

型号认可证数据单

THE VALIDATION DATA SHEET

编号/No: VTC0067A

版次/Revision: 5

型号/Type:

A330-201 A330-202 A330-203

A330-223 A330-243 A330-223F

A330-243F

A330-301 A330-302 A330-303

A330-321 A330-322 A330-323

A330-341 A330-342 A330-343

批准人/Approved By:



日期/Date: 2014 年 2 月 26 日

本数据单是型号认可证(编号: VTC0067A)的组成部分, 它规定了符合中国民用航空总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: VTC0067A), prescribes condition and limitation 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:

Airbus

1 Rond-point Maurice Bellonte

31707 Blagnac

France

有效页清单/List of effective pages :

页数/ Pages	1	2	3	4	5	6	7	8	9	10	11	12	13	14
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第一节: 概述(所有机型) / 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 Certificate 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	067A, Revision 5, 2014 年 2 月 26 日	EASA A.004 (issue 36, Nov 22, 2013)
历史 History	067A, Revision 0, 2004 年 2 月 4 日	EASA A.004 (issue 3, Aug. 4, 2004)
	067A, Revision 1, 2006 年 6 月 5 日	EASA A.004 (issue 11, Apr. 19, 2006)
	067A, Revision 2, 2007 年 11 月 20 日	EASA A.004 (issue 13, Nov. 9, 2007)
	067A, Revision 3, 2007 年 12 月 10 日	EASA A.004 (issue 13, Nov. 9, 2007)
	067A, Revision 4, 2010 年 11 月 5 日	EASA A.004 (issue 19, Apr 9, 2010)
	067A, Revision 4 *, 2011 年 10 月 31 日	EASA A.004 (issue 25, Sep 27, 2010)

* 2 份第 4 次修订版是由于无意的编号重复 / 2 Revision 4 results from the unintentionally duplicated numbers

2. 飞机类型 / Airworthiness Category: 大飞机/Large Aeroplanes
3. 认可当局/ Validation Authority: 中国民用航空局/CAAC
审定当局/ Certifying Authority: 欧洲航空安全局/ EASA
4. 型号证持有人 / Type Certificate Holder: 空中客车/AIRBUS
1 Rond-point Maurice Bellonte
31707 BLAGNAC – FRANCE

5. 延程运行(ETOPS) / ETOPS:

当其构形、维护和运行符合当前版次的《ETOPS 构形、维护和程序(CMP)》文件 LR2/EASA:AMC 20-6/CMP 要求时, A330 型的型号设计、系统可靠性和性能有能力进行 ETOPS,但其不作为 ETOPS 批准,运行批准必须从责任当局获得。 /

The Type Design, system reliability and performance of A330 model(s) were found capable for Extended Range Operations when configured, maintained and operated in accordance with the current revision of the ETOPS Configuration, Maintenance and Procedures (CMP) document, LR2/EASA:AMC 20-6/CMP.

该内容不构成延程运行批准 (运行批准必须从主管当局获得)

This finding does not constitute an approval to conduct Extended Range Operations (operational approval must be obtained from the responsible Authority).

下表提供 ETOPS 批准的详细内容/The following table provides details on the ETOPS approvals.

系列 /Variant	发动机型号/Engine Type	120 分钟批准的日期/120 Min Approval Date	180 分钟批准的日期/180 Min Approval Date	超过 180 分钟批准的日期 /Beyond 180 Min* Approval Date
A330-301	GE CF6-80E1A2	29 April 1994	06 February 1995	13 October 2009
A330-302	GE CF6-80E1A4	N/A	17 June 2004	13 October 2009
A330-303	GE CF6-80E1A3	N/A	17 June 2004	13 October 2009
A330-321	PW 4164	06 Feb. 1995	04 August 1995	13 October 2009
A330-321	PW 4164-1D	N/A	N/A	04 February 2011
A330-322	PW 4168	06 Feb. 1995	04 August 1995	13 October 2009
A330-322	PW 4168-1D	N/A	N/A	04 February 2011
A330-323	PW 4168A	N/A	22 April 1999	13 October 2009
A330-323	PW 4168A-1D	N/A	04 June 2009	13 October 2009
A330-323	PW 4170	N/A	04 June 2009	13 October 2009
A330-341	RR Trent 768-60	15 Dec. 1995	17 June 1996	13 October 2009
A330-342	RR Trent 772-60	15 Dec. 1995	17 June 1996	13 October 2009
A330-343	RR Trent T772B-60	N/A	21 Oct. 1999	13 October 2009
A330-343	RR Trent T772C-60	N/A	20 April 2006	13 October 2009
A330-201	GE CF6-80E1A2	N/A	19 Nov. 2002	13 October 2009
A330-202	GE CF6-80E1A4	N/A	27 April 1998	13 October 2009
A330-203	GE CF6-80E1A3	N/A	30 Nov. 2001	13 October 2009
A330-223	PW 4168A	N/A	13 July 1998	13 October 2009
A330-223	PW 4168A-1D	N/A	04 June 2009	13 October 2009
A330-223	PW 4170	N/A	04 June 2009	13 October 2009
A330-223F	PW 4170	N/A	09 July 2010	N/A
A330-223F	PW 4168A-1D	N/A	10 April 2012	N/A
A330-223F	Intermix PW 4168A/PW 4168A-1D	N/A	** May 2013	N/A
A330-243	RR Trent 772B-60	N/A	03 February 1999	13 October 2009
A330-243	RR Trent 772C-60	N/A	19 April 2006	13 October 2009
A330-243F	RR Trent 772B-60	N/A	09 July 2010	N/A

* 注：对于最大的偏离时间/举例，参见飞机飞行手册和 ETOPS CMP 文件。

* Note: Refer to the Airplane Flight Manual and ETOPS CMP document for maximum diversion time/distance.

6 型号认证后被中国民航局认可的设计更改：

The following design changes have been validated post Type Validation by CAAC:

改装包 / MOD	描述 / Description
Major Change 58640	机载移动电话系统 Cabin System-On-Board Mobile Telephony System-Define and Certify GSM on Board
Major Change 58723	中央油箱可燃性降低系统的安装 Installation of Flammability Reduction System for the Center Fuel Tank
Major Change 58528	为安装燃油箱惰性化系统进行中央翼结构改装 Install Structural Provisions for Tank Inerting System
Major Change 200600	为安装燃油箱惰性化系统中央翼结构改装(改装解决方案) (可燃性降低系统) Adapt Structural Provisions for FTIS (Adaptation Solution) (Flammability Reduction System)

第二节:A330-300 系列/ A330-300 SERIES

I. 概述 / GENERAL

1. 机型/Aeroplane:

Airbus A330-300

II. 认可审定基础/ Validation Basis

1. 认可审定基础/ Validation Basis

中国民用航空局的认可审定基础为/ Validation Basis:

1.1 欧洲联合适航当局的合格审定基础: / CAAC accepts the Certification Basis of EASA as the Validation Basis:

1.2 CAAC 的附加要求/ CAAC Additional Requirement:

参见问题纪要 G001 / Refer to Issue Paper G001

1. The Chinese fuel mainly used for civil aviation is No. 3 Jet fuel (GB 6537-94). The fuel needs to be approved for the airplanes before its operation in China.
2. As per CCAR 21.29(e), All literal markings and placards on an airplane used for advising, warning, or notifying passengers must be at least in Chinese; all literal markings and placards on an airplane used for indicating passengers or outboard rescue personnel of the location of emergency exits and doors and their means of opening must be at least in Chinese; and all the operation instructions of airplane emergency equipment that may be used by passengers must be at least in Chinese.
3. As per Airworthiness Management Document No. AA2002093, the pilot compartment doors and the security considerations should comply with: §25.772 Pilot compartment doors, and § 25.795 Security considerations

交付中国的每架飞机, 必须安装满足 CAAC 要求的驾驶舱门(空客改装包 No.50014)/Each aircraft delivered in China shall be equipped with reinforced cockpit door meeting CAAC requirement(Airbus Modification No.50014)

4. Quick Access Recorder (QAR) must be installed on each aircraft (reference to CAD97-MULT-38).
5. Altimeter should display flight altitude with the metric system.

2. EASA 审查参考的申请日期/ Reference Application Date for EASA Certification:

1988 年 6 月 15 日/15 JUNE 1988

3. EASA 审定日期(JAA 建议)/ EASA Certification Date (JAA recommendation):

(对于 2003 年 9 月 28 日前审定的型别, DGAC-F TC 184 仍然是有效的参考 / DGAC-F TC 184 remains a valid reference for models certified before 28. September 2003)

A330-301:	1993 年 10 月 21 日/21 October 1993
A330-321:	1994 年 6 月 2 日/02 June 1994
A330-322:	1994 年 6 月 2 日/02 June 1994
A330-341:	1994 年 12 月 22 日/22 December 1994
A330-342:	1994 年 12 月 22 日/22 December 1994
A330-323:	1999 年 4 月 22 日/22 April 1999
A330-343:	1999 年 9 月 13 日/13 September 1999
A330-302:	2004 年 5 月 17 日/17 May 2004

4. EASA 审定基础/EASA Certification Basis:

- 欧洲联合航空条例 JAR25 部, 1989 年 10 月 5 日生效的第 13 号修正案, 除下列之外: /JAR 25 Change 13 effective on October 5, 1989 with the following exceptions:

在限定区域符合性偏离 JAR25.561 和 JAR25.562 的要求, 例如: /deviation on limited areas for compliance against paragraphs 25-561 and 25-562 such as :

- 在机身轮廓线外的机翼油箱符合第 12 号修订。/Compliance at change 12 for wing tank outside the fuselage contour,
- 为表明符合 JAR25.785(a)(b)(c)的要求, 壁板与壁板之后的最前排座椅未按 JAR 25.562(c)(5)(6)试验。替代方法是, 座椅和壁板间的距离最小是 35 英寸, 认为是可接受的替代方法。/ For showing compliance with JAR 25.785 (a)(b)(c), the front row seats located behind a bulkhead are not tested according to JAR 25.562(c)(5)(6). Instead, a minimum 35 inches distance between the seats and the bulkhead is considered an acceptable alternative.

- JAR AWO Change 1
- NPA JAR AWO-3 (低能见度下的起飞 / Take-off in low visibility)
- OP 91/1 离散突风 / for discrete gust

5. 专用条件/Special Conditions:

SC G-5 阻燃术语(NPA 25D-181)/SC G-5 Resistance to fire terminology (NPA 25D-181)

SC G-7 功能及可靠性试验/SC G-7 Function and reliability testing

SC A-1 离散突风要求(NPA 25C-205)/SC A-1 Discrete gust requirements (NPA 25C-205)

SC A-2 系统与结构的相互作用(NPA 25C-199)/SC A-2 Interaction of systems and structure (NPA 25C-199)

SC A-3 设计机动要求/SC A-3 Design maneuver requirements

SC A-4 设计俯冲速度/SC A-4 Design dive speed

SC A-5 限制驾驶员操纵力和扭矩/SC A-5 Limit pilot forces and torque

SC A-7 结构设计的失速速度/SC A-7 Stalling speeds for structural design

SC A-11 气动弹性稳定性要求(NPA 25B, C, D-236)/SC A-11 Aeroelastic stability requirements (NPA 25B, C, D-236)

SC F-1 失速和预期使用速度/SC F-1 Stalling and scheduled operating speeds

SC F-2 驾驶舱操纵的运动和影响/SC F-2 Motion and effects of cockpit controls

SC F-3 纵向静稳定性/SC F-3 Static longitudinal stability

SC F-4 航向和横向静稳定性/SC F-4 Static directional and lateral stability

SC F-5 飞行包线保护/SC F-5 Flight envelope protections

SC F-6 正常载荷因子限制系统/SC F-6 Normal load factor limiting system

SC S-3 起落架警告(NPA 25D-162)/SC S-3 Landing gear warning (NPA 25D-162)

SC S-6 闪电防护的间接影响/SC S-6 Lightning protection indirect effects

SC S-10 外部辐射对机上系统的影响/SC S-10 Effects of external radiations upon aircraft systems

SC S-13 自动推力系统/SC S-13 Autothrust system

SC S-16 控制信号完整性/SC S-16 Control signal integrity

SC S-18 电子飞行控制/SC S-18 Electronic flight controls

SC S-20 应急电源(NPA 25D, F-179)/SC S-20 Emergency electrical power (NPA 25D, F-179)

SC S-23 电线和混合电的要求(NPA 25D, F-191)/SC S-23 Electrical wiring and miscellaneous electrical requirements (NPA 25D, F-191)

SC S-24 门 (NPA 25D, F-251)/SC S-24 Doors (NPA 25D, F-251)

SC S-38 无牵引拖把牵引 / Towbarless towing

SC P-1 全权数字式电子控制/SC P-1 FADEC

SC P-2 配平油箱/SC P-2 Trim tank

SC E-2 机组休息/Crew rest

SC E-5.1 下舱面厕所(自2000年8月适用)/Lower deck Lavatory (applicable from August 2000)

SC E-8.1 下舱面储藏区(自2000年8月适用)/Lower deck stowage area (applicable from August 2000)

SC E-11 下舱机组休息 间(自2002年1月适用)/Bulk crew rest compartment (applicable from January 2002)

SC E-19F/C 滑动银幕(自2003年9月适用)/ F/C sliding screens (applicable from September 2003)

SC E-128 增强的隔音/隔热材料可燃性标准 (自2009年2月适用) / Improved flammability standards for thermal/acoustic insulation (applicable from February 2009)

SC E-130 座椅材料散热和厌恶密度要求的应用 (自2010年2月适用) /Application of heat release and smoke density requirements to seat materials (applicable from February 2010)

SC E-1014 前排座椅的HIC符合性(限制充气)(自2007年7月适用)/HIC compliance for front row seating (inflatable restraints) (applicable from July 2007)

SC H-01 飞机系统的增强型适航项目-EWIS的持续适航文件 (自2010年5月适用) /Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS (applicable from May 2010)

6. 等效安全/Equivalent Safety Findings:

SC F-8(加速停止距离)与 SC S-21(刹车)定义的要求已对欧洲联合航空条例 JAR 25(NPA 25 B, D, G 244)提供了等效安全水平。/SC F-8 and SC S-21 have been found to provide an equivalent safety level to JAR 25 accelerate-stop and brakes qualification requirements (NPA 25 B, D, G 244)

CRI S-45 已对欧洲联合航空条例 JAR 25.1549(a) 提供了等效安全水平。/CRI S-45 provides an equivalent level of safety to JAR 25.1549(a)

CRI S-48 已对欧洲联合航空条例 JAR AWO 313CRI 提供了等效安全水平。/S-48 provides an equivalent level of safety to JAR AWO 313

CRI P-9 已对欧洲联合航空条例 JAR 25.1203(d) 提供了等效安全水平。/CRI P-9 provides an equivalent level of safety to JAR 25.1203(d)

CRI E-15 已对欧洲联合航空条例 JAR 25.772 提供了等效安全水平。(自 2002 年 7 月适用)/CRI E-15 provides an equivalent level of safety to JAR 25.772 (applicable from July 2002)

CRI E-18 已对欧洲联合航空条例 JAR 25.819(f) 提供了等效安全水平。(自 2003 年 11 月适用)/CRI E-18 provides an equivalent level of safety to JAR 25.819(f) (applicable from November 2003)

CRI E-1022 已对欧洲联合航空条例 JAR 25.853(b)提供了等效安全水平。(自 2005 年 8 月适用) /CRI E-1022 provides an equivalent level of safety to JAR 25.853(b) (applicable from August 2005)

7. 自愿符合 / Elect to comply

TC 证后活动: 对于多语言“出口”标志, 符合 2007 年 9 月 19 日第 3 次修订版的 CS 25.811 和 CS 25.812 (选装改装包)

Post TC activity: Compliance with CS 25.811 and CS 25.812 Amdt. 3 issued September 19th 2007 for multi lingual “EXIT” signs (optional modification).

8. 环境标准/Environmental Standards:

噪声、燃油排放及排泄物的环境要求/Environmental requirements for noise, fuel venting and emissions :

国际民航组织附件 16 卷 1 (噪声)– 第 II 部分第 3 章和第 4 章

ICAO Annex 16 Volume 1 (Noise) – Part II, Chapter 3 and 4

(详见 EASA 噪声型号合格证数据单 A.004 / see EASA TCDSN A.004 for details)

国际民航组织附件 16 卷 2 (燃油排放)– 第 II 部分第 2 章

ICAO Annex 16 Volume II (Vented Fuel) - Part II, Chapter 2

9. 延程运行技术条件/ETOPS Technical Conditions:

对于双发延程飞机的运行, 适用的技术条件包含在 AMC 20-6 (AMJ 120-42/IL20)和 CRI G-6,G-106,EASA CRI G-8 中。 / For the Extended Twin-Engine Airplane Operations, the applicable technical conditions are contained in AMC 20-6 (AMJ 120-42 / IL 20) and JAA CRI G-6, G-106, EASA CRI G-8.

10. 仅对 A330-302; A330-303; A330-323; A330-342 WV22&52; A330-343 型号的要求/A330-302; A330-303; A330-323;A330-342 WV22&52; A330-343 models only:

10.1 专用条件/等效安全/Special Condition / Equivalent Safety Finding:

下列专用条件/等效安全要求与上面5/6条要求相同。 / The following requirements are in addition of Special Conditions / ESF identified in paragraphs 5/6 above:

- SC F-8.1适用替代SC F-8。 /SC F-8.1 is applicable instead of SC F-8.
- 等效安全S-148 (JAR NPA AWO-8)替代S-48。 /ESF S-148 (JAR NPA AWO-8) replaces S-48.

10.2 延程运行/Extended Range Operations:

对于双发延程飞机的运行, 适用的技术条件包含在 AMC 20-6(AMJ 120-42/IL 20)和 JAA CRI G-106, EASA CRI G-8。 /For the Extended Twin-Engine Airplane Operations, the applicable technical conditions are contained in AMC 20-6 (AMJ 120-42 / IL 20) and JAA CRI G-106, EASA CRI G-8..

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

两台涡轮风扇发动机、中-远航程、双通道的大型运输类飞机。

Two turbo-fan, medium to long range, twin aisle, large category airplane.

1. A330-300 装通用电气发动机 A330-300 powered by General Electric engines

1.1 型号设计定义 / Type Design Definition

A330-301: 00G000A0301/C00

A330-302: 00G000A0302/C00

A330-303: 00G000A0303/C00

1.2 发动机 / Engines

A330-301: 2 台通用电气 CF6-80E1A2 涡轮风扇发动机。

Two (2) General Electric CF6-80E1A2 turbofan engines

A330-302: 2 台通用电气 CF6-80E1A4 or CF6-80E1A4/B 涡轮风扇发动机。

Two (2) General Electric CF6-80E1A4 or CF6-80E1A4/B turbofan engines

A330-303: 2 台通用电气 CF6-80E1A3 涡轮风扇发动机。

Two (2) General Electric CF6-80E1A3 turbofan engines

1.2.1 发动机限制/ Engine Limits

动力装置限制/ENGINE LIMITS 数据单/DATA SHEET E41NE (FAA) IM.E.007 (EASA)	A330-301 CF6-80E1A 2	A330-302		A330-303 CF6-80E1A3
		CF6-80E1 A4	CF6-80E1 A4/B	
海平面静推力/Static thrust at sea level:	64,530 lbs	66,870 lbs	68,530 lbs	68,530 lbs
- 起飞(5 分钟)take-off (5mn)*	60,400 lbs	60,400 lbs	60,400 lbs	60,400 lbs
- 最大连续/maximum continuous				
批准滑油/Approved oils : 符合通用电气公司规范 D50TF1 中的 B 级或该公司服务通告 79-1/ conform to GE specification D50TF1 Class B or GE Service Bulletin 79-1				

* 在发动机失效或关车的事件中可延伸至 10 分钟: 参见发动机型号合格证数据单 / May be extended to 10 mn in the event of a power unit having failed or been shut down: see notes in Engine TCDS.

其它发动机限制/Other engine limitations: 见相应的发动机型号合格证数据单。/See the relevant Engine Type Certificate Data Sheet.

注/Note: A330-302 飞机推力“增加”功能能力(选装):

Thrust “Bump” function capability for A330-302 (option):

当安装 CF6-80E1A4/B 发动机时, 飞机推力“增加”功能可以对起飞状态激活(Mod 52776)

When CF6-80E1A4/B engines are installed, the thrust “Bump” function can be activated for take-off (Mod 52776).

1.3 燃油 / Fuel

NOMENCLATURE	SPECIFICATION
KEROSENE (refer to GE Specification D50TF2)	JET A, JETA-1, JP5,JP8 , N°3 JET Fuel,TS-1, RT

添加剂: 见通用电气公司《安装手册》的“特殊使用说明”章节。/ Additives: See G.E. "Specific Operating Instructions", installation manual.

上述提及的燃油和添加剂也适用于辅助动力装置。/The above mentioned fuels and additives are also suitable for the APU.

1.4 限制速度 / Limit Speeds

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

1.5 重心范围 / Center of Gravity Range

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

1.6 最大审定重量 / Maximum Certified Weights

仅对A330-301有效/Valid for A330-301 only

VARIANT	000 (BASIC)	001 (42200)	002 (42600)	003 (44270)	004 (44849)	010 (44308)	051 (51806)
最大起飞重量 / MTOW (T)	212	184	212	215	215(*) 209	217	212
最大着陆重量 /MLW (T)	174	174	177	177	182 177(*)	179	187
最大零燃油重量 /MZFW (T)	164	164	167	167	172 167(*)	169	175

(*)这些重量间线性变化。/ Linear variation between those weights

仅对A330-302和A330-303有效/Valid for A330-302 and A330-303 only

VARIANT	050 (51805)	052 (51807)	054 (201648 用于生 产线 / for production) (202218 用于后 改装 / Retrofit)	055 (202462)	056 (202878)
最大起飞重量/MTOW (T)	230	233	235	235	205
最大着陆重量/MLW (T)	185	187	187	187	187
最大零燃油重量/MZFW (T)	173	175	173	173 to 175 (取决于 TOW / depending on TOW)	175

仅对A330-302有效/Valid for A330-302 only

VARIANT	053 (52924)
最大起飞重量/MTOW (T)	205
最大着陆重量/MLW (T)	185
最大零燃油重量/MZFW (T)	173

1.7 注/Note

Aircraft model conversion / 航空器型别转换

A330-301 飞机可通过实施空客服务通告 A330-00-3036 (Mod 53107) 转换为 A330-303 /
A330-301 aircraft can be converted into A330-303 by application of Airbus Service Bulletin
A330-00-3036 (Mod 53107)

2. A330-300 装普惠发动机/ A330-300 powered by Pratt & Whitney engines

2.1 型号设计定义 / Type Design Definition

A330-321: 00G000A0321/C00

A330-322: 00G000A0322/C00

A330-323: 00G000A0323/C00

2.2 发动机 / Engines

A330-321: 2 台普惠 Pratt & Whitney 4164 涡轮风扇发动机。/ Two (2) Pratt & Whitney 4164
turbofan engines

A330-321: 2 台普惠 Pratt & Whitney 4164-1D 涡轮风扇发动机。/ Two (2) Pratt & Whitney
4164-1D turbofan engines

A330-322: 2 台普惠 Pratt & Whitney 4168 涡轮风扇发动机。/ Two (2) Pratt & Whitney 4168
turbofan engines

A330-322: 2 台普惠 Pratt & Whitney 4168-1D 涡轮风扇发动机。/ Two (2) Pratt & Whitney
4168-1D turbofan engines

A330-323: 2 台普惠 Pratt & Whitney 4168A 涡轮风扇发动机。/ Two (2) Pratt & Whitney
4168A turbofan engines

A330-323: 2 台普惠 Pratt & Whitney 4168A-1D 涡轮风扇发动机。/ Two (2) Pratt & Whitney
4168A-1D turbofan engines

A330-323: 2 台普惠 Pratt & Whitney 4170 涡轮风扇发动机。/ Two (2) Pratt & Whitney
4170 turbofan engines

2.2.1 发动机限制/ Engine Limits

动力装置限制/ENGINE LIMITS 数据单/ DATA SHEET E36NE (FAA) M-IM37 (DGAC)	A330-321 PW4164/ PW4164-1 D	A330-322 PW4168/ PW4168-1 D	A330-323	
			PW4168A PW4168A-1D	PW4170
海平面静推力/Static thrust at sea level:				
- 起飞(5 分钟)take-off (5mn)*	64,500 lbs	68,600 lbs	68,600 lbs	70,000 lbs
- 最大连续/maximum continuous	55,800 lbs	59,357 lbs	59,357 lbs	59,357 lbs
批准滑油/Approved oils: 见普惠发动机服务通告 N°238,最新版/ see Pratt & Whitney engine Service Bulletin N°238, latest revision				

* 根据法国民用航空局的“发动机数据单”，万一(起飞或复飞期间)发动机失效情况下，仅允许起飞推力状态工作 10 分钟。/10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go-around in accordance with DGAC "Fiche de caractéristiques moteur").

其它发动机限制/Other engine limitations: 见相应的发动机型号合格证数据单。/See the relevant Engine Type Certificate Data Sheet.

注/Note: 反推和排气系统/ Thrust reverser and Exhaust System:

PW4164、PW4164-1D、PW4168、PW4168-1D、PW4168A、PW4168A-1D 和 PW4170 发动机上安装的反推和排气系统(反推组件 P/N 70M001,排气管组件 P/N 76A008 和排气插头组件 P/N 75A001)是由 FAA STC SE825NE 批准的。

/ Installation of Thrust Reverser and Exhaust System (Reverser Assembly P/N 70M001, Nozzle Assembly P/N 76A008 and Exhaust Plug Assembly P/N 75A001) on PW4164, PW4164-1D, PW4168, PW4168-1D, PW4168A, PW4168A-1D and PW4170 engines according to FAA STC SE825NE is approved.

2.3 燃油 / Fuel

NOMENCLATURE	SPECIFICATION
KEROSENE : refer to PWA 522 Specification (PW SB N° 2016)	JET A, JETA-1, JP5, JP8, N°3 JET Fuel, TS-1, RT

注: 上述燃油和添加剂也适用于 APU。/ Note : The above mentioned fuels and additives are also suitable for the APU.

2.4 限制速度 / Limit Speeds

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

2.5 重心范围 / Center of Gravity Range

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

2.6 最大审定重量 / Maximum Certified Weights

仅对A330-321和A330-322有效/Valid for A330-321 and A330-322 only

VARIANT	000 Basic	002 (42600)	003 (44270)	004 (44849)	010 (43308)	011 (44803)	012 (45086)	013 (46688)
最大起飞重量/ MTOW (T)	212	212	215	215 (*) 209	217	212	218	215
最大着陆重量 /MLW (T)	174	177	177	(*) 182 177	179	177	182	177
最大零燃油重量 /MZFW (T)	164	167	167	(*) 172 167	169	167	172	167

(*)这些重量间线性变化。/ Linear variation between those weights

仅对A330-323有效/Valid for A330-323 only

VARIANT	020 Basic	022 (4778 5)	025 (4965 1)	050 (5180 5)	052 (5180 7)	054*	055 (2024 62)	056 (2028 78)	057 (2037 16)
最大起飞重量 /MTOW (T)	230	233	217	230	233	235	235	205	184
最大着陆重量/MLW (T)	185	187	179	185	187	187	187	187	174
最大零燃油重量 /MZFW (T)	173	175	169	173	175	173	173 to 175**	175	164

* (201648 用于生产线 / for production)(202218 用于后改装 / Retrofit)

** (取决于 TOW / depending on TOW)

2.7 注 / Note

Aircraft model conversion / 航空器型号转换

A330-321飞机可能通过实施空客服务通告A330-00-3013 (Mod 46661)转换为A330-322/A330-321 aircraft can be converted into A330-322 by application of Airbus Service Bulletin A330-00-3013 (Mod 46661).

3. A330-300 装罗-罗发动机/ A330-300 powered by Rolls Royce engines

3.1 型号设计定义 / Type Design Definition

A330-341: 00G000A0341/C00

A330-342: 00G000A0342/C00

A330-343: 00G000A0343/C00

3.2 发动机 / Engines

A330-341: 2 台罗-罗 Trent 768-60 涡轮风扇发动机。 / Two (2) Rolls Royce Trent 768-60 turbofan engines

A330-342: 2 台罗-罗 Trent 772-60 涡轮风扇发动机。 / Two (2) Rolls Royce Trent 772-60 turbofan engines

A330-343: 2 台罗-罗 Trent 772B-60 涡轮风扇发动机。 / Two (2) Rolls Royce Trent 772B-60 turbofan engines

A330-343: 2 台罗-罗 Trent 772C-60 涡轮风扇发动机。 / Two (2) Rolls Royce Trent 772C-60 turbofan engines

3.2.1 发动机限制/ Engine Limits

动力装置限制/ENGINE LIMITS 数据单/ DATA SHEET 1050 (CAA) EASA.E.042	A330-341 Trent 768-60	A330-342 Trent 772-60	A330-343 Trent 772B-60	A330-343 Trent 772C-60
海平面静推力/Static thrust at sea level:	67,500 lbs	71,100 lbs	71,100 lbs	71,100 lbs
- 起飞(5 分钟)take-off (5mn)*	60,410 lbs	63,560 lbs	63,560 lbs	63,560 lbs
- 最大连续/maximum continuous				
经批准的滑油: 参见罗罗服务通告 RB.211-12-F139, 最新版 Approved oils: See Rolls Royce Service Bulletin RB.211-12-F139, latest revision				

- * 在发动机失效的事件中起飞推力状态工作和相关运行限制可延伸至 10 分钟(参见发动机型号合格证数据单) / The take-off rating and the associated operating limitations may be used for up to 10 minutes in the event of an engine failure (see notes in Engine TCDS).

其它发动机限制/Other engine limitations: 见相应的发动机型号合格证数据单。/See the relevant Engine Type Certificate Data Sheet.

3.3 燃油 / Fuel

NOMENCLATURE	SPECIFICATION
KEROSENE : refer to RR Operating Instruction defined in RR Manuel F-Trent A330	JET A, JET A-1, JET B, JP 4, JP5, JP8, N°3 JET fuel, TS-1, RT

注: 上述燃油和添加剂也适用于 APU。 / Note : The above mentioned fuels and additives are also suitable for the APU.

3.4 限制速度 / Limit Speeds

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

3.5 重心范围 / Center of Gravity Range

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

3.6 最大审定重量 / Maximum Certified Weights

仅对A330-341和A330-342有效/ Valid for A330-341 and A330-342 only

VARIANT	000	002 (42600)	003 (44270)	004 (44849)	010 (43308)	011 (44803)	012 (45086)	013 (46688)	014 (48377)
最大起飞重量 / MTOW (T)	212	212	215	215 (*) 209	217	212	218	215	205
最大着陆重量 /MLW (T)	174	177	177	(*)182 177	179	177	182	177	182
最大零燃油重量 /MZFW (T)	164	167	167	(*)172 167	169	167	172	167	172

(*)这些重量间线性变化。 / Linear variation between those weights

仅对A330-342和A330-343有效 / Valid for A330-342 and A330-343 only

VARIANT (MOD)	022 (47785)	052 (51807)	054*	055 (202462)	056 (202878)	057 (203716)
最大起飞重量 MTOW (T)	233	233	235	235	205	184
最大着陆重量 MLW (T)	187	187	187	187	187	174
最大零燃油重量 MZFW (T)	175	175	173	173 to 175 **	175	164

* (201648 用于生产线 / for production)(202218 用于后改装 / Retrofit)

** (取决于 TOW / depending on TOW)

仅对A330-343有效/ Valid for A330-343 only

VARIANT	020 Basic	024 (48350)	050 (51805)
最大起飞重量/MTOW (T)	230	205	230
最大着陆重量/MLW (T)	185	185	185
最大零燃油重量/MZFW (T)	173	173	173

3.7 注 / Note

可以实施服务通告 72-3008 (Mod 49684) 在 A330-343 上装 RR Trent 772 发动机并实施服务通告 72-3009 (Mod 49685)重新装回 RR Trent 772B 发动机。 / It is feasible for A330-343 to be fitted with RR Trent 772 engines by application of Service Bulletin 72-3008 (Mod 49684) and to be reverted to RR Trent 772B engines installation by Service Bulletin 72-3009 (Mod 49685).

A330-343 飞机可通过实施空客服务通告 A330-00-3039 (Mod 50943) 转换为 A330-342 / A330-343 can be converted into A330-342 by application of Service Bulletin A330-00-3039 covering modification 50943.

4. 适用于所有 A330-300 系列的数据/Data pertinent to all A330-300 series

4.1 燃油量 / Fuel Quantity(0.8 kg/liter):

油箱/TANK	2 油箱飞机/2-TANK AIRPLANE		
	可用燃油 升（公斤） /Usable fuel liters (kg)	不可用燃油 升（公斤） /Unusable fuel liters (kg)	
	A330-301 A330-321/-322 A330-341/-342 A330-342 except WV22 & 52	A330-302/-303 A330-323 A330-343 A330-342 WV22 A330-342 WV52	All models
机翼/WING	91764 (73 411)	91300 (73 040)	348 (279)
配平油箱/TRIM TANK	6 121 (4 897)	6 230 (4 984)	6 (5)
总计/TOTAL	97 885 (78 308)	97 530 (78 024)	354 (284)

4.2 最小飞行机组 / Minimum Flight Crew

2 人：驾驶员和副驾驶。 / Two (2): Pilot and Co-pilot

4.3 最大座椅布局数量 / Maximum Seating Capacity

由应急撤离批准的最大乘员数为: /The maximum number of passengers approved for emergency evacuation is:

375 基本型(装 3 个 A 型门和 1 个 I 型门)/375 basic (3 Type A and 1 Type I doors installed) ;

440 选装型(装 4 个 A 型门- Mod 40161)/440 option (4 Type A doors installed – Mod 40161).

交付时每架飞机批准的最大乘员容量见客舱内部布置图。/ See interior layout drawing for the maximum passenger capacities approved for each aircraft when delivered.

4.4 货舱载荷 / Cargo Compartment Loading

货舱/Cargo compartment	最大载荷 (公斤) / Maximum load (kg)
前/Forward	22 861
后/Aft	18 507
最后 (散装) /Rear (bulk)	3 468

关于集装箱、集装板及相关重量的授权的每一位置和装载条件, 见《重量平衡手册》编号 00G080A0006/C3S。/ For the positions and the loading conditions authorized in each position (references of containers, pallets and associated weights), see Weight and Balance Manual ref. 00G080A0006/C3S.

4.5 环境飞行包线 / Environmental Flight Envelope

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

4.6 其它限制 / Other Limitations

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

4.7 辅助动力装置(APU) / Auxiliary Power Unit (APU)

一台 GARRET AIRESEARCH GTCP 331-350C 型(规范 31-7677A / Specification 31-7677A)。/ One GARRETT GTCP 331-350C (Specification 31-7677A)

滑油: 参见适用的经批准的手册 / Oils: refer to applicable approved Manuals

4.8 设备 / Equipment

应安装适用条款要求的设备。/The equipment required by the applicable requirements shall be installed.

客舱设施, 设备和布置应符合下述规范。/Cabin furnishings, equipment and arrangement shall conform to the following specification:

00F252K0005/C01 客舱座椅/for cabin seats

00F252K0006/C01 厨房/for galley

00F252K0020/C01 客舱乘务员座椅/for cabin attendant seats

4.9 全部气象能力 / All Weather Capacities

A330-301:

- 如果执行 42390 改装, 飞机可以进行 II 类精密进近。/If modification 42390 is embodied the aircraft is qualified to Cat 2 precision approach
- 如果执行 42792 改装, 飞机可以进行 III 类精密进近和自动着陆。/If modification

42792 is embodied the aircraft is qualified to Cat 3 precision approach and autoland

A330-321 / A330-322:

- 如果执行 43397 改装，飞机可以进行 III 类精密进近和自动着陆。/If modification 43397 is embodied the aircraft is qualified to Cat 3 precision approach and autoland.

A330-323:

- 飞机型号设计批准进行 III 类精密进近和自动着陆。/Aircraft Type Design is approved for Cat 3 precision approach and autoland.

A330-341 / A330-342:

- 飞机型号设计批准进行 III 类精密进近和自动着陆。/Aircraft Type Design is approved for Cat 3 precision approach and autoland.

A330-343:

- 飞机型号设计批准进行 III 类精密进近和自动着陆。/Aircraft Type Design is approved for Cat 3 precision approach and autoland.

A330-302 / A330-303:

- 飞机型号设计批准进行 III 类精密进近和自动着陆。/Aircraft Type Design is approved for Cat 3 precision approach and autoland.

4.10 机轮和轮胎 / Wheels and Tyres

见服务通告 A330-32-3004。/ See SB A330-32-3004.

4.11 液压 / Hydraulics

液体规范: IV 型 – 《NSA 307-110》。/ Fluid specifications: TYPE IV (NSA 307-110).

4.12 维护要求和适航限制 / Maintenance Instructions and Airworthiness Limitations

- 适用于安全寿命适航限制项的限制部分见 EASA 批准的 A330 适航限制部分(ALS), 1-2 分部和 1-3 分部 / Limitations applicable to Safe Life Airworthiness Limitation Items are provided in the A330 Airworthiness Limitations Section (ALS) sub-parts 1-2 and 1-3 approved by EASA;
- 适用于损伤容限适航限制项的限制部分见 EASA 批准的 A330 适航限制部分(ALS), 第 2 部分 / Limitations applicable to Damage Tolerant Airworthiness Limitation Items are provided in the A330 Airworthiness Limitations Section (ALS) Part 2 approved by EASA;
- 审定维修要求见 EASA 批准的 A330 适航限制部分 (ALS), 第 3 部分 / Certification Maintenance Requirements are provided in the A330 Airworthiness Limitations Section (ALS) Part 3 approved by EASA;
- 老龄系统维修限制见 EASA 批准的 A330 适航限制部分 (ALS), 第 4 部分 / Limitations applicable to Ageing System Maintenance are provided in the A330 Airworthiness Limitation Section (ALS) Part 4 approved by EASA;
- 燃油适航限制见 EASA 批准的 A330 适航限制部分 (ALS), 第 5 部分 / Fuel

Airworthiness Limitations are provided in the A330 Airworthiness Limitations Section (ALS) Part 5 approved by EASA;

- MRB 报告 / Maintenance Review Board report.

第三节:A330-200 系列/ A330-200 SERIES

I. 概述 / GENERAL

1. 机型/Aeroplane:

Airbus A330-200

II. 认可审定基础/ Validation Basis

1. 认可审定基础/ Validation Basis

中国民用航空总局的认可审定基础为/ Validation Basis:

1.1 欧洲联合适航当局的合格审定基础: / CAAC accepts the Certification Basis of EASA as the Validation Basis:

1.2 CAAC 的附加要求/ CAAC Additional Requirement:

参见问题纪要 G001 / Refer to Issue Paper G001

1. The Chinese fuel mainly used for civil aviation is No. 3 Jet fuel (GB 6537-94). The fuel needs to be approved for the airplanes before its operation in China.
2. As per CCAR 21.29(e), All literal markings and placards on an airplane used for advising, warning, or notifying passengers must be at least in Chinese; all literal markings and placards on an airplane used for indicating passengers or outboard rescue personnel of the location of emergency exits and doors and their means of opening must be at least in Chinese; and all the operation instructions of airplane emergency equipment that may be used by passengers must be at least in Chinese.
3. As per Airworthiness Management Document No. AA2002093, the pilot compartment doors and the security considerations should comply with: §25.772 Pilot compartment doors, and § 25.795 Security considerations

交付中国的每架飞机, 必须安装满足 CAAC 要求的驾驶舱门(空客改装包 No.50014)/Each aircraft delivered in China shall be equipped with reinforced cockpit door meeting CAAC requirement(Airbus Modification No.50014)

4. Quick Access Recorder (QAR) must be installed on each aircraft (reference to CAD97-MULT-38).
5. Altimeter should display flight altitude with the metric system.

2. EASA 审查参考的申请日期/ Reference Application Date for EASA Certification:

1996 年 1 月 23 日/23 JANUARY 1996

3. EASA 审定日期(JAA 建议)/ EASA Certification Date (JAA recommendation):

(对于 2003 年 9 月 28 日前审定的型别, DGAC-F TC 184 仍然是有效的参考 / DGAC-F TC 184 remains a valid reference for models certified before 28. September 2003)

A330-201:2002 年 10 月 31 日/31 October 2002

A330-202:1998 年 3 月 31 日/31 March 1998

A330-203:2001 年 11 月 20 日/20 November 2001

A330-223:1998 年 7 月 13 日/13 July 1998

A330-243:1999 年 1 月 11 日/11 January 1999

4. EASA 审定基础/EASA Certification Basis:

- 欧洲联合航空条例 JAR25 部, 及 1989 年 10 月 5 日生效的第 13 号修正案, 除下列之外: /JAR 25 Change 13 effective on October 5, 1989 with the following exceptions:

- 在机身轮廓线外的机翼油箱符合第 12 号修正案修订的 JAR25.561。/ paragraph 25.561 is applied at change 12 for wing tanks outside the fuselage contour ;
- 为表明符合 JAR25.785(a)(b)(c)的要求，壁板与壁板之后的最前排座椅未按 JAR 25.562(c)(5)(6)试验。替代方法是，座椅和壁板间的距离最小是 35 英寸，认为是可接受的替代方法。/ For showing compliance with JAR 25.785 (a)(b)(c), the front row seats located behind a bulkhead are not tested according to JAR 25.562(c)(5)(6). Instead, a minimum 35 inches distance between the seats and the bulkhead is considered an acceptable alternative.

下列 JAR25 条款适用第 14 次修订。/The following JAR 25 paragraphs are applicable at change 14:

JAR 25.21 证明符合性的若干规定/Proof of compliance

JAR 25.29 空重和相应的重心/Empty weight and corresponding center of gravity

JAR 25.101 性能-总则/Performance - General

JAR 25.111 起飞航迹/Take-off path

JAR 25.125 着陆/Landing

JAR 25.145 纵向操纵/Longitudinal control

JAR 25.147 航向和横向控制/Directional and lateral control

JAR 25.149 最小操纵速度/Minimum control speed

JAR 25.175 纵向静稳定性的演示/demonstration of static longitudinal stability

JAR 25.177 横向和航向静/Staic directional and lateral stability

JAR 25.181 动稳定性/Dynamic stability

JAR 25.205 失速：临界发动机不工作/Stalls : critical engine inoperative

JAR 25.251 振动和抖振/Vibration and buffeting

JAR 25.253 高速特性/High speed Characteristics

JAR 25.305 强度和变形/Strength and deformation

JAR 25.307 结构符合性的证明/Proof of structure

JAR 25.321 飞行载荷-总则/Flight loads - general

JAR 25.331 对称机动情况/Symmetric maneuvering conditions

JAR 25.333 飞行包线/flight envelope

JAR 25.335 设计空速/design airspeeds

JAR 25.341 突风和紊流载荷/Gust and turbulence loads

JAR 25.343 设计燃油和滑油载重/Design fuel and oil loads

JAR 25.345 增升装置/High lift devices

JAR 25.349 滚转情况/Rolling conditions

JAR 25.351 偏航机动情况/Yawing maneuvering conditions

JAR 25.361 发动机和辅助动力装置扭矩/Engine and APU torque

JAR 25.371 陀螺载荷/Gyroscopic loads

JAR 25.373 速度控制装置/Speed control devices

JAR 25.391 操纵面载荷-总则/Control surfaces loads – general

JAR 25.395 操纵系统/Control system

JAR 25.397 操纵系统载荷/Control system loads

JAR 25.415 地面突风情况/Ground gust condition

JAR 25.427 非对称载荷/Unsymmetrical loads

JAR 25.459	特殊装置/Special devices
JAR 25.571	损伤容限/Damage tolerance
JAR 25.603	材料：仅适用于垂直安定面/materials : applicable to vertical stabilizer only
JAR 25.613	材料的强度性能和设计值-仅适用于垂直安定面/Material strength properties and design values applicable to vertical stabilizer only
JAR 25.615	设计值-仅适用于垂直安定面/Design values : applicable to vertical stabilizer only
JAR 25.679	操纵系统突风锁/Control system gust locks
JAR 25.723	减震试验/Shock absorption tests
JAR 25.729	起落架收放机构/Landing Gear retracting mechanism
JAR 25.731	机轮/Wheels
JAR 25.733	轮胎/Tires
JAR 25.735	刹车/Brakes
JAR 25.772	驾驶舱舱门/Pilot compartment door
JAR 25.777	驾驶舱操纵器件/Cockpit controls
JAR 25.779	驾驶舱操纵器件的动作和效果/Motion and effect of cockpit control
JAR 25.783	舱门/Doors
JAR 25.851	灭火器/Fire extinguishers
JAR 25.863	可燃液体的防火/Flammable fluid fire protection
JAR 25.867	其它部件的防火/Fire protection : other components
JAR 25X899	防止闪电及静电的电气搭铁和防护-仅适用于垂直安定面/Electrical bonding and protection against lightning and static electricity: applicable to vertical stabilizer only
JAR 25.963(g)	燃油箱加油口盖(仅中央油箱)/Fuel tanks access covers (fuel center tank only)
JAR 25.979	压力加油系统/Pressure fuelling system
JAR 25.1303	飞行和导航仪表/Flight and navigation instruments
JAR 25.1381	仪表灯/Instrument lights
JAR 25.1415	水上迫降设备/Ditching equipment
JAR 25.1419	防冰/Flight in icing condition
JAR 25.1533	附加使用限制/Additional operating limitations
JAR 25.1543	仪表标记：总则/Instrument markings, general
JAR 25.1551	滑油油量指示器/Oil quantity indicator

JAR AWO 修订 1 加上以下： /JAR AWO change I plus:

- orange paper AWO 91/1
- JARAWO 3 建议修正案/NPA JAR AWO 3
- JAR AWO 8 建议修正案(CRI S-148)/NPA JAR AWO 8 (CRI S-148)

5. 专用条件/Special Conditions:

SC G-105 阻燃 /SC G-105 Resistance to fire

SC G-7 功能及可靠性试验/SC G-7 Function and reliability testing

SC A-2 系统与结构的相互作用(NPA 25C-199)/SC A-2 Interaction of systems and structure (NPA 25C-199)

SC A-3 设计机动要求/SC A-3 Design maneuver requirements

SC A-4 设计俯冲速度/SC A-4 Design dive speed VD

SC A-5 限制驾驶员操纵力和扭矩/SC A-5 Limit pilot forces and torque

SC A-7 结构设计的失速速度/SC A-7 Stalling speeds for structural design

SC A-11 气动弹性稳定性要求(NPA 25B, C, D-236)/SC A-11 Aeroelastic stability requirements (NPA 25B, C, D-236)

SC F-101 失速和预期使用速度/SC F-1 Stalling and scheduled operating speeds

SC F-2 驾驶舱操纵的运动和影响/SC F-2 Motion and effects of cockpit controls

SC F-3 纵向静稳定性/SC F-3 Static longitudinal stability

SC F-4 航向和横向静稳定性/SC F-4 Static directional and lateral stability

SC F-5 飞行包线保护/SC F-5 Flight envelope protections

SC F-6 正常载荷因子限制系统/SC F-6 Normal load factor limiting system

SC S-6 闪电防护的间接影响/SC S-6 Lightning protection indirect effects

SC S-10 外部辐射对机上系统的影响/SC S-10 Effects of external radiations upon aircraft systems

SC S-10.1 外部辐射对机上系统的影响/SC S-10.1 Effects of external radiations upon aircraft systems

SC S-10.2 外部辐射对机上系统的影响/SC S-10.2 Effects of external radiations upon aircraft systems

SC S-13 自动推力系统/SC S-13 Autothrust system

SC S-16 控制信号完整性/SC S-16 Control signal integrity

SC S-18 电子飞行控制/SC S-18 Electronic flight controls

SC S-20 应急电源(NPA 25D, F-179)/SC S-20 Emergency electrical power (NPA 25D, F-179)

SC S-23 电线和混合电的要求(NPA 25D, F-191)/SC S-23 Electrical wiring and miscellaneous electrical requirements (NPA 25D, F-191)

SC S-38 无牵引拖把牵引 / Towbarless towing

SC P-1 全权数字式电子控制/SC P-1 FADEC

SC P-2 配平油箱/SC P-2 Trim tank

SC P-27 可燃性降低系统(自2010年6月适用)Flammability Reduction System (applicable from June 2010)

SC E-2 机组休息/Crew rest

SC E-5.1 下舱面厕所(自2000年8月适用)/Lower deck Lavatory (applicable from August 2000)

SC E-8.1 下舱面储藏区(自2000年8月适用)/Lower deck stowage area (applicable from August 2000)

SC E-11 下舱机组休息 间(自2002年1月适用)/Bulk crew rest compartment (applicable from January 2002)

SC E-19F/C 滑动银幕(自2003年9月适用)/ F/C sliding screens (applicable from September 2003)

SC E-128 增强的隔音/隔热材料可燃性标准(自2009年2月适用) / Improved flammability standards for thermal/acoustic insulation (applicable from February 2009)

SC E-130 座椅材料散热和厌恶密度要求的应用(自2010年2月适用) / Application of heat release and smoke density requirements to seat materials (applicable from February 2010)

SC E-1014 前排座椅的HIC符合性(限制充气)(自2007年7月适用)/HIC compliance for front row seating (inflatable restraints) (applicable from July 2007)

SC H-01 飞机系统的增强型适航项目-EWIS的持续适航文件（自2010年5月适用）/Enhanced Airworthiness Programme for Aeroplane Systems - ICA on EWIS (applicable from May 2010)

6.等效安全/Equivalent Safety Findings:

SC F-8.1(加速停止距离)与 SC S-21(刹车)定义的要求已对欧洲联合航空条例 JAR 25(NPA 25 B, D, G 244)提供了等效安全水平。/SC F-8.1 and SC S-21 have been found to provide an equivalent safety level to JAR 25 accelerate-stop and brakes qualification requirements (NPA 25 B, D, G 244)

CRI S-45 已对欧洲联合航空条例 JAR 25.1549(a) 提供了等效安全水平。/CRI S-45 provides an equivalent level of safety to JAR 25.1549(a)

CRI P-9 已对欧洲联合航空条例 JAR 25.1203(d) 提供了等效安全水平。/CRI P-9 provides an equivalent level of safety to JAR 25.1203(d)

CRI E-15 已对欧洲联合航空条例 JAR 25.772 提供了等效安全水平。(自 2002 年 7 月适用)/CRI E-15 provides an equivalent level of safety to JAR 25.772 (applicable from July 2002)

CRI E-18 已对欧洲联合航空条例 JAR 25.819(f) 提供了等效安全水平。(自 2003 年 11 月适用)/CRI E-18 provides an equivalent level of safety to JAR 25.819(f) (applicable from November 2003)

CRI E-1022 已对欧洲联合航空条例 JAR 25.853(b)提供了等效安全水平。（自 2005 年 8 月适用）/CRI E-1022 provides an equivalent level of safety to JAR 25.853(b) (applicable from August 2005)

7. 自愿符合 / Elect to comply

TC 证后活动：对于多语言“出口”标志，符合 2007 年 9 月 19 日第 3 次修订版的 CS 25.811 和 CS 25.812 (选装改装包)

Post TC activity: Compliance with CS 25.811 and CS 25.812 Amdt. 3 issued September 19th 2007 for multi lingual “EXIT” signs (optional modification).

8.环境标准/Environmental Standards:

噪声、燃油排放及排泄物的环境要求/Environmental requirements for noise, fuel venting and emissions :

国际民航组织附件 16 卷 1 (噪声) – 第 II 部分第 3 章和第 4 章

ICAO Annex 16 Volume 1 (Noise) – Part II, Chapter 3 and 4

(详见 EASA 噪声型号合格证数据单 A.004 / see EASA TCDSN A.004 for details)

国际民航组织附件 16 卷 2 (燃油排放) – 第 II 部分第 2 章

ICAO Annex 16 Volume II (Vented Fuel) - Part II, Chapter 2

9.延程运行技术条件/ETOPS Technical Conditions:

对于飞机双发延程运行，适用的技术条件包含在 AMC 20-6 (AMJ 120-42 / IL 20)和 JAA CRI G-106, EASA CRI G-8 中。

For the Extended Twin-Engine Airplane Operations, the applicable technical conditions are contained in AMC 20-6 (AMJ 120-42 / IL 20) and JAA CRI G-106, EASA CRI G-8.

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

两台涡轮风扇发动机、中-远航程、双过道的大型飞机。 / Two turbo-fan, medium to long range, twin aisle, large category airplane.

1. A330-200 装通用电气发动机/ 1.A330-200 powered by General Electric engines

1.1 型号设计定义 / Type Design Definition

A330-201: 00G000A0201/C00

A330-202: 00G000A0202/C00

A330-203: 00G000A0203/C00

1.2 发动机 / Engines

A330-201: 2 台通用电气 CF6-80E1A2 涡轮风扇发动机。 / Two (2) General Electric CF6-80E1A2 turbofan engines

A330-202: 2 台通用电气 CF6-80E1A4 or CF6-80E1A4/B 涡轮风扇发动机。 /Two (2) General Electric CF6-80E1A4 or CF6-80E1A4/B turbofan engines

A330-203: 2 台通用电气 CF6-80E1A3 涡轮风扇发动机。 /Two (2) General Electric CF6-80E1A3 turbofan engines

1.2.1 发动机限制/ Engine Limits

动力装置限制/ENGINE LIMITS 数据单/DATA SHEET E41NE (FAA) IM.E.007 (EASA)	A330-201 CF6-80E1A 2	A330-202		A330-203 CF6-80E1A3
		CF6-80E1 A4	CF6-80E1 A4/B	
海平面静推力/Static thrust at sea level:	64,530 lbs	66,870 lbs	68,530 lbs	68,530 lbs
- 起飞(5 分钟)take-off (5mn)*	60,400 lbs	60,400 lbs	60,400 lbs	60,400 lbs
- 最大连续/maximum continuous				
批准滑油/Approved oils : 符合通用电气公司规范 D50TF1 中的 B 级或该公司服务通告 79-1/ conform to GE specification D50TF1 Class B or GE Service Bulletin 79-1				

* 在发动机失效或关车的事件中可延伸至 10 分钟: 参见发动机型号合格证数据单 / May be extended to 10 mn in the event of a power unit having failed or been shut down: see notes in Engine TCDS.

其它发动机限制/Other engine limitations: 见相应的发动机型号合格证数据单。 /See the relevant Engine Type Certificate Data Sheet.

注/Note: A330-202 飞机推力“增加”功能能力(选装)/ Thrust “Bump” function capability for A330-302 (option):

当装 CF6-80E1A4/B 发动机时, 飞机推力“增加”功能可以对起飞状态激活(Mod 52776)/When CF6-80E1A4/B engines are installed, the thrust “Bump” function can be activated for take-off (Mod 52776).

1.3 燃油 / Fuel

NOMENCLATURE	SPECIFICATION
KEROSENE (conform to GE Specification D50TF2)	JET A, JETA-1, JP5,JP8 , N°3 JET Fuel,TS-1

添加剂：见通用电气公司《安装手册》的“特殊使用说明”章节。/ Additives: See G.E. "Specific Operating Instructions", installation manual.

上述提及的燃油和添加剂也适用于辅助动力装置。/The above mentioned fuels and additives are also suitable for the APU.

1.4 限制速度 / Limit Speeds

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

1.5 重心范围 / Center of Gravity Range

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

1.6 最大审定重量 / Maximum Certified Weights

系列/VARIANT	020 (基本/BASIC)	021 (46892)	022 (47784)	023 (47888)	024 (49819)	026 (51712)
有效/VALIDITY	A330-201 A330-202 A330-203	- A330-202 -	- A330-202 A330-203	A330-201 A330-202 A330-203	A330-201 - -	- - A330-203
最大起飞重量/MTOW (T)	230	230	233	233	202	192
最大着陆重量/MLW (T)	180	182	182	180	180	180
最大零燃油重量/MZFW (T)	168	170	170	168	168	168

系列/VARIANT	050 (51802)	051 (51803)	052 (51804)	053 (53109)	054 (54106)	055 (54107)	056 (55813)
有效 / VALIDITY	A330-201 A330-202 A330-203	- - A330-203	A330-201 A330-202 A330-203	A330-202	A330-201 A330-202 A330-203	A330-201 A330-202 A330-203	A330-201 A330-202 A330-203
最大起飞重量/MTOW (T)	230	192	233	210	230	192	233
最大着陆重量/MLW (T)	180	180	182	180	182	182	180
最大零燃油重量/MZFW (T)	168	168	170	168	170	170	168

对 A330-201/-202/-203 有效 / Valid for A330-201/-202/-203

系列/VARIANT	057 *	058 **	059 (57439)	060 (57440)	061 (200561)	062 (201701)
最大起飞重量/MTOW (T)	236	238	202	220	230	238
最大着陆重量/MLW (T)	182	182	182	182	182	182
最大零燃油重量/MZFW (T)	170	168	170	170	168	168 to 170 ***

* (58859 用于生产线 / for Production) (201436 用于后改装 / for Retrofit)

** (58860 用于生产线 / for Production) (201437 用于后改装 / for Retrofit)

*** (取决于 TOW / depending on TOW)

1.7 注/Note:

A330-202飞机可以通过实施服务通告72-003 (Mod 46549)装CF6-80E1A2发动机, 并能通过实施服务通告72-3005 (Mod 47332)换装CF6-80E1A4发动机。 / A330-202 can be fitted with CF6-80E1A2 engines by application of Service Bulletin 72-003 (Mod 46549), and can be reverted to CF6-80E1A4 engines installation by Service Bulletin 72-3005 (Mod 47332).

航空器型别转换 / Aircraft model conversion:

- A330-203飞机可以通过实施服务通告A330-00-3034完成53335改装转换为A330-202飞机,
- A330-203 can be converted into A330-202 by application of Airbus Service Bulletin A330-00-3034 covering modification 53335,
- A330-201飞机可以通过实施服务通告A330-00-3051完成55917改装转换为A330-202飞机。
- A330-201 can be converted into A330-202 by application of Airbus Service Bulletin A330-00-3051 covering modification 55917.

2. A330-200 装普惠发动机/ A330-200 powered by Pratt & Whitney engines

2.1 型号设计定义 / Type Design Definition

A330-223: 00G000A0223/C00

2.2 发动机 / Engines

A330-223: 2 台普惠 Pratt & Whitney 4168A 涡轮风扇发动机。 / Two (2) Pratt & Whitney 4168A turbofan engines

A330-223: 2 台普惠 Pratt & Whitney 4168A-1D 涡轮风扇发动机。 / Two (2) Pratt & Whitney 4168A-1D turbofan engines

A330-223: 2 台普惠 Pratt & Whitney 4170 涡轮风扇发动机。 / Two (2) Pratt & Whitney 4170 turbofan engines

2.2.1 发动机限制/ Engine Limits

动力装置限制/ENGINE LIMITS 数据单/ DATA SHEET E36NE (FAA) M-IM37 (DGAC)	A330-223		
	PW4168A	PW4168A-1D	PW4170
海平面静推力/Static thrust at sea level:			
- 起飞(5 分钟)take-off (5mn)*	68,600 lbs	68,600 lbs	70,000 lbs
- 最大连续/maximum continuous	59,357 lbs	59,357 lbs	59,357 lbs
批准滑油/Approved oils : 见普惠发动机服务通告 N°238,最新版/ see Pratt & Whitney engine Service Bulletin N°238, latest revision			

- * 根据法国民用航空局的“发动机数据单”, 万一(起飞或复飞期间)发动机失效情况下, 仅允许起飞推力状态工作 10 分钟。 /10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go-around in accordance with DGAC "Fiche de caractéristiques moteur").

其它发动机限制/Other engine limitations: 见相应的发动机型号合格证数据单。/See the relevant Engine Type Certificate Data Sheet.

注/Note: 反推和排气系统/ Thrust reverser and Exhaust System:

PW4164、4168、4168A、4168A-1D 和 4170 发动机上安装的反推和排气系统, (反推组件 P/N 70M001, 排气管组件 P/N 76A008 和排气插头组件 P/N 75A001)是由 FAA STC SE825NE 批准的。/ Installation of Thrust Reverser and Exhaust System (Reverser Assembly P/N 70M001, Nozzle Assembly P/N 76A008 and Exhaust Plug Assembly P/N 75A001) on PW4164, 4168, 4168A, 4168A-1D and 4170 engines according to FAA STC SE825NE is approved.

2.3 燃油 / Fuel

NOMENCLATURE	SPECIFICATION
KEROSENE : refer to PWA 522 Specification (PW SB N° 2016)	JET A, JETA-1, JP5,JP8 , N°3 JET Fuel,TS-1, RT

注: 上述燃油和添加剂也适用于 APU。/ Note : The above mentioned fuels and additives are also suitable for the APU.

2.4 限制速度 / Limit Speeds

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

2.5 重心范围 / Center of Gravity Range

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

2.6 最大审定重量 / Maximum Certified Weights

VARIANT	020 Basic	021 (46892)	022 (47784)	023 (47888)	050 (51802)	052 (51804)
最大起飞重量/ MTOW (T)	230	230	233	233	230	233
最大着陆重量 /MLW (T)	180	182	182	180	180	182
最大零燃油重量 /MZFW (T)	168	170	170	168	168	170

VARIANT	054 (54106)	055 (54107)	056 (55813)
最大起飞重量/ MTOW (T)	230	192	233
最大着陆重量 /MLW (T)	182	182	180
最大零燃油重量 /MZFW (T)	170	170	168

系列/VARIANT	057 *	058 **	059 (57439)	060 (57440)	061 (200561)	062 (201701)
最大起飞重量/MTOW (T)	236	238	202	220	230	238
最大着陆重量/MLW (T)	182	182	182	182	182	182
最大零燃油重量/MZFW (T)	170	168	170	170	168	168 to 170 ***

* (58859 用于生产线 / for Production) (201436 用于后改装 / for Retrofit)

** (58860 用于生产线 / for Production) (201437 用于后改装 / for Retrofit)

*** (取决于 TOW / depending on TOW)

3. A330-200 装罗-罗发动机/ A330-200 powered by Rolls Royce engines

3.1 型号设计定义 / Type Design Definition

A330-243: 00G000A0243/C00

3.2 发动机 / Engines

A330-243: 2台罗-罗Trent 772B-60或Trent 772C-60涡轮风扇发动机。 / Two (2) Rolls Royce Trent 772B-60 turbofan engines or two (2) Rolls Royce Trent 772C-60 turbofan engines

3.2.1 发动机限制/ Engine Limits

动力装置限制/ENGINE LIMITS 数据单/ DATA SHEET 1050 (CAA) EASA.E.042	A330-243 Trent 772B-60	A330-243 Trent 772C-60
海平面静推力/Static thrust at sea level:		
- 起飞(5 分钟)take-off (5mn)*	71,100 lbs	71,100 lbs
- 最大连续/maximum continuous	63,560 lbs	63,560 lbs
经批准的滑油: 参见罗罗服务通告 RB.211-12-F139, 最新版 Approved oils: See Rolls Royce Service Bulletin RB.211-12-F139, latest revision		

* 在发动机失效的事件中起飞推力状态工作和相关运行限制可延伸至 10 分钟(参见发动机型号合格证数据单) / The take-off rating and the associated operating limitations may be used for up to 10 minutes in the event of an engine failure (see notes in Engine TCDS).

其它发动机限制/Other engine limitations: 见相应的发动机型号合格证数据单。 /See the relevant Engine Type Certificate Data Sheet.

3.3 燃油 / Fuel

NOMENCLATURE	SPECIFICATION
KEROSENE : refer to RR Operating Instruction defined in RR Manuel F-Trent A330	JET A, JET A-1, JET B, JP 4, JP5, JP8, N°3 JET fuel, TS-1, RT

注: 上述燃油和添加剂也适用于 APU。 / Note : The above mentioned fuels and additives are also

suitable for the APU.

3.4 限制速度 / Limit Speeds

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

3.5 重心范围 / Center of Gravity Range

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

3.6 最大审定重量 / Maximum Certified Weights

VARIANT	020 (BASIC)	021 (46892)	022 (47784)	023 (47888)	024 (49819)	025 (50864)
最大起飞重量/ MTOW (T)	230	230	233	233	202	220
最大着陆重量/MLW (T)	180	182	182	180	180	182
最大零燃油重量/MZFW (T)	168	170	170	168	168	170

VARIANT	026 (51712)	027 (54519)	050 (51802)	052 (51804)	054 (54106)	055 (54107)
最大起飞重量/MTOW (T)	192	220	230	233	230	192
最大着陆重量/MLW (T)	180	180	180	182	182	182
最大零燃油重量/MZFW (T)	168	168	168	170	170	170

系列/VARIANT	056 (55813)	057 *	058 **	059 (57439)	060 (57440)	061 (200561)	062 (201701)
最大起飞重量/MTOW (T)	233	236	238	202	220	230	238
最大着陆重量/MLW (T)	180	182	182	182	182	182	182
最大零燃油重量/MZFW (T)	168	170	168	170	170	168	168 to 170 ***

* (58859 用于生产线 / for Production) (201436 用于后改装 / for Retrofit)

** (58860 用于生产线 / for Production) (201437 用于后改装 / for Retrofit)

*** (取决于 TOW / depending on TOW)

4. 适用于所有 A330-200 系列的数据/Data pertinent to all A330-200 series

4.1 燃油量 / Fuel Quantity(0.8 kg/liter):

油箱/TANK	3 油箱飞机/3-TANK AIRPLANE	
	可用燃油 升（公斤） /Usable fuel liters (kg)	不可用燃油 升（公斤）/Unusable fuel liters (kg)
机翼/WING	91 300 (73 040)	348 (279)
中央/CENTER	41 560 (33 248)	83 (67)
配平油箱/TRIM TANK	6 230 (4 984)	6 (5)
总计/TOTAL	139 090 (111 272)	437 (350)

4.2 最小飞行机组 / Minimum Flight Crew

2 人：驾驶员和副驾驶员。/ Two (2): Pilot and Co-pilot

4.3 最大座椅布局数量 / Maximum Seating Capacity

由应急撤离批准的最大乘员数为：/The maximum number of passengers approved for emergency evacuation is:

375 基本型(装 3 个 A 型门和 1 个 1 型门)/375 basic (3 Type A and 1 Type 1 doors installed) ;

406 选装型(装 4 个 A 型门- Mod 40161)/406 option (4 Type A doors installed – Mod 40161).

交付时每架飞机批准的最大乘员容量见客舱内部布置图。/ See interior layout drawing for the maximum passenger capacities approved for each aircraft when delivered.

4.4 货舱载荷 / Cargo Compartment Loading

货舱/Cargo compartment	最大载荷（公斤）/ Maximum load (kg)
前/Forward	18869
后/Aft	15241
最后（散装）/Rear (bulk)	3468

关于集装箱、集装板及相关重量的授权的每一位置和装载条件，见《重量平衡手册》编号 00G080A0006/C2S。/ For the positions and the loading conditions authorized in each position (references of containers, pallets and associated weights), see Weight and Balance Manual ref. 00G080A0006/C2S.

4.5 环境飞行包线 / Environmental Flight Envelope

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

4.6 其它限制 / Other Limitations

参见经批准的《飞机飞行手册》。/Refer to approved airplane Flight Manuals

4.7 辅助动力装置(APU) / Auxiliary Power Unit (APU)

一台 GARRET AIRESEARCH GTCP 331-350C 型(规范 31-7677A / Specification 31-7677A)。 /
One GARRETT GTCP 331-350C (Specification 31-7677A)

滑油: 参见适用的经批准的手册 / Oils: refer to applicable approved Manuals

4.8 设备 / Equipment

应安装适用条款要求的设备。/The equipment required by the applicable requirements shall be installed.

客舱设施, 设备和布置应符合下述规范。/Cabin furnishings, equipment and arrangement shall conform to the following specification:

00F252K0005/C01 客舱座椅/for cabin seats

00F252K0006/C01 厨房/for galley

00F252K0020/C01 客舱乘务员座椅/for cabin attendant seats

4.9 全部气象能力 / All Weather Capacities

A330-201 / A330-202 / A330-203:

- 飞机型号设计批准进行 III 类精密进近和自动着陆。/Aircraft Type Design is approved for Cat 3 precision approach and autoland.

A330-223:

- 飞机型号设计批准进行 III 类精密进近和自动着陆。/Aircraft Type Design is approved for Cat 3 precision approach and autoland.

A330-243:

- 飞机型号设计批准进行 III 类精密进近和自动着陆。/Aircraft Type Design is approved for Cat 3 precision approach and autoland.

4.10 机轮和轮胎 / Wheels and Tyres

参见空客服务通告 A330-32-3004。 / Refer to Airbus Service Bulletin A330-32-3004.

4.11 液压 / Hydraulics

液体规范: IV 型 – 《NSA 307-110》。 / Fluid specifications: TYPE IV (NSA 307-110).

4.12 维护要求和适航限制 / Maintenance Instructions and Airworthiness Limitations

- 适用于安全寿命适航限制项的限制部分见 EASA 批准的 A330 适航限制部分(ALS), 1-2 分部和 1-3 分部 / Limitations applicable to Safe Life Airworthiness Limitation Items are provided in the A330 Airworthiness Limitations Section (ALS) sub-parts 1-2 and 1-3 approved by EASA;
- 适用于损伤容限适航限制项的限制部分见 EASA 批准的 A330 适航限制部分(ALS), 第 2 部分 / Limitations applicable to Damage Tolerant Airworthiness Limitation Items are provided in the A330 Airworthiness Limitations Section (ALS) Part 2 approved by EASA;
- 审定维修要求见 EASA 批准的 A330 适航限制部分 (ALS), 第 3 部分 / Certification Maintenance Requirements are provided in the A330 Airworthiness Limitations Section (ALS) Part 3 approved by EASA;

- 老龄系统维修限制见 EASA 批准的 A330 适航限制部分 (ALS), 第 4 部分 / Limitations applicable to Ageing System Maintenance are provided in the A330 Airworthiness Limitation Section (ALS) Part 4 approved by EASA;
- 燃油适航限制见 EASA 批准的 A330 适航限制部分 (ALS), 第 5 部分 / Fuel Airworthiness Limitations are provided in the A330 Airworthiness Limitations Section (ALS) Part 5 approved by EASA;
- MRB 报告 / Maintenance Review Board report.

4.13 燃油箱可燃性降低系统 (FRS) /Fuel tank flammability Reduction System (FRS)

如果安装了 FRS, 2012 年 1 月 1 日之后首次飞行的飞机的中央油箱必须在生产过程中装配燃油箱可燃性降低系统 (改装 58723)。这个系统应保持安装和工作, 并且只能按照与改装 58723 相关的 MMEL 版本要求, 不工作放行。

If fitted, the centre fuel tank of aircraft which have made their first flight after 1st of January 2012 must be equipped in production with a fuel tank Flammability Reduction System (Modification 58723). This system shall remain installed and operative and can only be dispatched inoperative in accordance with the provisions of the MMEL revision associated with Modification 58723.

第四节 A330-200 货机系列/A330-200 FREIGHTER SERIES

I. 概述/General

1. 飞机/Aeroplane:

Airbus A330-200F

II. 认可审定基础/Validation Basis

1. 认可审定基础/Validation Basis

中国民用航空局的认可审定基础为/ Validation Basis:

1.1 欧洲航空安全局的型号合格审定基础: /CAAC accepts the Certification Basis of EASA as the Validation Basis;

1.2 CAAC 的附加要求/CAAC Additional Requirement :

参见问题纪要 A330-200F CAAC Issue Paper G-1.

(1) All applicable airworthiness directives (ADs) issued by the EASA shall be complied with.

(2) Placard Requirements:

(a) Per CCAR 21.29 (5), all on-board placard and marking for awareness, warning, and note to the passenger; all on-board placard and marking for opening method and location indication of the emergency exit and door to passenger and outside rescuer; and all operational instructions for on-board emergency equipments possible operated by passengers shall be presented in Simplified Chinese at least.

(b) The dimension of the Chinese characters shall comply with the provision of the CCAR 25.811 (e) (4) (iii) and CCAR 25.812 as applicable.

(c) Other placard and marking in Chinese, if any, shall be accepted or approved by the CAAC before or at the moment of the aircraft delivery

(3) Significant Regulatory Differences between CCAR 25R3 (equivalent to FAR 25 Amdt 100) and CS 25 Amdt. 1 related to the significant change of A 330-200F: CCAR 25.307(a), 25.365, 25.562(b), 25.571(b) , 25.571 (e), 25.621, 25.631, 25.1529

For the significant changes the A330-200F is in compliance with CCAR 25R3 (equivalent to

FAR Amdt 100) plus the following FAR Amendments:

- FAR 25.783 at Amdt 114 for the Main Deck Cargo Door

- FAR 25.1439 at Amdt 115

- FAR 25.853(f) at Amdt 116

- FAR 25.1317 at Amdt 122 (Elect to comply)

(4) Per CAAC Airworthiness Directive CAD97-MULT-38, the Quick Access Recorder (QAR) shall

be installed.

- (5) Considering the Chinese operational environment, Refer to CCAR 121.301(d), the altimeter measure unit shall be indicated in meter at least.
- (6) Operational condition for the P.R.C. JET fuel No.3 (GB 6537-2006) shall be defined.

2. EASA 审查参考的申请日期/ Reference Application Date for EASA Certification:

2006 年 8 月 30 日/ 30 August 2006

3. EASA 颁证日期/ EASA Certification Date:

A330-223F: 2010 年 4 月 9 日/09 April 2010
A330-243F: 2010 年 4 月 9 日/09 April 2010

4. EASA 审定基础/EASA Certification Basis:

参见 TCDS EASA A.004 (issue 36, Nov. 22, 2013)/refer TCDS EASA A.004 (issue 36, Nov. 22, 2013)

5. 环境标准/Environmental Standards:

欧洲航空安全局 CS 36 部 噪声要求/EASA CS 36 for noise requirements
欧洲航空安全局 CS 34 部 发动机排泄物和燃油排放/EASA CS 34 for engine emission and fuel venting

6. 双发延程飞行技术条件/ ETOPS Technical Conditions:

对于飞机双发延程运行, 适用的技术条件包含在 AMC 20-6 (AMJ 120-42 / IL 20)和 EASA CRI G-106F 中。

For the Extended Twin-Engine Airplane Operations, the applicable technical conditions are contained in AMC 20-6 (AMJ 120-42 / IL 20) and EASA CRI G-106F.

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

两台涡轮风扇发动机、中-远航程、双过道的大型飞机。 / Two turbo-fan, medium to long range, twin-aisle, large category airplane.

1. A330-200F 装普惠发动机/A330-200F powered by Pratt & Whitney engines

1.1 型号设计定义 / Type Design Definition

A330-223F: 00G000A223F/C00 issue 1

1.2 发动机 / Engines

A330-223F: 两台普惠 4170 涡轮风扇发动机/A330-223F: Two (2) Pratt & Whitney 4170 turbofan engines

1.2.1 发动机限制/Engine Limits:

发动机限制/Engine Limits 数据单/Data Sheet E36NE(FAA) M-IM37 (DGAC)	A330-223F	
	PW4168A-1D (58344 issue 3)	PW4168A ** (MOD 202393)
海平面静推力: Static thrust at sea level: - 起飞 (5 分钟) /take-off (5mn) * - 最大连续/ maximum continuous	68,600 lbs 59,357 lbs	68,600 lbs 59,357 lbs
批准滑油/Approved oils: 见普惠发动机服务通告 N°238, 最新版本/see Pratt & Whitney engine Service Bulletin N°238, latest revision		

*根据法国民用航空局的“发动机数据单”，仅允许在（起飞或复飞期间）发动机失效情况下以起飞推力状态工作 10 分钟。/ 10 minutes at take-off thrust allowed only in case of engine failure (at take-off or during go-around in accordance with DGAC "Fiche de caractéristiques moteur").

发动机其他限制/Other engine limitations: 见相应的发动机型号合格证数据单。/See the relevant Engine Type Certificate Data Sheet.

1.3 燃油/Fuel:

术语/NOMENCLATURE	规范/SPECIFICATION
煤油/Kerosene: 参考 PWA 522 规范(PW SB N° 2016)/ refer to PWA 522 specification (PW SB N° 2016)	JET A, JET A-1, JP5, JP8, N°3 JET fuel(GB6537-2006), TS -1, RT

注/Note: 上述提及的燃油和添加剂同样适用于辅助动力装置/ The above mentioned fuels and additives are also suitable for the APU.

1.4 限制速度/Limit Speeds:

参见经批准的《飞机飞行手册》/Refer to approved Airplane Flight Manual.

1.5 重心范围/Centre of Gravity Range:

参见经批准的《飞机飞行手册》/Refer to approved Airplane Flight Manual.

1.6 最大审定重量/Maximum Certified Weights:

Variant(MOD)	000 Basic(range mode)	001 Payload mode	002 Dynamic payload modification
最大起飞重量 (吨) /MTOW (T)	233	227	233
最大着陆重量(吨)/MLW (T)	182	187	187
最大零燃油重量(吨)/MZFW (T)	173	178	173 到 178 (根据起飞重量) /(depending on TOW)

2. A 330-200F 装罗-罗发动机/A330-200F powered by Rolls Royce engines

2.1 型号设计定义/Type Design Definition:

A330-243F: 00G000A243F/C00 issue 1

2.2 发动机/Engines:

A330-243F: 2 台罗-罗 Trent 772B-60 涡轮风扇发动机/ Two (2) Rolls Royce Trent 772B-60 turbofan engines

2.2.1 发动机限制/Engine Limits:

发动机限制/Engine Limits 数据单/Data Sheet 1050 (CAA) E.042 (EASA)	A330-243F Trent 772B-60
海平面静推力/Static thrust at sea level: - 起飞 (5 分钟) /take-off (5mn) * - 最大连续/maximum continuous	71,100 lbs 63,560 lbs
批准滑油/Approved oils: 见罗-罗服务通告 RB.211-12-F139, 最新版本/see Rolls Royce Service Bulletin RB.211-12-F139, latest revision	

在发动机失效的事件中起飞推力状态工作和相关运行限制可延伸至 10 分钟(见发动机型号合格证数据单中的注)/ The take-off rating and the associated operating limitations may be used for up to 10 minutes in the event of an engine failure (see notes in Engine TCDS).

发动机的其他限制/Other engine limitations: 参见相应的发动机型号合格证数据单/See the relevant Engine Type Certificate Data Sheet.

2.3 燃油/Fuel:

术语/NOMENCLATURE	规范/SPECIFICATION
煤油/KEROSENE: 见罗-罗手册《F-Trent A330》所定义的罗-罗运行指南/refer to RR Operating Instruction defined in RR Manuel F-Trent A330	JET A, JET A-1, JET B, JP 4, JP5, JP8 ,N°3 JET fuel(GB6537-2006), TS-1, RT

注/Note: 上述提及的燃油和添加剂也适用于辅助动力装置/The above mentioned fuels and additives are also suitable for the APU.

2.4 速度限制/Limit Speeds:

参见经批准的《飞机飞行手册》/Refer to approved Airplane Flight Manual.

2.5 重心范围/Centre of Gravity Range:

参见经批准的《飞机飞行手册》/Refer to approved Airplane Flight Manual.

2.6 最大审定重量/Maximum Certified Weights:

Variant (MOD)	000 Basic (range mode)	001 Payload mode	002 Dynamic payload modification
最大起飞重量(吨)/MTOW (T)	233	227	233
最大着陆重量(吨)/MLW (T)	182	187	187
最大零油重量(吨)/MZFW (T)	173	178	173 到 178 (根据起飞重量)/(depending on TOW)

3. 与 A330-200F 系列所有机型都相关的数据 Data pertinent to all A330-200F series:

3.1 燃油量

3.1.1 燃油量 (0.8 千克/升) 进行了 58623 设计更改, 未进行 200281 设计更改/Fuel quantity (0.8 kg/liter) with 58623 and without mod 200281:

油箱/TANK	2 油箱飞机/2-TANK AIRPLANE	
	可用燃油 升 (千克) / Usable fuel liters(kg)	不可用燃油 升 (千克) / Unusable fuel liters(kg)
机翼/WING	91300 (73040)	348 (279)
配平油箱/TRIM TANK	6 230 (4 984)	6 (5)
总计/TOTAL	97530 (78024)	354 (284)

3.1.2 燃油量(0.8 千克/升)进行了 58623/200281 设计更改或未进行 58623 设计更改/Fuel quantity (0.8 kg/liter) with mod 58623/200281 or without 58623:

油箱/TANK	3 油箱飞机/3-TANK AIRPLANE	
	可用燃油 升 (千克) / Usable fuel liters(kg)	不可用燃油 升 (千克) / Unusable fuel liters(kg)
机翼/WING	91300 (73040)	348 (279)
中央翼/CENTER	41560 (33248)	83 (67)
配平油箱/TRIM TANK	6230 (4984)	6 (5)
总计/TOTAL	139 090 (111272)	437 (350)

3.2 最小飞行机组/Minimum Flight Crew:

2 人: 驾驶员和副驾驶/Two (2): Pilot and Co-pilot

3.3 最大座椅布局数量/Maximum Seating Capacity:

驾驶舱后面的押运舱内可以乘坐最多 12 个人。飞机上的乘员不得超过 16 个人。/A maximum of 12 supernumeraries may occupy the courier area located aft of the flight deck compartment. The total occupancy of the airplane is limited to 16 persons.

3.4 货舱装载/Cargo compartment loading:

货舱/Cargo compartment	最大载重(千克)/Maximum load (kg)
前/Forward	18869
后/Aft	15241
后散货舱/Rear (bulk)	3468
主甲板货舱/MDC Compartment	65000 (range mode)

关于集装箱、货盘和相关重量授权的每一位置和装载条件, 见编号为 00G080A0006/C2S 的《重量平衡手册》。/ For the positions and the loading conditions authorized in each position (references of containers, pallets and associated weights), see Weight and Balance Manual ref. 00G080A0006/C2S.

3.5 环境飞行包线/Environmental Flight Envelope:

参见经批准的《飞机飞行手册》。/Refer to approved Airplane Flight Manual.

3.6 其他限制/Other Limitations:

参见经批准的《飞机飞行手册》。/Refer to approved Airplane Flight Manual.

3.7 辅助动力装置/Auxiliary Power Unit (APU):

一台 GARRETT GTCP 331-350C (规范 31-7677A)。/One GARRETT GTCP 331-350C (Specification 31-7677A)

滑油/Oils: 参见适用的经批准手册。/ refer to applicable approved Manuals

3.8 设备/Equipment

应安装适用条款要求的设备。/The equipment required by the applicable requirements shall be installed.

客舱设施、设备和布置应符合下述规范。/Cabin furnishings, equipment and arrangement shall conform to the following specification:

00F252K0005/C01 客舱座椅/for cabin seats

00F252K0006/C01 厨房/for galley

00F252K0020/C01 客舱乘务员座椅/for cabin attendant seats

3.9 全天候能力/All Weather Capabilities

A330-223F:

- 飞机型号设计批准进行III类精度近进和自动着陆。/Aircraft Type Design is approved for Cat 3 precision approach and autoland

A330-243F:

- 飞机型号设计批准进行III类精度近进和自动着陆。/Aircraft Type Design is approved for Cat 3 precision approach and autoland

3.10 机轮和轮胎/Wheels and Tyres

参见空客服务通告 A330-32-3004。该服务通告将进行更新以在货机型服役之前将其纳入。/Refer to Airbus Service Bulletin A330-32-3004. This SB will be updated to include the Freighter version prior to Entry Into service.

3.11 液压/Hydraulics

液体规范: IV型(NSA 307-110)/Fluid specifications: TYPE IV (NSA 307-110).

3.12 维护指南和适航限制/Maintenance Instructions and Airworthiness Limitations

- 适用于安全寿命适航限制项目的限制见 EASA 批准的 A330 适航限制部分 (ALS), 1-2 分部和 1-3 分部。/Limitations applicable to Safe Life Airworthiness Limitation Items are provided in the A330 Airworthiness Limitations Section (ALS) sub-parts 1-2 and 1-3 approved by EASA;
- 适用于损伤容限适航限制项目的限制见 EASA 批准的 A330 适航限制部分 (ALS), 第 2 部分。/Limitations applicable to Damage Tolerant Airworthiness Limitation Items are provided in the A330 Airworthiness Limitations Section (ALS) Part 2 approved by EASA;
- 审定维修要求见 EASA 批准的 A330 适航限制部分 (ALS), 第 3 部分。/Certification

Maintenance Requirements are provided in the A330 Airworthiness Limitations Section (ALS)

Part 3 approved by EASA;

- 燃油适航限制见 EASA 批准的 A330 适航限制部分 (ALS)，第 5 部分。/Fuel Airworthiness Limitations are provided in the A330 Airworthiness Limitations Section (ALS) Part 5 approved by EASA;
- MRB 报告。/Maintenance Review Board Report.

第五节 适用于所有 A330 飞机的进口要求

SECTION 5: Import Requirements PERTINENT TO ALL a330

1. 运行要求 / Operational Requirements

交付中国的每架飞机，必须满足中国民用航空总局的运行要求(例如，标记和标牌的中文标识要求)。the operational requirements of CAAC must be met (e.g Chinese language requirements for markings and placards).

2. 出口适航证 / Export Airworthiness Certificate

欧洲航空安全局将颁发声明飞机符合中国民用航空总局批准的型号设计的单机出口适航证，并处于安全使用状态。/ EASA will issue an individual Export Certificate of Airworthiness stating that the aircraft complies with CAAC approved type design and is in condition for safe operation.

3. 《飞行手册》 / Flight Manual

每架飞机配有法国民用航空局或欧洲航空安全局代表中国民用航空总局批准的《飞行手册》。
/ The Flight Manual for each aircraft will be approved by DGAC or EASA on behalf of CAAC.

4. 认可型别见数据单首页 / Validated Models refer to Page 1 of the VTCDS

注：安装在 A330-202/-302 上的发动机 CF6-80E1A4 尚未被 CAAC 认可

Note: Engine CF6-80E1A4 installed on A330-202/-302 has NOT validated by CAAC

注：安装在 A330-203/-303 上的发动机 CF6-80E1A3 尚未被 CAAC 认可

Note: Engine CF6-80E1A3 installed on A330-203/-303 has NOT validated by CAAC