Manual for loading schedule.
燃油油量	燃油油量参见旋翼航空器飞行手册。
Fuel Capacity	Refer to Rotorcraft Flight Manual for Fuel Capacity.
滑油油量	滑油油量参见旋翼航空器飞行手册。
Oil Capacity	Refer to Rotorcraft Flight Manual for Oil Capacity.
高度限制	最大高度 6096 米（20000 英尺）压力高度。
Altitude Limits	Maximum altitude 6096 m (20,000 ft.) pressure altitude.
OAT 限制	-40°C（-40°F）到 50°C（122°F）。
OAT Limits	-40°C（-40°F）to 50°C（122°F）.
审定基础（见备注 2）	<u>正常类:</u> a) 适航手册（AWM）527 章 – 正常类旋翼航空器至 2014 年 7 月 31 日发布的更改 527-11（等效于 FAR 27 部修正案 27-0 到 27-47）； b) AWM 516, 飞机排放: A 分部的飞机噪声（此处可参考国际民航组织（ICAO）附件 16, 卷 I）和 B 分部的燃油排放（此处可参考 ICAO 附件 16, 卷 II, 第 II 部分）；

同时表明了对于 FAR 36 部至 2006 年 2 月 3 日生效的修正案 36-30 的符合性;

c) 专用条件:

1. SCA 2015-09, 可充电锂电池;

d) 对于以下标准的等效安全:

1. AWM 527 章, 527.307(b)(5), 527.723, 527.725 和 527.727 – 起落架限制落震试验;
2. AWM 527.1545(b)(2) VNE 的空速指示标记 (自转);
3. AWM 527.995(d) – 燃油切断阀的安装。
4. AWM 527 章, 527.49(a), 527.51(a), 527.75(a)(1), 527.141(b), 527.143(a), 527.143(c)(2), 527.143(d), 527.695(a), 527.1581, 527.1587(a)(2)(i), 527.1587(a)(2)(ii) – 高高度操纵性。

Certification Basis (See NOTE 2)

Normal Category:

- a) Airworthiness Manual (AWM) Chapter 527 – Normal Category Rotorcraft at Change 527-11 published July 31, 2014 (equivalent to FAR part 27 Amdt. 27-0 to 27-47);
- b) AWM 516 Aircraft Emissions: Subchapter A for Aircraft Noise (this refers to International Civil Aviation Organization (ICAO) Annex 16, Volume I) and Subchapter B for Prevention of Vented Fuel (this refers to ICAO Annex 16, Volume II, Part II);
- c) Special Conditions:
 1. SCA 2015-09, Rechargeable Lithium Batteries;
- d) Findings of Equivalent Safety exist with respect to the following Standards:
 1. AWM Chapter 527, sections 527.307(b)(5), 527.723, 527.725 and 527.727 – Landing Gear Limit Drop Test;
 2. AWM 527.1545(b)(2) – Airspeed Indicator Markings of VNE (autorotation);
 3. AWM 527.995(d) – Fuel Shut-Off Valve Installation;
 4. AWM Chapter 527, sections 527.49(a), 527.51(a), 527.75(a)(1), 527.141(b), 527.143(a), 527.143(c)(2), 527.143(d), 527.695(a),

527.1581,527.1587(a)(2)(i), 527.1587(a)(2)(ii) - High Altitude Controllability.

CAAC 认可审定基础

CAAC 认可审定基础如下:

1. TCCA 确定的审定基础;

2. CAAC 附加技术条件:

(1) 根据 CCAR 21.29(5), 有关适航规章、噪声规定所要求的手册、标牌、目录清单和仪表标记应当用中文或英文书写, 下列各项应当至少有中文表述:

- 1) 机上所有对旅客进行的提示、警告和通知的文字标记和标牌;
- 2) 机上所有向旅客或者机外营救人员指示应急出口和门的位置以及开启方法的文字标记和标牌;
- 3) 旅客可能使用的机上所有应急设备的操作、使用说明。

其它中文标记和标牌必须被 CAAC 批准或接受。

(2) Bell 505 的燃油系统必须经过评估, 可以使用 3 号燃油 (中国国家标准 GB 6537-2006), 飞机在中国国内运行前, 相关的评估数据必须提供给 TCCA 并被 TCCA 接受。

CAAC Validation Certification Basis

CAAC validation basis was defined as follows:

1. Certification basis as established by TCCA for the product type design.

2. CAAC additional technical conditions as follows:

(1) As per CCAR 21.29(5), The manuals, placards, listings and instrument markings required by the applicable airworthiness regulation, noise requirement are presented in Chinese or English language. Below items must be at least in Chinese language.

- 1) All literal markings and placards on the aircraft used for indicating, warning and informing passengers;
- 2) All literal markings and placards on the aircraft used for indicating to passengers or outboard rescue personnel of the location of emergency exits and doors and their means of opening;

3) The operation and usage instructions for emergency equipment which passengers will use.

All other placards and markings in Chinese, if any, shall be accepted or approved by the CAAC.

(2) The Bell 505 Fuel system must be evaluated to demonstrate satisfactory performance when using No. 3 Jet Fuel (P.R.C National Standard GB 6537-2006). The data to demonstrate satisfactory performance must be provided to TCCA for acceptance before its operation in China.

构型

505 构型由贝尔顶层件号定义:

SLS-100-003-001 版本 C 或后续批准版本, 序列号 65011 及以后。

Configuration

The Model 505 is defined by Bell top part number:

SLS-100-003-001 Revision C, or later approved revision, for serial number 65011 and Subsequent.

要求的设备

要求的设备必须按如下要求安装到直升机上:

加拿大运输部批准的旋翼航空器飞行手册。

Required Equipment

The required equipment must be installed in the helicopter as follows:

Transport Canada approved Rotorcraft Flight Manual.

适用的序列号

65011 及以后。

Serial Numbers Eligible

65011 and Subsequent.

标牌

列在经批准的旋翼航空器飞行手册中的所有标牌必须安装在指定位置。

Placards

All placards listed in the approved Rotorcraft Flight Manual must be installed in the specified locations.

批准的出版物

1) 加拿大运输部批准的如下贝尔旋翼航空器飞行手册, 及其后续批准版本;

- a. 序列号 65011 到序列号 65300（不包括 65170）的 Bell 505，使用 2016 年 12 月 19 日批准的 BHT-505-FM-1；
- b. 序列号 65170 和序列号 65301 以及后续的 Bell 505，使用 2019 年 10 月 30 日批准的 BHT-505-FM-2。

2) 寿命件和批准的退役时间开列在 2016 年 12 月 19 日批准的维护手册 BHT-505-MPI（或后续批准的版本）的第 4 章，适航限制章节中。

Approved Publications

1) Transport Canada approved Bell Rotorcraft Flight Manual as listed, or later approved revision:

- a. Bell 505 S/N 65011 to S/N 65300 (excluding 65170) are to be operated in accordance with BHT-505-FM-1, dated December 19, 2016.
- b. Bell 505 S/N 65170 and S/N 65301 and subsequent are to be operated in accordance with BHT-505-FM-2, dated October 30, 2019.

2) Life limited components and approved retirement times are listed in the Approved Chapter 4, Airworthiness Limitations Section of the Maintenance Manual BHT-505-MPI, dated December 19, 2016 or later approved revision.

备注 1	这一型号合格证适用于日/夜 VFR 正常类旋翼航空器。
NOTE 1	This type certification is for a Day/Night VFR Normal Category Rotorcraft.
备注 2	审定噪声水平详见批准的旋翼航空器飞行手册。
NOTE 2	Certification Noise Levels are detailed in the approved Rotorcraft Flight Manual.
备注 3	在必要的时候, 当前重量重心报告, 包括包含在批准的空机重量和载重定额中的设备, 在初始审定时, 必须在每一旋翼航空器上
NOTE 3	The current weight and balance report, including list of equipment included in approved empty weight and loading instructions, when necessary, must be in each rotorcraft at the time of original certification.
备注 4	中文标牌和标识包含在图纸 SLS-706-019-001 DECAL KIT - CHINA 或以后 CAAC 批准的更新版本中。
NOTE 4	The Chinese Placards and Markings are included in Drawing SLS-706-019 DECAL KIT - CHINA or later CAAC approved revision.
备注 5	从 2019 年 12 月 16 日起, 贝尔直升机德事隆加拿大有限公司的名称更改为贝尔德事隆加拿大有限公司。
NOTE 5	Effective December 16,2019 the name Bell Helicopter Textron Canada Limited was revised to Bell Textron Canada Limited.

-完END-