

型号认可证数据单

THE VALIDATION OF
TYPE CERTIFICATE DATA SHEET

编号/No.: VTC0119A

版次/Revision: 6

型号/Type:

A109E

A119

A109S

AW109SP

AW119MKII

批准人/Approved By:

徐超群

职位/Title:

Director General of CAAC-AAD

日期/Date: 2018-06-11

本数据单是型号认可证（编号：VTC0119A）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: VTC0119A), prescribes condition and limitation under 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:

Leonardo S.p.A.

Helicopters

Piazza Monte Grappa, 4

00195 Roma - Italy

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第 1 部分 型号认可证概述 SECTION 1 GENERAL OF VTC

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

	CAAC 认可数据单号、版次和颁发日期 CAAC Validation Data Sheet Number, Revision and issuance date	EASA 型号合格证数据单号、版次和颁发日期 EASA Type Certificate Data Sheet Number, Revision and issuance date
当前 Current	AW119MKII VTC0119A, REV 6, 2018-06-11 AW109SP A109S A119 A109E	AW119MKII EASA.R.005 Issue 19, Mar 6, 2018 AW109SP EASA.R.005 Issue 15, Jan 23, 2012 A109S EASA.R.005 Issue 19, Mar 6, 2018 A119 EASA.R.005 Issue 7, Jun 11, 2007 A109E EASA.R.005 Issue 7, Jun 11, 2007
历史 History	AW119MKII VTC0119A, REV 5, 2016-07-20 AW109SP A109S A119 A109E	AW119MKII EASA.R.005 Issue 17, Mar 15, 2016 AW109SP EASA.R.005 Issue 15, Jan 23, 2012 A109S EASA.R.005 Issue 7, Jun 11, 2007 A119 EASA.R.005 Issue 7, Jun 11, 2007 A109E EASA.R.005 Issue 7, Jun 11, 2007
	AW119MKII VTC0119A, REV 4, 2015-01-04 AW109SP A109S A119 A109E	AW119MKII EASA.R.005 Issue 14, May 25, 2011 AW109SP EASA.R.005 Issue 15, Jan 23, 2012 A109S EASA.R.005 Issue 7, Jun 11, 2007 A119 EASA.R.005 Issue 7, Jun 11, 2007 A109E EASA.R.005 Issue 7, Jun 11, 2007
	AW109SP VTC0119A, REV 3, 2013-01-04 A109S A119 A109E	AW109SP EASA.R.005 Issue 15, Jan 23, 2012 A109S EASA.R.005 Issue 7, Jun 11, 2007 A119 EASA.R.005 Issue 7, Jun 11, 2007 A109E EASA.R.005 Issue 7, Jun 11, 2007
	A109S VTC0119A, REV 2, 2009-12-15 A119 A109E	A109S EASA.R.005 Issue 7, Jun 11, 2007 A119 EASA.R.005 Issue 7, Jun 11, 2007 A109E EASA.R.005 Issue 7, Jun 11, 2007
	A119 VTC0119A, REV 1, 2006-04-13 A109E	A119 EASA.R.005 Issue 5, Jun 13, 2005 A109E EASA.R.005 Issue 5, Jun 13, 2005
	A109E VTC0119A, REV 1, 2001-07-30	A109E ENAC SO/A 156 rev 21

2. 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

3. 型号合格证/Type Certificate: EASA.R.005

型号合格证持有人/Type Certificate Holder: Leonardo S.p.A.
Helicopters
Piazza Monte Grappa, 4
00195 Roma - Italy

型号合格证持有人记录/ Type Certificate Holder Record:	Costruzioni Aeronautiche Giovanni Agusta 位于意大利 Via Giovanni Agusta, 520 21017 Cascina Costa di Samarate (VA) Italy	至 1988 年 11 月 29 日 Until 29 November 1988
	Agusta S.p.A. 位于意大利 Via Giovanni Agusta 520: 21017 Cascina Costa di Samarate (VA) Italy	自 1988 年 11 月 30 日至 1996 年 12 月 19 日 30 November 1988 – 19 December 1996
	Agusta un'azienda di Finmeccanica S.p.A. 位于意大利 Via Giovanni Agusta 520: 21017 Cascina Costa di Samarate (VA) Italy	自 1996 年 12 月 20 日至 1999 年 12 月 27 日 20 December 1996 – 27 December 1999
	Agusta S.p.A. 位于意大利 Via Giovanni Agusta 520: 21017 Cascina Costa di Samarate (VA) Italy	自 1999 年 12 月 28 日至 2011 年 5 月 31 日 28 December 1999 – 31 May 2011
	AgustaWestland S.p.A 位于意大利 Via Giovanni Agusta, 520 21017 Cascina Costa di Samarate (VA) - Italy	自 2011 年 6 月 1 日至 2014 年 7 月 30 日 1 June 2011 – 30 July 2014
	AgustaWestland S.p.A 位于意大利 Piazza Monte Grappa, 4 00195 Roma - Italy	自 2014 年 7 月 31 日至 2016 年 1 月 12 日 31 July 2014 – 12 Jan 2016
	Finmeccanica S.p.A. Helicopter Division 位于意大利 Piazza Monte Grappa, 4 00195 Roma - Italy	自 2016 年 1 月 13 日至 2016 年 7 月 14 日 13 Jan 2016 – 14 July 2016
	Leonardo S.p.A. Helicopters 位于意大利 Piazza Monte Grappa, 4 00195 Roma - Italy	自 2016 年 7 月 15 日至今 Since 15 July 2016

5. 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航空器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（用英文），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 EASA which states (in English language): This aircraft conforms to its CAAC type design and is in a condition for safe operation .

II. 认可审定基础/Validation Basis

CAAC 的认可审定基础由 EASA 审定基础和 CAAC 的附加技术条件组成

The CAAC validation basis consists of the EASA certification basis and the CAAC additional technical conditions.

CAAC 附加技术条件/CAAC additional technical conditions

1. 中文标记与标牌

Chinese Markings and Placards

依据 CCAR21.29 (五) 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，下类各项应当至少有中文表述：

- (a) 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。
- (b) 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。
- (c) 旅客可能使用的机上所有应急设备的操作、使用说明。

As per CCAR21.29 (5) The manuals, placards, listings and instrument markings required by the applicable airworthiness regulation, noise requirements, are presented in Chinese or English language. Below items must be at least in Chinese language.

- (a) All literal markings and placards on an airplane used for indicating, warning and informing passengers
- (b) All literal markings and placards on an airplane used for indicating passengers or outboard rescue personnel of the location of doors and their means of opening.
- (c) The operation and use instructions of emergency equipment which passengers will use.

2. 3 号喷气燃料。

No.3 Jet Fuel.

燃油应符合“中国国标 3 号喷气燃料-GB6537-2006”的规范要求

Fuel conforming to Specification “PRC National Standard No.3 Jet Fuel -- GB6537-2006.”

第 2 部分 型号数据

SECTION 2 TYPE DATA

I. 型号: A109E

TYPE: A109E

I. 概述/General

- | | |
|---|--|
| 1. 衍生型或型别/Variant or Model | A109E |
| 2. 适航类别
/Airworthiness Category | B 类-等效于 A 类小型旋翼航空器
Small Rotorcraft, Category B and
Equivalent Category A operation |
| 型号合格证持有人/Type Certificate Holder: | AGUSTAWESTLAND S.p.A.
Via Giovanni Agusta 520 - 21017
Cascina Costa di Samarate (Va) – Italy |
| 3. 国家认证日期
National Certification Date: | 31 May 1996 (ENAC T.C.No.SO/A 156) |
| 4. CAAC 型号认可日期
CAAC Validation Date: | 30 July 2001 |

II. 认可审定基础 / Validation Basis:

1. 满足要求的日期/ Reference Date for determining the applicable requirements:

报告 109-01-15, A109 直升机: 满足申请条件

Report 109-01-15 A109 Helicopter: Compliance with Applicable Rules

2. ENAC 许可日期/ ENAC Certification Date: 31May 1996 (ENAC T.C.No.SO/A156)

3. ENAC 型号合格数据单号/ ENAC Type Certificate Data Sheet No.: SO/A156 Rev. 21

4. ENAC 审定基础 / ENAC Certificate Basis:

正常类 / Normal Category

FAR part 27 with Amendment from 1 to 8 included

FAR part 29 Paragraph 29.903 (b), "Category A; engine isolation";

FAR part 27 paragraphs: 27.2 Amendment 28; 27.21 Amendment 21; 27.45 Amendment 22; 27.79 Amendment 21; 27.141 Amendment 21; 27.143 Amendment 21; 27.175 Amendment 21; 27.177 Amendment 21; 27.401 Amendment 27; 27.610 Amendment 21; 27.901 Amendment 23; 27.903 Amendment 23; 27.927 Amendment 23; 27.954 Amendment 23; 27.1091 Amendment 23; 27.1189 Amendment 23; 27.1305 Amendment 23; 27.1321 Amendment 13; 27.1322 Amendment 11; 27.1323 Amendment 13; 27.1325 Amendment 13; 27.1505 Amendment 21; 27.1519 Amendment 21; 27.1521 Amendment 23; 27.1527 Amendment 14; 27.1529 Amendment 18; 27.1549 Amendment 23; 27.1555 Amendment 21; 27.1557 Amendment 11; 27.1581 Amendment 14; 27.1583 Amendment 16; 27.1585 Amendment 21; 27.1587 Amendment 21.

等效 A 类使用依据 JAR OPS 3.480 附加上述条款满足以下相应章节/ For "Equivalent Category A operations as

per JAROPS 3.480 in addition to what listed above is required the compliance with following paragraphs:
 JAR 29.45 (a) (b) (2) Base Amendment, JAR 29.49 (a) Base Amendment, JAR 29.51 Base Amendment, JAR 29.53 Base Amendment, JAR 29.55 Base Amendment, JAR 29.59 Base Amendment, JAR 29.60 Base Amendment, JAR 29.61 Base Amendment, JAR 29.62 Base Amendment, JAR 29.64 Base Amendment, JAR 29.65 (a) Base Amendment, JAR 29.67 (a) Base Amendment, JAR 29.75 Base Amendment, JAR 29.77 Base Amendment, JAR 29.79 Base Amendment, JAR 29.81 Base Amendment, JAR 29.85 Base Amendment, JAR 29.87 (a) Base Amendment, JAR 29.571 Base Amendment (AC Material only: AC29-2A Item 230 paragraph 10), JAR 29.861(a) Base Amendment, JAR 29.901(c) Base Amendment, JAR 29.903 (b)(c) (e) Base Amendment, JAR 29.908 (a) Base Amendment, JAR 29.953 (a) Base Amendment, JAR 29.1027 (a) Base Amendment, JAR 29.1045 (a)(1), (b) (c) (d) (f) Base Amendment, JAR 29.1047 (a) Base Amendment, JAR 29.1181 (a) Base Amendment, JAR 29.1187 (e) Base Amendment, JAR 29.1189 (c) Base Amendment, JAR 29.1191 (a)(1) Base Amendment, JAR 29.1193 (e) Base Amendment, JAR 29.1195 (a) (d) Base Amendment, JAR 29.1197 Base Amendment, JAR 29.1199 Base Amendment, JAR 29.1201 Base Amendment, JAR 29.1305 (a)(6) (b) Base Amendment, JAR 29.1309 (b) (2) (i) (d) Base Amendment, JAR 29.1323 (c)(1) Base Amendment, JAR 29.1331 (b) Base Amendment, JAR 29.1351(d) (2) Base Amendment, JAR 29.1587 (a) Base Amendment.

针对安装应急浮筒审定/ For Emergency floats certification:

FAR 27.563 Amendment 26, FAR 27.801 Amendment 11, FAR 27.807 Amendment 26, FAR 27.1411 Amendment 11, FAR 27.1415 Amendment 11.

For the installation 109-0810-22 (all dashes approved) required for IFR (IMC) operations, with one or two pilots during day and night: FAR 27 App. B Amendment 19, FAR 27.672 Amendment 21, FAR 27.1309 Amendment 21, FAR 27.1329 Amendment 21, FAR 27.1335 Amendment 13

针对安装滑橇式起落架的 / For the A109E with Skid Landing Gear Installation p/n 109-0812-57-101

In addition to what listed above is required the compliance with following paragraphs:

FAR 27.1 Amendment 37; FAR 27.25 Amendment 36; FAR 27.29 Amendment 14; FAR 27.33 Amendment 14; FAR 27.6 Amendment 33; FAR 27.67 Amendment 23; FAR 27.75 Amendment 14; FAR 27.151 Amendment 21; FAR 27.161 Amendment 21; FAR 27.173 Amendment 21; FAR 27.175 Amendment 34; FAR 27.307 Amendment 26; FAR 27.321 Amendment 11; FAR 27.337 Amendment 26; FAR 27.339 Amendment 11; FAR 27.351 Amendment 34; FAR 27.391 Amendment 34; FAR 27.395 Amendment 26; FAR 27.397 b) Amendment 11; FAR 27.501 Amendment 26; FAR 27.571 Amendment 26; FAR 27.602 dated 24/08/99; FAR 27.603 Amendment 16; FAR 27.605 Amendment 16; FAR 27.610 Amendment 37; FAR 27.613 Amendment 26; FAR 27.621 Amendment 34; FAR 27.625 Amendment 35; FAR 27.629 Amendment 26; FAR 27.663 Amendment 26; FAR 27.675 Amendment 16; FAR 27.685 Amendment 26; FAR 27.727 Amendment 26; FAR 27.863 Amendment 16; FAR 27.917 Amendment 11; FAR 27.923 Amendment 29; FAR 27.1141 Amendment 33; FAR 27.1151 Amendment 33; FAR 27.1163 Amendment 23; FAR 27.1185 Amendment 37; FAR 27.1187 Amendment 37; FAR 27.1329 Amendment 35; FAR 27.1365 Amendment 35; FAR 27.1501 Amendment 14; FAR 25.1525 Amendment 21.

5. 适航要求/Airworthiness Requirements:

FAR 27 Amendment as defined above

6. 专用技术条件 / Special Conditions:

N° 27-54-EU-17 dated 26/06/73 forwarded with sheet N°109.489/T dated 03/07/73;

N° 94/253/MAV dated 04/05/1994 for HIRF;

N° 00/14/9/MAE dated 11/05/2000 ENAC D-1 issue 2 for cargo hooks P/N 109-0810-31 and P/N 109-0811-75

as written in the CRI D-1.

7. 继承及豁免 / Reversion and Exemptions:

Para 27.1(a) Base Amendment(max weight 6000 lb) for normal category and for restricted category, see Note 7

8. 等效安全/ Equivalent Safety Findings:

Shut off Valve, instead of FAR 27.1189

9. 环境保护标准 / Environmental Protection Standards

噪声: 国际民航组织附件 16, 卷 I, 第 7 修正案, 芝加哥公约第 II 部分, 第 8 章。

Noise: Chapter 8 of ICAO Annex 16, Volume I, amendment 7, Part II to the Chicago Convention

排放: 国际民航组织附件 16, 1993 年版, 卷 II, 第 2 章。

Emissions: Chapter 2 (fuel venting) of ICAO Annex 16, Ed 1993, Volume II, Part II to the Chicago Convention.

III. 技术特征和使用限制/Technical Characteristics and Operational Limitations

1. 型号设计定义

参考图纸 109-9000-01-151/

Type Design Definition:

Refer to the drawing 109-9000-01-151

2. 描述

Description

B 类, 等效 A 类使用, 轻型双发直升机, 四片复合材料桨叶, (具有弹性轴承) 铰接式主旋翼, 2 片跷跷板式尾桨, 前三点可收放式起落架或装有组件 p/n 109-0812-57-101 的滑橇式起落架, 1 或 2 名驾驶员, 6 或 7 名乘客的座舱布局。

Cat B. and "Equivalent Cat A" operations. Light twin-engine aircraft, four (4) composite MR blades, articulated (with elastomeric bearings) main rotor, twin (2) blades teetering tail rotor, tricycle retractable landing gear or skid landing gear for helicopters equipped with kit p/n 109-0812-57-101, one (1) pilot and seven (7) passengers capacity.

A109E 与 A109K2 不同点在于安装了由 FADEC 控制的 Pratt & Whitney Canada PW206C 或 Turbomeca Arrius 2K1 涡轴发动机, 座舱配装了综合显示系统(IDS)

The A109E differs from A109K2 model for the installation of Pratt & Whitney Canada PW206C or Turbomeca Arrius2K1 turboshaft engines controlled by FADEC; and for the new cockpit with Integrated Display System (IDS).

3. 设备

Equipment

依据适航规范 (见审定基础) 要求的基本设备, 为适航许可须安装在直升机上。另外以下设备须安装:

Basic equipment required by the Airworthiness Specifications (see Certification Basis) shall be installed on the helicopter for Airworthiness Certificate release. Besides are required the following equipment.

与外部温度有关的数据, 从 IDS 和件号为 P/N E22307-2-4 外部探头;

Data relevant to outside temperature provided from IDS and external probe identified by P/N E22307-2-4;

依据图纸 N° 109-0753-28 安装的低旋翼转速和发动机故障警告系统。

Low rotor rpm and engine failure warning according to drawing N° 109-0753-28.

针对等效 A 类操作要求, 依据 JAR OPS3.480 安装 P/N 109-0811-39(所有系列均认可)。

For "Equivalent Category A" operations as per JAR OPS 3.480, install P/N 109-0811-39 (all dashes approved)

针对仪表飞行规则要求, 为满足一侧或双侧昼/夜飞行员仪表飞行规则, 须加装组件 P/N 109-0810-22(所有系列) 适用于 n.c.11001 及以后, 对于选装滑撬式起落架的 A109E, 须加装滑撬式起落架选装件 P/N 109-0570-69-103、主旋翼 P/N 109-0112-02-101 和由 FADEC 控制的 Pratt Whitney Canada PW206C 发动机。

For IFR (IMC) operations with one or two pilots during day and night, install IFR P/N109-0810-22(all dashes) applicable to n.c.11001 and subsequent. For the A109E with skid Landing Gear install: skid landing gear P/N109-0570-69-103, main rotor P/N 109-0112-02-101 and engines Pratt & Whitney Canada PW206C controlled by FADEC

许可的强制和选装设备清单见报告 109-07-16 "Elenco degli equipaggiamenti".

Approved mandatory and optional equipment are listed in the Report 109-07-16 "Elenco degli equipaggiamenti"

亦可参考飞行手册设备清单。

Refer also to the Equipment list in the RFM.

5. 几何尺寸 Dimensions

机身/Fuselage		长/ Length	11450mm
		宽/Width	2880mm
		高/Height	3500mm
主旋翼	5 片桨叶	直径	11000mm
Main Rotor	5 blades	Diameter	11000mm
尾桨	2 片桨叶	直径	2000mm
Tail Rotor	2 blades	Diameter	2000mm

6. 发动机 Engine

2 台加拿大普惠 2 Pratt Whitney Canada

由 FADEC 控制的 PW206C controlled by FADEC

发动机 TCDS 设计声明/State of Design Engine TCDS No. TC E-23 issue 21 dated 16/03/05 issued by DOT Canada

EASA 发动机 TCDS/EASA Engine TCDS No:NA

2 台透博梅卡公司/2 Turbomeca

由 FADEC 控制的 Arrius 2K1 controlled by FADEC

发动机 TCDS 设计声明/State of Design Engine TCDS No. DGAC n. M20 of 16 October 2000

EASA 发动机 TCDS/EASA Engine TCDS No:NA

5.1 安装的发动机制限制 Installed Engine Limits

PW206C

额定功率 RATING		
双发工作 AEO	起飞功率(5 分钟) Take-off 5 min	450SHP, 100% (Nr 100%)
	最大连续 Max. Continuous	450SHP, 100% (Nr 100%)
单发失效 OEI	最大连续 Max. Continuous	640SHP, 142% (Nr 100%)
	2.5 分钟 2.5 min	560 shp, 124% (Nr 100%)

Arrius 2K1

额定功率 RATING		
双发工作 AEO	起飞功率(5 分钟) Take-off 5 min	450SHP, 100% (Nr 100%)
	最大连续 Max. Continuous	450SHP, 100% (Nr 100%)
单发失效 OEI	最大连续 Max. Continuous	640SHP, 142% (Nr 100%)
	2.5 分钟 2.5 min	560 shp, 124% (Nr 100%)

参考 EASA 批准的飞行手册-第一部分在 TOT, N1 上的附加详细信息。

See EASA approved Rotorcraft Flight Manual for TOT, N1 and Transient

5.2 瞬时扭矩限制 / Transmission Torque Limits

参考 EASA 批准的飞行手册-第一部分附加详细信息。

See EASA approved Rotorcraft Flight Manual section 1, for additional detailed information

6. 液体(燃油/滑油/其它)

Fluids (Fuel/ Oil/ Additives)

6.1 燃油

Fuel

PW206C

适用于所有温度情况下/ For all temperatures:
ASTM D1655 Jet A; ASTM D-1655 Jet A-1; ASTM
D-1655 Jet A-2; Jet B

Arrius 2K1

适用于所有温度情况下/ For all temperatures:
ASTM D-1655 Jet A; ASTM D-1655 Jet A-1;

军标（仅供参考） Military Specifications （For

reference Only)

MIL-T-5624 JP-4, JP-5; MIL-T-83133 Type JP-8;

详细信息参考 EASA 批准的飞行手册第一部分

For detailed information refer to EASA approved
RFM-Section 1.

6.2 滑油 Oil

PW206C

发动机/Engines: MIL-PRF-23699F (MIL-L-23699), or
PWA-521

Arrius 2K1

发动机/Engines: MIL-PRF-23699 (MIL-L-23699), or
MIL-PRF-7808 (MIL-L-7808)

传动系统 Transmission: DOD-L-85734 or
MIL-PRF-23699(MIL-L-23699)

详细信息参考 EASA 批准的飞行手册第一部分

For detailed information refer to EASA approved
RFM-Section 1

7. 液体容量

Fluid capacities

7.1 燃油/Fuel

可用燃油/Total usable: 595 l (157 US Gal)

安装辅助邮箱状态的不可用燃油量见飞行手册

See Rotorcraft Flight Manual for unusable fuel capacity when installed
auxiliary tanks.

7.2 滑油/Oil

PW206C: 每台发动机/Engine: 5.12l (1.35 USGal) each engine

Arrius 2K1: 每台发动机/Engine: 4.31l (1.13 USGal) each engine

(不可放滑油见飞行手册) See Flight Manual for non-drainable lubricant

传动系统/Transmission: 11 l (2,9 USGal)

(不可放滑油见飞行手册) See Rotorcraft Flight Manual for non-drainable
lubricant

8 空速限制

Airspeed limits:

有动力时: 168 Kts IAS Power On

有动力时: 128 Kts IAS Power Off

详细信息参考 EASA 批准的飞行手册第一部分

For detailed information refer to EASA approved
RFM-Section 1.

9. 桨速限制

Rotor Speed Limits

全发工作功率/Power On AEO		
状态/Condition	(RPM)	(%)
最大/Maximum	394	102
最小/Minimum	380	99
单发失效功率/Power On OEI		
状态/Condition	(RPM)	(%)
最大/Maximum	394	102
最小/Minimum	380	99
无动力/Power Off		
状态/Condition	(RPM)	(%)
最大/Maximum	422	110
最小/Minimum	346	90

详细信息参考 EASA 批准的飞行手册第一部分

For detailed information refer to EASA approved RFM-Section 1.

10. 最大使用升限及温度

Maximum Operating Altitude and Temperature

10.1 高度/Altitude

起飞和着陆/Take-off and landing 4572m (15000 ft) Hp

最大实用升限/Maximum Operating Altitude 6095 m (20000 ft) Hp

针对安装滑橇式起落架组件 p/n 109-0812-57-101

For helicopter equipped with skid landing gear kit p/n 109-0812-57-101

起飞和着陆/Take-off and landing 914m (3000ft)

最大实用升限/Maximum Operating Altitude 4572m (15000 ft) Hp

10.2 温度/Temperature

附加详细信息参见 EASA 批准的飞行手册-第一部分, 温度限制

See EASA approved Rotorcraft Flight Manual-Section 1 for temperature limitations.

11. 使用限制 Operating Limitations:

11.1

概述: B 类和"等效于 A 类"使用 – 无结冰条件下, 昼夜间目视和仪表飞行

General: Cat B and "Equivalent Cat A" operations
VFR/IFR day and night operations in non-icing conditions

11.2

起飞着陆附加限制

附加详细信息参见 EASA 批准的飞行手册-第一部分,
Additional limitations for take-off and landing: See
EASA approved Rotorcraft Flight Manual-Section 1
for temperature limitations.

12. 最大重量 Maximum Certified

起飞和着陆 2850 kg (见注释 7)

Weight	Take-off and Landing 2850 kg (see Note 7)	
13. 重心范围 Centre of Gravity Range:	参考 EASA 批准的飞行手册的重心包线 Refer to EASA approved RFM for CG Envelope	
14. 基准 Datum:	纵向基准线原点(SAT 0)位于前支撑点前 1835mm(72 in)处 Longitudinal datum line (STA 0) is located at 1835mm(72 in) forward of the front jack point. 侧向基准线位于两侧主支撑点+/-450 mm (+/-18 in)中间, 与纵向基准线相交。 Lateral datum line (BL 0) is located at +/-450 mm (+/-18 in) inboard of each of the two main jack points and it coincides with the helicopter longitudinal plane of symmetry. 详见飞行手册-第六部分 For detailed information refer to RFM-Section 6.	
15. 水平测量措施 Levelling Means:	水平平台放置于客舱顶部右侧参考支柱, 详见飞行手册-第六部分 The spirit level plate is to be placed on cabin roof right stanchion reference. For detailed information refer to RFM-Section 6.	
16. 最小飞行机组 Minimum Flight Crew:	右侧单驾驶员可操纵直升机 1 pilot, who shall operate the helicopter from the cockpit right seat.	
17. 最大座位数 /Maximum Passenger Seating Capacity:	7 人/ (seven) passengers	
18. 乘客应急出口 Passenger Emergency Exit:	两个, 客舱每侧一个 2 (two), one on each side of the passengers cabin	
19. 最大行李/货物装载 Maximum Baggage/Cargo Loads:	位置/Location	最大载荷/装载
	Max Load/Loading	
	行李舱/ Baggage compartments 在 STA 5300mm (209in) 处 150kg(330lbs)或根据飞行手册第六部分载荷分布定义。 150kg (330lbs) at STA 5300mm (209in) or according to load distribution defined in the RFM-Section 6.	
	货舱地板最大载荷	500 kg/m ² (102 lb/ft ²)
	Maximum load on cargo compartment floor: 500 kg/m ² (102 lb/ft ²)	
	最大货舱安全挂点载荷为 91kg(200 lbs)。	

Maximum load on securing points of cargo compartment: 91Kg (200 lbs).

客舱/Cabin compartment 不适用 NA

20. 桨叶操纵移动范围

Rotor Blade control movement

主旋翼（总距）/Main Rotor (Collective) min -2° / max +12°

尾旋翼/Tail RH pedal -7° LH pedal +24 °

操纵系统详细参数见 A109E 维护手册

For rigging information refer to the A109E Maintenance Manual

21. 辅助动力装置

Auxiliary Power Unit (APU):

不适用/ N.A.

22. 寿命件

Life-limited parts:

参考 EASA 批准维护手册第 4 章

Refer to EASA Approved Chapter 4 of the Maintenance Manual

25. 机轮和轮胎

Wheels and Tyres:

无内胎 360x135-6 tubeless

除安装滑橇式起落架的 A109E

IV. 使用和维护技术资料/Operating and Service Instructions

1. 飞行手册

Flight Manual

针对安装 PW206C 发动机的 A109E 直升机飞行手册: ENAC 以信件 n° 97/3147/MAE, 1997 年 7 月 3 日, 批准了该飞行手册。

For helicopters equipped with PW206C: RFM ENAC approved with letter n° 97/3147/MAE, dated 3.7.1997.

针对安装 Arrius 2K1 发动机的 A109E 直升机飞行手册: ENAC 以信件 n° 03/171337/SPA, 1997 年 7 月 3 日, 批准了该飞行手册。关系到第 5 部分 “选装设备补充说明” 109-08-063, EASA 以 n° 2004-6322 在 2004 年 6 月 17 日批准

For helicopters equipped with Arrius 2K1: RFM ENAC approved with letter n° 03/171337/SPA, dated 3.7.1997. and relevant section 5 “Optional Equipment Supplements” 109-08-063 EASA approved n° 2004-6322 dated 17-06-2004

针对安装滑橇式起落架组件 p/n 109-0812-57-101 的飞行手册 109-08-055: ENAC 以信件 n° 120350/SICU, 2001 年 6 月 1 日批准。关系到第 5 部分 “选装设备补充部分” 109-08-058, EASA 以 n° 2004-6322 在 2004 年 6 月 17 日批准

For helicopters equipped with Arrius 2K1: RFM ENAC approved with letter n° 03/171337/SPA, dated 3.7.1997. and relevant section 5 “Optional Equipment Supplements” 109-08-063 EASA approved n° 2004-6322 dated 17-06-2004

- | | |
|---|--|
| 2. 维修手册
Maintenance Manual | 参考“A109E 维护手册
Refer to A109E Maintenance Manual |
| 3. 服务信函和服务通告
Service Letters and Service Bulletins | 由 AgustaWestland 发布。
As published by AgustaWestland |
| 4. 必备设备
Required Equipment: | 针对批准的强制和备选设备，参考上面 III.3 提到 EASA 批准的飞行手册。
Refer to Point III.3 above and EASA approved Rotorcraft Flight Manual for the approved mandatory and optional equipments |

注/Note

1. 符合的系列号/Eligible serial numbers
 组装图纸号 109-9000-09-01-151 从 s/n 11001 到 s/n 11999
 Assembly Drawing 109-9000-09-01-151 from s/n 11001 to s/n 11999.

2. 标准 C.N. 获得正常类增重 (2850 公斤) / Weight Increase (2850) in normal category for standard C.N. release
 A109K2 和 A109E: 通过满足 1993 年 3 月 4 日信件 93/09 (对 A109K2), 1997 年 6 月 2 日信件 97/3.335 (对 A109E) 的要求: 依据 1996 年 5 月 4 日信件 96/1429/MAE 许可, 作为审定流程的结论及相关的飞行手册版次, 已经同意对 27.1 (a) 条款的豁免, 因此标准 C.N. 可获得正常类 2850kg 的最大起飞重量 (A109K2, 1997 年 7 月 31 日获得批准信件 97/3166/MAE, A109E 1997 年 7 月 30 日获得批准信件 97/3147/MAE)
 Following the request forwarded with letter 93/09 dated 04/03/1993 (for A109K2) and 97/3.335 dated 2/6/1997 (for A109E); following the approval expressed with letter 96/1429/MAE dated 05/04/1996, as conclusion of certification procedures and relevant RFM revisions, it has been granted the exemption to paragraph 27.1(a) therefore the standard C.N. can be obtained in normal category with takeoff maximum weight of 2850kg (approved letters 97/3166/MAE dated 31/07/97 for A109K2 and 97/3147/MAE dated 30/7/97 for A109E)

3. 中文标牌和标识包含在图纸 109-0812-66, 版本 C 或 CAAC 批准的更新版本中。
 Chinese Placards and markings are included in Drawing 109-0812-66, Revision C or later revisions CAAC approved

II. 型号: A119

TYPE NUMBER: A119

I. 总则/General

- | | |
|--|--|
| 1. 衍生型或型别/ Variant or Model | A119 |
| 适航类别/ Airworthiness Category | B 类-等效于 A 类小型旋翼航空器/Small Rotorcraft – Cat. B and Equivalnet Category A Operation |
| 型号合格证持有人/ Type Certificate Holder: | AGUSTAWESTLAND S.p.A. Via Giovanni Agusta 520 – 21017 Cascina Costa di Samarate (Va) – Italy |
| 2. 生产批准机构/ Production Organization Approval | 依据批准的许可证 IT.21G.0007, ENAC(Ente Nazionale per l'Aviazione Civil certifies) 批准 AGUSTAWESTLAND 为批准的生产机构
Ente Nazionale per l'Aviazione Civil certifies AGUSTAWESTLAND s.p.A as a PRODUCTION ORGANIZATION accord to APPROVAL CERTIFICATE IT.21G.0007 |
| 3. 国家认证日期/ National Certification Date: | 30 December 1999 (ENAC T.C. No.SO/A 156). |
| 4. CAAC 型号认可日期/ CAAC Validation Date: | 13 April 2006 |

II. 认可审定基础 / Validation Basis:

1. 满足要求的日期/ **Reference Date for determining the applicable requirements:**
报告 109-01-15, A109-01-15, A109 直升机: 符合相应规章
Report 109-01-15, A109 Helicopter: Compliance with Aplicable Rules
 2. ENAC 许可日期/ **ENAC Certification Date:** 30 December 1999
 3. ENAC 型号合格证数据单号/ **ENAC Type Certificate Data Sheet No.:** SO/A156 Rev.21
 - 4.EASA 审定基础 / **EASA Certificate Basis:**
JAR 27 Small Rotorcraft
For significant changes JAR 27 Small Rotorcraft issue 1 dated 6 September 1993 except the following paragraphs JAR27.561 replaced by FAR 27.561 Base Amendment; JAR27.785 replaced by FAR 27.2 Amendment 28 and FAR 27.785 Base Amendment; JAR27.952, JAR27.562; JAR 27.963 replaced by FAR 27.963 Amendment 23;JAR; JAR 27.971 replaced by FAR 27.971 Base Amendment; JAR 27.973 replaced by FAR 27.973 Base Amendment; Jar27.865 Amendment 2 dated 1 may 2001 for Cargo Hook and rescue hoist.
 - 5.适航要求/**Airworthiness Requirements:**
JAR27 修正案定义如上/JAR27 Amdt as defined above
 6. 专用技术条件/**Special Conditions**
依据 JAA 内部文件 n° INT/POL/27&29/1 执行 HIRF
HIRF Protection according to JAA Interim Policy n° INT/POL/27&29/1
 7. 继承及豁免/**Reversion and Exemptions:** 不适用/N.A..
 8. 等效安全/**Equivalent Safety** JAR 27.1322; JAR27.1509(a) see CRI A1 for details on certification basis..
- Findings:**

9. 环境标准包括噪声/

**Environmental Standards
including Noise:**

ICAO Annex 16, Chapter 11, Vol I, third edition 1993

Emissions : ICAO Annex 16, Vol II, Ed 1993 (see note 5)

III. 技术特征和使用限制/Technical Characteristics and Operational Limitations

1. 型号设计定义/Type Design Definition:

参考报告 109-00-155 Rev. B 和 and subsequent

Refer to Report 109-00-155 Rev. B and subsequent

2. 描述/Description

B 类单发直升机, 4 片复合材料主旋翼桨叶, 具有柔性轴承的铰接式主旋翼, 两片跷跷板式尾桨, 滑撬式起落架, 一/二 名驾驶员和六/七名乘客的座舱布局。A119 与 A109E 不同点在于安装了一台由 EECU 控制的 Pratt & Whitney Canada PT6B-37207C 涡轮发动机。

Cat. B Single engine aircraft, four (4) composite MR blades, articulated (with elastomeric bearings) main rotor, twin (2) blades teetering tail rotor, skid landing gears, one (1) pilot and seven(7) passengers capacity.

The A119 differs from A109E model for the installation of a single Pratt & Whitney Canada PT6B-37A turbo engine, controlled by Electronic Engine Control (EEC).

3. 设备/Equipment

依据适航规范(见审定基础)要求的基本设备, 为适航许可须按安装在直升机上。还需要以下设备安装

Basic equipment required by the Airworthiness Specifications (see Certification Basis) shall be installed on the helicopter for the Airworthiness Certificate release. Besides are required the following equipments.

天气温度指示器 P/N MS28028-1

OAI indicateor P/N MS28028-1

旋翼低转速和发动机故障告警系统, 依据图纸 N° 109-0729-21 和 N° 109-0729-22

Low rotor rpm and engine failure warning syster according to drawing N ° 109-0729-21and N° 109-0729-22.

针对装有 IDS 的机型, 109-900-66 替代 109-0729-21。

For helicopters equipped with IDS, the 109-0729-21 is replaced by109-900-66.

许可强制和被选设备清单见报告 109-07-19 “Elenco degli equipaggiamenti”.

Approved mandatory and ptional equipments are listed in the Report 109-07-19 “Elenco degli equipaggiamenti”

可参考飞行手册设备清单。

Refer aso to the ENAC approved Equipment list in RFM

4. 几何尺寸/Dimensions

机身/Fuselage	长/ Length	m	11,173
	宽/Width	m	2.880
	高/Height	m	3,773

主旋翼/ Main Rotor 4 片桨叶-直径 4 blades-Diameter m 10,830

尾桨/ Tail Rotor type 2 片桨叶-直径 2 blades-Diameter m 2,000

(金属尾桨叶 with metallic tail rotor blades)
2 片桨叶-直径 2 blades-Diameter m 1,940
(复合材料尾桨叶 with composite tail rotor blades)

5. 发动机/Engines

加拿大普惠公司 Pratt & Whitney Canada
PT6B-37A 按照安装规范 No. 1017 (不装 IDS 的直升机)
Build Specification No. 1017(for helicopters not equipped with IDS)
或按照安装规范 No. 1142 (装 IDS 的直升机)
Build Specification No. 1142(for helicopters equipped with IDS)
发动机 TCDS 设计声明/State of Design Engine TCDS No:
Transport Canada Approval E-20 of 23 July 1999
EASA 发动机/EASA Engin TCDS No: NA

5.1 安装的发动机限制/Installed Engine Limits:

起飞功率(5 分钟)	900SHP, 108,5% (Nr 100%)
最大连续	830SHP, 100% (Nr 100%)
对与 ITT, N1 及瞬态值, 参考 EASA 批准的飞行手册	
Take Off (5 min)	900SHP, 108,5% (Nr 100%)
Maximum Continuous	830SHP, 100% (Nr 100%)
See EASA approved Rotorcraft Flight Manual for ITT, N1 and transient	

6. 液体/Fluids (燃油/滑油/附加/Fuel/ Oil/ Additives)

6.1 燃油/Fuel

适用于所有温度情况下/ For all temperatures:
ASTM D1655 Jet A; ASTM D-1655 Jet A-1; ASTM D-1655 Jet A-2;
MIL-T-5624 JP-5A; MIL-T-83133 Type JP-8;
详细信息参考 EASA 批准的飞行手册第一部分
For detailed information refer to EASA approved RFM-Section 1.

6.2 滑油/Oil

发动机/Engines: MIL-PRF-23699F (MIL-L-23699), or PWA-521
传动系统 Transmission: DOD-L-85734 or MIL-PRF-23699(MIL-L-23699)

详细信息参考 EASA 批准的飞行手册第一部分
For detailed information refer to EASA approved RFM-Section 1

7. 液体容量/Fluid capacities

7.1 燃油/Fuel

可用燃油/Total usable: 595 l (157 US Gal)

不可用燃油和安装辅助邮箱状态的燃油量见飞行手册
See Flight Manual for unusable fuel and for fuel capacity when installed auxiliary tanks.

不可用燃油见旋翼飞行手册

See Rotorcraft Flight Manual for unsuable fuel.

7.2 滑油/Oil

发动机/Engine: 10,45l (2,76USGal)

(不可放滑油见飞行手册) See Flight Manual for non-drainable lubricant

传动系统/Transmission: 10,3 l (2,7 USGal)

(不可放滑油见飞行手册) See Rotorcraft Flight Manual for non-drainable lubricant

8 空速限制/Airspeed limits:

152 Kts IAS

附加详细信息参见 ENCA 批准的飞行手册-第一部分

For detailed information see Flight Manual-Section 1 approved by ENCA.

9. 旋翼转速限制/ Rotor Speed Limits

有功率状态/Power on: 最大 Max 101% (388rpm)
103%(103%) with torque < 50%

最小 Min 95% (365rpm)

无动力状态/Power off: 最大 Max 110% (422rpm)
最小 Min 90% (346rpm)

附加详细信息参见 EASA 批准的飞行手册-第一部分

For detailed information see EASA approved Rotorcraft Flight Manual - Section 1.

10. 最大适用升限及温度/Maximum Operating Altitude and Temperature

最大适用升限/Maximum Operating Altitude 4572m (15000 ft)

附加详细信息参见 EASA 批准的飞行手册-第一部分, 温度限制

See EASA approved Rotorcraft Flight Manual-Section 1 for temperature limitations.

11. 使用限制/Operating Limitations:

11.1 一般/General B 类, 无结冰条件下, 白天和夜间目视飞行, (同样参考 EASA 批准的 RFM 1
Cat. B - VFR day and night, non-icing conditions

11.2 起飞和着陆附加限制/ Additional limitations for take-off and landing

参考 EASA 批准的飞行手册-第一部分

See EASA approved Rotorcraft Flight Manual-Section 1.

12. 最大重量/Maximum Certified Weight

起飞和着陆/take off and landing 2720kg (6000 lb)

13. 重心范围/Centre of Gravity Range:

参考飞行手册重心包线。

See Rotorcraft Flight Manual CG envelope

14. 基准/Datum:

纵向基准线原点(SAT 0)位于前支撑点前 1785mm(70,3 in)处
 Longitudinal datum line (STA 0) is located at 1785mm(70,3 in) forward of the front jack point.
 侧向基准线位于两侧主支撑点 ± 450 mm (± 18 in)中间, 与纵向基准线相交。
 Lateral datum line (BL 0) is located at ± 450 mm (± 18 in) inboard of each of the two main jack points and it coincides with the helicopter longitudinal plane of symmetry.
 详见飞行手册-第六部分
 For detailed information refer to RFM-Section 6.

15. 水平方法/Levelling Means: 从顶棚参考点悬挂铅垂线到客舱地板制定位置, 详见飞行手册-第六部分
 Plumb line from ceiling reference point to the index plate located on passengers compartment floor. For detailed information refer to RFM-Section 6.

16. 最小飞行机组/Minimum Flight Crew:

右侧单驾驶员可操纵直升机

1 pilot, who shall operate the helicopter from the cockpit right seat.

17.最大乘客座位数/Maximum Passenger Seating Capacity:

7 人/ (seven) passengers

18. 乘客应急出口/Passenger Emergency Exit:

两个, 客舱每侧一个 2 (two), one on each side of the passengers cabin

19. 最大行李/货物装载/Maximum Baggage/Cargo Loads:

位置/Location 最大载荷/装载 Max Load/Loading

行李舱/ Baggage compartments 在 STA 4880mm (192in 处)150kg(330lbs)或根据飞行手册第六部分载荷分布定义。

150kg (330lbs) at STA 4880mm (192in) or according to load distribution defined in the RFM-Section 6.

货舱地板最大载荷 500 kg/m² (102 lb/ft²)

Maximum load on cargo compartment floor: 500 kg/m² (102 lb/ft²)

最大货舱安全挂点载荷为 91kg(200 lbs)。

Maximum load on securing points of cargo compartment: 91Kg (200 lbs).

客舱/Cabin compartment 不适用 NA

20. 桨叶控制移动范围/Rotor Blade control movement

主旋翼 (总距) /Main Rotor (Collective) min -2° / max +12°

尾/Tail RH pedal -7° /LH pedal +24° (金属尾桨 with metallic tail rotor blades)

RH pedal -8° /LH pedal +24° (复合材料尾桨 with composite tail rotor blades)

操纵系统详细参数见 A119 维护手册

For rigging information refer to the A119 Maintenance Manual

21. 辅助动力装置/Auxiliary Power Unit (APU): 不适用/ N.A.

22. 寿命件/Life-limited parts:

参考 EASA 批准维护手册第 4 章

Refer to EASA Approved Chapter 4 of the Maintenance Manual

23. 机轮和轮胎/Wheels and Tyres: 不适用/ N.A.

IV. 使用和操作规范/Operating and Service Instructions

1. 飞行手册文件号/ Rotorcraft Flight Manual Document No:

针对安装标准设备的直升机: ENAC 以信件 n° 99/4812/MAE, 1999 年 12 月 30 日, 批准了相应的飞行手册。

For aircraft equipped with standard instrument: RFM ENAC approved with letter n° 99/4812/MAE, dated 30.12.1999.

针对安装综合显示器的直升机: ENAC 以信件 n° 03/171218/SPA, 2003 年 5 月 23 日, 批准了相应的飞行手册。

For aircraft equipped with Integrated Display System RFM n° 109G0040A006, ENAC approved with letter n° 03/171218/SPA, dated 23.5.2003.

2. 维修手册文件号/Maintenance Manual, Document No:

A119/AW119 MKII-MPM Issue 1 Rev.0 Maintenance Planning Manual (维修大纲)

A119/AW119 MKII-MM Issue 1 Rev.0 Maintenance Manual 维修手册

A119/AW119 MKII-WDM Issue 1 Rev.0 Wiring Diagram Manual 布线手册

And subsequent approved (when required) revisions.

及后续经批准的 (如需要) 相应版次。

3. 服务信件和服务通告/ Service Letters and Service Bulletins: As published by AgustaWestland

4. 必备设备/Required Equipment

针对批准的强制和备选设备, 参考上面 III.3 提到 EASA 批准的飞行手册。

Refer to Point III.3 above and EASA approved Rotorcraft Flight Manual for the approved mandatory and optional equipments

注/Notes

1 符合的系列号 组装图纸号 119-9000-01-107 从 s/n 14003 到 s/n 14700

Eligible serial numbers :Assembly Drawing 19-9000-01-107 from s/n 140031 to s/n 14700

2 制造/Manufacturer: from s/n 14003 to s/n 14516 AGUSTA WESTLAND S.p.A Via Giovanni Agusta. 520, 21017 Cascina Costa di Samarate (VA) – Italy

from s/n 14517 to s/n 14700 Agustawestland Philadelphia Corporation
3050 Lion Road, Philadelphia, PA 19114 - USA

3. 中文标牌和标识包含在图纸 109-0812-91, ISS.H 或 CAAC 批准的更新版本中。

Chinese Placards and markings are included in Drawing 109-0812-91, 1SS.H or later revisions CAAC approved.

III. 型号: A109S

TYPE NUMBER: A109S

I 总则 General

CAAC 数据单更新日期 2018-06-11

CAAC VTCDS updating date

CAAC 认可日期 2009-12-15

CAAC Validated Date 15 December 2009

型号合格证数据单号 EASA.R.005

Type Certificate Data Sheet No.

1. 型号/衍生型或型别 Type/Variant or Model

1.1 型号 Type A109

1.2 型别 Model A109S

1.3 衍生型 Variant n/a

2. 适航类别/Airworthiness Category 小型 A 类旋翼航空器/Small Rotorcraft, Category A

3. 制造 Manufacturer 依据批准的许可证 IT.21G.0007, ENAC(Ente Nazionale per l'Aviazione Civil certifies) 批准 Leonardo S.p.a. Helicopters 为批准的生产机构
Ente Nazionale per l'Aviazione Civil certifies Leonardo S.p.a. Helicopters as a PRODUCTION ORGANIZATION
accord to APPROVAL CERTIFICATE IT.21G.0007

4. ENAC 申请日期 2001-12-11
Type Certification Date to ENAC 11 December 2001

5. 设计批准国家 EASA
State of Design Authority:

6. 国外适航当局型号审定日期 2005-06-01
EASA Type Certification Date: 01 June 2005

II. 合格审定基础和生产依据 CERTIFICATION BASIS AND PRODUCTION BASIS:

CAAC 的认可审定基础 CAAC validation Certification basis

CAAC 型号认可审定基础定义如下 CAAC validation basis was defined as follows:

1. EASA 确定的产品型号设计或设计更改的合格审定基础 Certification basis as established by EASA for the product type design and design change.

2. CAAC 附加技术条件/CAAC additional technical conditions

2.1 CCAR 21.29 修改函 Amendment Level: R3

2.2 环保标准/Environmental Standards

排除物/Emissions:CCAR-34 涡轮发动机飞机燃油排泄和排气排出物规定

CCAR-34 Fuel Venting and Exhaust Emission Requirement for Turbine Powered Airplanes

噪声/Noise: CCAR-36-R1 航空器型号和适航合格审定噪声规定

CCAR-36-R1 Noise Standards: Aircraft Type and Airworthiness Certification

2.3 用于告知乘客或地面救援人员舱门位置和打开方法的标记标牌必须满足中文要求

All literal markings and placards on an airplane used for indicating passengers or outboard rescue personnel of the location of doors and their means of opening must be at least in Chinese language.

2.4 燃油符合中国航空燃油 3 号喷气燃料(GB -6537-2006):

Fuel conforms to China Aviation NO.3 JET FUEL (PRC National Standard GB-6537-2006);

2.5 CAAC 批准的型号设计的定义文件/ CAAC Approved Type Design Definition (applicant) document

型号设计定义文件 109G0000X006/07 Rev. G 及其后续版次。

Type Design Definition Doc. 109G0000X006/07 Rev. G and subsequent approved revisions.

应急出口标识图纸 109-0814-86。

109-0814-86 INSTALLATION DECALS STENCILS AND MARKINGS KIT T.P.P.

中文安装标识图纸 109G1114434-105

109G1114A34-105 INSTALLATION DECALS STENCILS AND MARKINGS (China)

中文 TREKKER 选装包安装标识 109G1114442-201 及其后续版次。

109G1114A42-201 and Subs. INSTALLATION MARKINGS FOR KIT TREKKER (China) .

CAAC 型号认可证申请日期 2009-03-30

CAAC Validation of Type Certificate Application Date 30 MAR 2009

(1) 国外适航当局合格审定基础/ Foreign Authority Certification Basis

1 制定适用要求的日期/ Reference Date for determining the applicable requirements: 31 May 2002

2 适航要求/Airworthiness Requirements:

FAR 27 / 29, JAR 27 / 29 修改函如下所定义 (CRI A-01 版 6 中) 的:

FAR27 在 EASA TCDS R.005 中引用的对于未变化区域和 JAR 27 Amdt. 3 2002 年 4 月 1 日关于 A109E 的新的或改变的部分 (在文件 n° 109-01-182 rev B 中被标识), 除 JAR 27.683 之外;

对于 A 类操作见 JAR 27 Amdt. 3 附录 C。

FAR 27 / 29, JAR 27 / 29 Amdt. as defined here below (参考 CRI A-01 issue 6):

FAR27 as quoted in the EASA TCDS R.005 for unchanged areas and JAR 27 Amdt. 3 1st April 2002 for the new or changed parts with respect to the A109E(identified in document n° 109-01-182 rev B) with the exceptions of JAR 27.683;

for Category A Operations Appendix C to JAR 27 Amdt. 3.

对于安装了件号 109G0000F01 选装包的直升机:

A109S 直升机审定基础作为未更改部分审定基础, 新增或更改部件审定基础为 2012 年 12 月 11 日的 CS 27 修正案 3。(参考 CRI A-01/T issue 4)

For helicopters equipped with Trekker kit p/n 109G0000F01:

A109S helicopters certification basis for unchanged areas and CS 27 Amdt.3, 11 December 2012 for the new or changed parts (Ref. CRI A-01/T issue 4)

3 专用技术条件/Special Conditions

1994 年 5 月 4 日关于 HIRF 的专用技术条件 n° 94/253/MAV (对于 A109E 型号)。

HIRF Special condition n° 94/253/MAV dated May 4th 1994 (as for A109E model).

2003 年 10 月 1 日关于 HIRF 的专用技术条件 n° INT/POL/27&29/1 第 3 版, 该专用条件针对安装了件号 109G0000F01 选装包的直升机适用于在 CRI F-01 issue 3 中的新航电设备。

HIRF Special condition n° INT/POL/27&29/1 Issue 3, dated 01/10/2003 for A109S equipped with Trekker kit p/n 109G0000F01 and applicable for new avionics equipment reported in CRI F-01 issue 3.

4 保留及豁免/Reversion and Exemptions: 无 None.

5 偏离 Deviations: 无 None

6 等效安全/Equivalent Safety Findings: 无 None.

7 选择性符合 Requirements elected to comply: 无 None.

8 环境保护要求/ Environmental Protection Requirement

8.1 Noise: see TCDSN EASA R.005

8.2 Emissions: ICAO Annex 16, Ed 1993, Vol II, Part II, Chapt.2(fuel venting).

(2) 生产依据

依据批准的许可证 IT.21G.0007, ENAC(Ente Nazionale per l'Aviazione Civil certifies) 批准 Leonardo S.p.a. Helicopters 为批准的生产机构

Ente Nazionale per l'Aviazione Civil certifies Leonardo S.p.a. Helicopters as a PRODUCTION ORGANIZATION accord to APPROVAL CERTIFICATE IT.21G.0007

III. 技术特性和操作限制/Technical Characteristics and Operational Limitations

1. 型号设计定义/Type Design Definition:

型号设计定义文件 109G0000X006/07 Rev.G 及合并的许可版次。

Type Design Definition Doc. 109G0000X006/07 Rev.G and subsequent approved revisions

2. 描述/Description

正常类及 A 类运行能力, 轻型双发直升机, 4 片桨叶, 铰接式主旋翼, 两片跷跷板式尾桨, 前三点可收放式起落架, 一/二名驾驶员机六/七位乘客的座舱布局。A109S 与 A109E 不同点在于安装了由 FADEC 控制的 Pratt & Whitney Canada PW 207C 涡轮发动机, 乘客及飞行员邮箱及燃油油量指示系统采用了抗坠毁设计, 主旋翼、发动机和传动系统的滑油冷却系统也作了相应更改, 机身作了相应更改, 以适应座舱的进出。

Normal Category and "Category A" operations, Light twin-engine helicopter, four (4) blades articulated main rotor, twin (2) blades teetering tail rotor, tricycle retractable landing gears, one/two pilots and six/seven passengers capacity. The AW109S differs from A109E model for the installation of Pratt & Whitney Canada PW 207C turbo engines, controlled through FADEC, passengers and pilots crash resistant seats and fuel tanks and fuel quantity gauging system crash resistant, main rotor group, engine and transmission oil cooling system, and airframe modifications to improve cockpit accessibility.

3. 设备/Equipment

依据适航规范 (见审定基础) 要求的基本设备, 为适航许可须按安装在直升机上。还需要安装以下设备: 与外

部温度有关的数据，从 IDS 和件号 P/N E22307-2-4 外部探头；依据图纸 N°109-0753-28 安装的低旋翼转速和发动机故障警告系统。

Basic equipment required by the Airworthiness Specifications (see Certification Basis) shall be installed on the helicopter for Airworthiness Certificate release. In addition the following equipment is required: Data relevant to outside temperature, provided from IDS and external probe identified by P/N E22307-2-4; Low rotor rpm and engine failure warning according to drawing N°109-0753-28.

针对 A 类操作要求，须以下相应设备(参考 109-0823-98-101)：发动机灭火瓶 109-0811-39；EDU 109-0900-76-2A01；DAU 109-0900-76-6A01；AWG 109-0729-96-105；Cat A 电子组件 109-0823-96；搜索灯 109-0811-46（针对夜间飞行）；附加高度表 109-0814-93；附加磁罗盘 109-0814-94.

For Category A operations the following equipments are required (ref 109-0823-98-101); Engine fire Extinguisher 109-0811-39; EDU 109-0900-76-2A01; DAU 109-0900-76-6A01; AWG 109-0729-96-105; Cat A Electrical kit 109-0823-96; Searchlight 109-0811-46 (for night operations); Additional Altimeter 109-0814-93; Additional Magnetic Compass 109-0814-94.

许可强制和被选设备清单见报告 109G0840W017 “A109S Helicopter – Chart A Equipment list”.

Approved mandatory and optional equipments are listed in the Report 109G0840W017, “A109S Helicopter – Chart A Equipment list”.

针对安装了 Trekker 选装包件号 109G0000F01 的 A109S:

须要求下述额外设备:

针对安装了 Trekker 选装包件号 109G0000F01 的 A109S 的 A 类操作要求

- 发动机灭火瓶 109-0811-39

For A109S equipped with Trekker kit p/n 109G0000F01:

In addition the following equipment is required:

For Category A operations with A109S equipped with Trekker kit p/n 109G0000F01:

- Engine Fire Extinguisher 109-0811-39;

许可强制和被选设备清单见报告 109G0840W048 “A109S Trekker Chart A Equipment list”.

Approved mandatory and optional equipment are listed in the Report 109G0840W048 “A109S Trekker Chart A Equipment list”.

或参考飞行手册设备清单。

Refer also to the Equipment list in RFMs.

4. 几何尺寸/Dimensions

机身/Fuselage	长/ Length	m	11.65
	宽/Width	m	3,290
	高/Height	m	3,40

针对安装了 Trekker 选装包件号 109G0000F01 的直升机

For Helicopters equipped with Trekker kit p/n 109G0000F01

机身/Fuselage	长/ Length	m	11.65
	宽/Width	m	3,290
	高/Height	m	3,53

主旋翼/ Main Rotor 4 片桨叶-直径 4 blades-Diameter m 10,830

尾桨/ Tail Rotor type 2 片桨叶-直径 2 blades-Diameter m 1,94

5. 发动机/Engine 2 台加拿大普惠公司 2XPW207C Pratt & Whitney Canada
PW 207C
发动机 TCDS 设计声明 State of Design Engine TC/TCDS
No:TCCA E-23 Issue 21 dated16/03/06 issued by DOT Canada

EASA 发动机 TCDS No. EASA IM.E.017 Issue 1,dated May 10 2005
EASA Engine TCDS
CAAC 认可证号: VTC 0104 E, VTCDS 版次为 R3
CAAC VTC NO.: VTC 0104 E, VTCDS R3

5.1 安装的发动机限制/Installed Engine Limits (热力/机械功率 thermodynamics/mechanical power):

双发工作:	最大连续	625 SHP/572 SHP (102% NR)
	起飞功率(5 分钟)	735 SHP/572 SHP (102% NR)
单发(应急):	最大连续	735 SHP/646 SHP (102% NR)
	2.5 分钟	815 SHP/745 SHP (102% NR)

在 TOT, N1 上的附加详细信息, 参考 EASA 批准的飞行手册-第 1 部分

AEO:	Maximum Continuous	625 SHP/572 SHP (102% NR)
	Take Off Power(5 min)	735 SHP/572 SHP (102% NR)
OEI(emergency):	Maximum Continuous	735 SHP/646 SHP (102% NR)
	2.5 min	815 SHP/745 SHP (102% NR)

Refer to EASA approved RFM-Section 1 for additional detailed information on TOT, N1.

5.2 瞬时扭矩限制/Transmission Torque Limits

双发工作:	最大连续	900 SHP 100%TQ (100% NR)
	起飞功率(5 分钟)	960 SHP 107%TQ (100% NR)
	瞬时 (6 秒)	990 SHP 110%TQ (100% NR)
单发(应急):	最大连续	600 SHP 133%TQ (100% NR)
	2.5 分钟	730 SHP 162%TQ (100% NR)
	瞬时 (6 秒)	780 SHP 173%TQ (100% NR)

附加详细信息, 参考 EASA 批准的飞行手册-第 1 部分

AEO:	Maximum Continuous	900 SHP 100%TQ (100% NR)
	Take Off Power(5 min)	960 SHP 107%TQ (100% NR)
	Transient (6 sec)	990 SHP 110%TQ (100% NR)
OEI(emergency):	Maximum Continuous	600 SHP 133%TQ (100% NR)
	2.5 min	730 SHP 162%TQ (100% NR)
	Transient (6 sec)	780 SHP 173%TQ (100% NR)

Refer to EASA approved RFM-Section 1 for additional detailed information

其他发动机及减速器扭矩极限参考批准的飞行手册。

Other Engine and Transmission Torque Limits Refer to approved RFMs

6. 液体/Fluids (燃油/滑油/附加/Fuel/ Oil/ Additives)

6.1 燃油/Fuel

适用于所有温度情况下

ASTM D-1655 Jet A; ASTM D-1655 Jet A 1; MIL-T-5624
JP-5;MIL-T-83133 JP-8; 3 号喷气燃料 (GB -6537-2006)

For all temperatures:

6.2 滑油/Oil

ASTM D-1655 Jet A; ASTM D-1655 Jet A 1; MIL-T-5624
JP-5; MIL-T-83133 JP-8; No.3 Jet Fuel
详细信息参考 EASA 批准的飞行手册第一部分
For detailed information refer to EASA approved RFM-Section 1
发动机滑油适用标准/Engine oil applicable specifications
MIL-PRF-23699 (MIL-L-23699) ,
传动系统滑油适用标准/Transmission oil applicable specifications
MIL-PRF-23699 (MIL-L-23699) DOD-PRF-85734
详细信息参考 EASA 批准的飞行手册第一部分
For detailed information refer to EASA approved RFM Section1

7. 液体容量/Fluid capacities

7.1 燃油/Fuel

可用燃油/Total usable: Fuel 563 liters

不可用燃油见飞行手册/See Rotorcraft Flight Manual for unusable fuel

7.2 滑油/Oil

每台发动机/Engine(PW207C):5,12litres for each engine

传动系统/Transmission: 11,0 litres

不可用滑油量见飞行手册/See Rotorcraft Flight Manual for non-drainable lubricant.

8 空速限制/Airspeed limits:

有动力时不可逾越速度 168 节/ V_{NE} :168 Kts power on

无动力时不可逾越速度 128 节/ V_{NE} : 128 Kts power off

针对安装了 Trekker 选装包件号 109G0000F01 的 A109S

For A109S equipped with Trekker kit p/n 109G0000F01:

有动力时不可逾越速度 160 节/ V_{NE} :160 Kts power on

无动力时不可逾越速度 120 节/ V_{NE} : 120 Kts power off

参见批准的飞行手册获得高度与其他速度限制因素对 V_{NE} 的降低。

Refer to approved RFMs for reduction in V_{NE} with altitude and other speed limitations.

9. 旋翼转速限制/

Rotor Speed Limits

有功率状态 Power on AEO:	最小	99%	Min
	最大连续	101%	Max continuous
	起降	102%	Take-off and Landings
无动力状态 Power off:	最小	95%	Min
	最大	110%	Max

附加详细信息参见 EASA 批准的飞行手册第一部分

For additional detailed information refer to EASA approved RFMSection1

10. 最大使用升限及温度 Maximum Operating Altitude and Temperature

10.1 升限/Altitude 6096m (20000 ft) Hp

10.2 温度/Temperature 参见批准的飞行手册第一部分 “起飞和着陆高度” 及温度限制

Refer to approved RFMs - Section 1, for “Take-off and Landing altitude” and for temperature limitations.

11. 使用限制/Operating Limitations:

白天和夜间目视飞行
仪表飞行
非结冰条件下
A 类运行
VFR day and night
IFR
Non-icing conditions
Category A operations

12. 最大取证重量/Maximum Certified Weight 3175kg

13. 重心范围/Centre of Gravity Range:

参考批准的飞行手册-第一部分重心包线。

Refer to approved RFM-Section 1 for CG envelopes.

14. 基准/Datum:

纵向 Longitudinal:

基准线原点(SAT 0)位于前支撑点前 1635mm 处

the datum line (STA 0) is located at 1635 mm forward of the front jack point.

针对安装了 Trekker 选装包件号 109G0000F01 的 A109S

For A109S equipped with Trekker kit p/n 109G0000F01:

纵向 Longitudinal:

基准线原点(SAT 0)位于前支撑点前 1580 mm 处

the datum line (STA 0) is located at 1 580 mm forward of the front jack point.

侧向 Lateral:

侧向基准线位于两侧主支撑点 ± 450 mm 中间, 与纵向基准线相交。

Lateral datum line (BL 0) is located at ± 450 mm inboard of each of the two main jack points and it coincides with the helicopter longitudinal plane of symmetry.

详见飞行手册-第六部分

For detailed information refer to RFM-Section 6.

15. 水平方法/Levelling Means:

水平平台位于客舱顶部右侧参考支柱, 详见维修手册。

The spirit level plate is to be placed on cabin roof right stanchion reference. Refer to Maintenance Manual.

16. 最小飞行机组/Minimum Flight Crew:

右侧单驾驶员 One (1) pilot right seat

17. 最大乘客座位数/Maximum Passenger Seating Capacity:

7 人 7 (seven) passengers

18. 乘客应急出口/Passenger Emergency Exit:

两个，客舱每侧一个 2 (two), one on each side of the passengers cabin

19. 最大行李/货物装载/Maximum Baggage:

位置/Location 最大载荷/装载 Max Load/Loading
行李舱/ Baggage compartments 依据飞行手册-第六部分定义载荷为 120kg
120 kg according to load distribution defined in the RFM-Section 6
货舱地板最大承载 Maximum load on cargo compartment floor: 500 kg/m²
最大货舱安全挂点载荷为 91kg Maximum load on securing points of cargo compartment: 91Kg

20. 桨叶控制移动范围/Rotor Blade and control movement

主桨/MR min -1° 24' max +12°
尾桨/TR RH pedal -7° LH pedal +24°

操纵系统详细参数见 A109S 维护手册

For rigging information refer to the Maintenance Manual

21. 辅助动力装置/Auxiliary Power Unit (APU): 不适用/ N.A.

22. 寿命件/Life-limited parts:

参考 EASA 批准的适航限制 0B-A-AMPI-00P , 第 4 章
0B-A-04-10-00-00A-000A-A 部分。

Refer to EASA Approved Airworthiness Limitations
0B-A-AMPI-00-P, Chapter 4, Section 0B-A-04-10-00-00A-000A-A.

针对安装了 Trekker 选装包件号 109G0000F01z 的 A109S

参考 EASA 批准的适航限制 0B-D-AMPI-00-P , 第 4 章
0B-D-04-10-00-00A-000A-A 部分

For A109S equipped with Trekker kit p/n 109G0000F01:

Refer to EASA approved Airworthiness Limitations: 0B-D-AMPI-00-P,
Chapter 4, Section 0B-D-04-10-00-00A-000A-A

23. 机轮和轮胎/Wheels and Tyres: 360 x135-6 无内胎 360 x135-6 tubeless

针对安装了 Trekker 选装包件号 109G0000F01 的 A109S 不适用

For A109S with Trekker kit p/n 109G0000F01: n/a

IV. 使用和操作规范/Operating and Service Instructions

1. 飞行手册/ Flight Manual:

109G0040A013 第 1 期第 3 版及之后批准版次

OES 109G0040A014 第 1 期第 3 版及之后批准版次

针对安装了 Trekker 选装包件号 109G0000F01 的直升机 109G0040A034
第 1 期及之后批准版次

109G0040A013 issue 1 rev 3 and subsequent approved revisions

OES 109G0040A014 issue 1 rev 3 and subsequent approved revisions

109G0040A034 issue 1 and later approved revisions for helicopters
equipped with Trekker kit p/n 109G0000F01

2. 维护手册/Maintenance Manual:

0B-A-AMPI-00-P => 第 0 章(章节 1 及后续); 第 4 章(章节 3 及批准的后续);
第 5 章(章节 5 及后续)

0B-A-AMPI-00-P => Chapter 00(ch 1 or subs); Chapter 4(ch 3 or subs approved);
Chapter 5 (ch5 or subs)

针对安装了 Trekker 选装包件号 109G0000F01 的直升机

For helicopters equipped with Trekker kit p/n 109G0000F01:

0B-D-AMPI-00-P => 第 0 章(第一版); 第 4 章(第一版及批准的后续);
第 5 章(第一版)

0B-D-AMPI-00-P => Chapter 00 (first issue), Chapter 4 (first issue or subs approved),
Chapter 5 (first issue)

0B-A-AMP-00-P 第 6 章及后续 (修改版 12 及后续)

0B-A-AMP-00-P Chapter 6 and subs (Amendment 12 or subs)

3. 服务信件和服务通告/ Service Letters and Service Bulletins:

由 Leonardo S.p.a., Helicopters, Piazza Monte Grappa, 4, 00195 Roma - Italy 发布

As published by Leonardo S.p.a., Helicopters, Piazza Monte Grappa, 4, 00195 Roma - Italy

4. 必备设备/Required Equipment

针对批准的强制和备选设备, 参考上述 III.3 部分及批准的飞行手册和相关补充材料。

Refer to the section III.3 above and to approved Rotorcraft Flight Manual and related supplements for the approved mandatory and optional equipment

V 注释/Notes

1 发动机关车时, 喷油管排出的燃油会被收集到主燃油箱中, 相应的图纸编号: 109-0601-49
The fuel vented from the injector line at the engine shutdown, is recollected into the main
fuel tank, according to the Drawing 109-0601-49.

2 制造商符合的系列号:

组装图纸号 109-9000-09-101/103(参考型号设计 109G000X006-07)

s/n 22001, 从 22003 到 22087, 从 s/n 22089 到 22200

针对安装了 Trekker 选装包件号 109G0000F01 的直升机:

s/n 22002, 22088, 从 22701 到 22999.

Manufacturer's eligible serial numbers:

Assembly drawing 109-9000-09-101/-103 (ref Type Design 109G0000X006/07)

s/n 22001, 22003 through 22087, 22089 through 22200.

For helicopters equipped with Trekker kit p/n 109G0000F01: s/n 22002, 22088,
22701 through 22999.

3 命名 Designation:

A109S 和 Grand 是没有安装 Trekker 选装包件号 109G0000F01 的 A109S 直升机的市场名字。

A109S Trekker, AW109 Trekker 和 Trekker 是安装了 Trekker 选装包件号 109G0000F01 的 A109S
直升机市场名字。

AW109S and Grand are used as marketing designation for A109S helicopters not equipped with
Trekker kit p/n 109G0000F01

A109S Trekker, AW109 Trekker and Trekker are used as marketing designation for A109S

helicopters equipped with Trekker kit p/n 109G0000F01

4 中文标牌和标识包含在图纸 109-5704-04-127, ISS.H 或 CAAC 批准的更新版本中。

Chinese Placards and markings are included in Drawing 109-5704-04-127, ISS.H or later revisions CAAC approved.

针对安装了 Trekker 选装包的直升机

For helicopters equipped with Trekker kit:

中文标牌和标识包含在图纸 109G1114A34-105 及在选装件适用图纸 109G1114A42-201 里。

Chinese Placards and markings are included in Drawing 109G1114A34-105 and 109G1114A42-201 and subs. for the applicable kits.

IV. 型号: A109SP

TYPE NUMBER: A109SP

I. 总则/General

1. 衍生型或型别/ Variant or Model	AW109SP
适航类别/ Airworthiness Category	按 A 类运行的正常类旋翼航空器/Small Rotorcraft and "Category A" Operations
型号合格证持有人/ Type Certificate Holder:	AGUSTAWESTLAND S.p.A. Via Giovanni Agusta 520 – 21017 Cascina Costa di Samarate (Va) – Italy
2. 制造商/ Manufacturer	AGUSTAWESTLAND S.p.A. Via Giovanni Agusta 520 – 21017 Cascina Costa di Samarate (Va) – Italy
3. 国家认证日期/ National Certification Date:	N.A.
4. EASA 申请日期/ EASA Application Date	10 Oct 2007
5. ENAC 推荐日期/ ENAC Recommendation Date	22 May 2009
6. EASA 型号合格日期/ EASA Type Certification Date	25 May 2009
7. 申请 CAAC 认可审定的日期/ Date of Application for CAAC Validation	06 Dec 2011
8. CAAC 型号认可日期/ CAAC Validation Date:	17 Jul 2013

II. 认可审定基础 / Validation Basis:

CAAC 的认可审定基础由 EASA 审定基础中的适用要求和 CAAC 的附加技术条件组成

The CAAC validation basis is consists of the EASA certification basis as applicable and the CAAC additional technical conditions.

2. 审定基础/Certification basis

- 1.1 满足要求的日期/ **Reference Date for determining the applicable requirements:** 10 Oct 2007
- 1.2. ENAC 许可日期/ **ENAC Certification Date:** 不适用 N.A.
- 1.3. ENAC 型号合格证数据单号/ **ENAC Type Certificate Data Sheet No.:** 不适用 N.A.
- 1.4. EASA 审定基础 / **EASA Certificate Basis:** As defined in CRI A-1 Issue 3:

按 CRI A-1 Issue 3 定义

与 A109S 相对照(参考文件 n° 109G0000N062 Rev A and n° 109G0000N091Rev B) , EASA TCDS R.005 Issue8 定义 FAR27/JAR27 作为没更改/不受影响区域、系统、部件或装置的审定基础, 同时定义 2003 年 12 月 14 日前的 CS27 修正案为新的或更改/受影响的区域、系统、部件或装置的审定基础。

FAR27/JAR27 as quoted in the EASA TCDS R.005 Issue 8 for unchanged/unaffected areas, systems, parts or appliances and CS 27 Amdt/14 November 2003 for the new or changed/affected areas, systems, parts or appliances with respect to the A109S (ref documents n° n° 109G0000N062 Rev A and n° 109G0000N091Rev B).

根据 21.A101(b)(2)及(3), CS27.863 不适用。

The paragraph CS27.863 is not applicable on the basis of Part 21.A101 (b) (2) and (3).

对于按照 IFR 运行: CS27 附录 B, 含修正案。

For **IFR Operation** : Appendix B to CS 27 amdt/

对于 A 类运行: CS27 附录 C, 含修正案。

For **Category A Operations**: Appendix C to CS 27 amdt /.

**1.5 适航要求/Airworthiness
Requirements:**

适用的 CS27/JAR27/FAR27 修正案如前(参考 CRI A-01 Issue 01).
CS27/JAR27/FAR27 Amdt as defined above (ref CRI A-01 Issue 01).

**1.6. 专用技术条件 /Special
Conditions**

HIRF=>INT/POL/27&29/1 Issu3 3(2003) – HIRF 的保护 – 管理和指导
材料的临时政策, 第 3 章, 第 3 部 高能辐射场。

HIRF=>INT/POL/27&29/1 Issu3 3(2003) - Protection from the effects of
HIRF- Interim Policy in the Administrative and Guidance Material,
Section 3, Part 3 High Intensity Radiated Fields.

**1.7. 继承及豁免/Reversion and
Exemptions:**

不适用/N.A..

**1.8. 等效安全/Equivalent Safety
Findings:**

不适用/N.A..

**1.9. 环境标准包括噪声/
Environmental Standards
including Noise:**

Noise => ICAO Annex 16 Vol I, Part II Amdt 7 Chapt.. 8
Emissions => ICAO Annex 16, Ed 1993, Vol II, Part II, Chapt.2
(fuel venting).

2. CAAC 附加技术条件/CAAC additional technical conditions

2.1 CCAR 21.29 Amendment Level: R3

2.2 环保标准/Environmental Standards

排除物/Emissions:CCAR-34 涡轮发动机飞机燃油排泄和排气排出物规定

CCAR-34 Fuel Venting and Exhaust Emission Requirement for Turbine Powered Airplanes

噪声/Noise: CCAR-36-R1 航空器型号和适航合格审定噪声规定

CCAR-36-R1 Noise Standards: Aircraft Type and Airworthiness Certification

2.3 用于告知乘客或地面救援人员舱门位置和打开方法的标记标牌必须满足中文要求

All literal markings and placards on an airplane used for indicating passengers or outboard rescue personnel
of the location of doors and their means of opening must be at least in Chinese language.

2.4 燃油符合中国航空燃油 3 号喷气燃料(GB -6537-2006):

Fuel conforms to China Aviation NO.3 JET FUEL (PRC National Standard GB-6537-2006);

**2.5 CAAC 批准的型号设计的定义文件/ CAAC Approved Type Design Definition (applicant) document
型号设计定义文件 109G0000X016 Rev. A 及其后续版次。**

Type Design Definition Doc.109G0000X016 Rev. A and subsequent

III. 技术特征和使用限制/Technical Characteristics and Operational Limitations

1. 型号设计定义/

Type Design Definition:

型号设计定义文件 109G0000X006/09 Rev.U 及后续批准版次。

Type Design Definition Doc. 109G0000X006/09 Rev.U and subsequent approved revisions

2. 描述/Description

轻型双引擎直升机, 4 铰接式主旋翼, 双, 铰接式 (具有弹性轴承) 主旋翼, 两片桨叶跷跷板式尾桨, 三轮可收放起落架, 1/2 名飞行员和 6/7 名乘客。

Light twin-engine helicopter four (4) blades articulated main rotor, twin (2) blades teetering tail rotor tricycle retractable landing gears one/two pilots and six/seven passengers capacity.

AW109SP 与 A109S 型号的差别在于使用了新的混合型金属-复合材料的邮箱结构, 4 通道数字自动驾驶仪以及带有 4 台显示器(EFIS)的驾驶舱新布局。

The AW109SP differs from A109S model for a new hybrid Metal-Composite fuselage structure, a four channel digital autopilot and a new cockpit layout with 4 displays (EFIS).

3. 设备/Equipment

适航规范 (见审定基础) 要求的基本设备, 为适航许可须按安装在直升机上。

Basic equipment required by the airworthiness rules (see Certification Basis) shall be installed on the helicopter for the Airworthiness Certificate release

4. 几何尺寸/Dimensions

机身/Fuselage	长/ Length	m	11,648
	宽/Width	m	3,294
	高/Height	m	3,395

主旋翼/ Main Rotor 4 片桨叶-直径 4 blades-Diameter m 10,830

尾桨/ Tail Rotor type 2 片桨叶-直径 2 blades-Diameter m 1,940

5. 发动机/Engine

2 台加拿大普惠公司 PW207C

2 Pratt & Whitney Canada PW 207C

发动机 TCDS 设计声明 加拿大运输部 TC E-23 Issue 21, 颁发日期: 05 年 3 月 16 日

State of Design Engine TCDS E-20 Issue 7 dated September 08, 2006 issued by Transport Canada

EASA 发动机/Engin TCDS No. EASA IM.E.017 Issue 1, dated May 10 2005

5.1 安装的发动机限制(热能/机械能)/Installed Engine Limits (thermodynamics/mechanical power):

AEO:	最大连续/ Maximum Continuous	625 SHP/572 SHP (102% NR)
	起飞(5 分钟)/Take Off Power(5 min)	735 SHP/572 SHP (102% NR)
OEI(应急/emergency):	最大连续/ Maximum Continuous	735 SHP/646 SHP (102% NR)
	2.5 分钟/2.5 min	815 SHP/745 SHP (102% NR)

关于 TOT 及 N 的更详细的信息参考 EASA 批准的 RFM

5.2 瞬时扭矩限制/Transmission Torque Limits

AEO:	最大连续/ Maximum Continuous	625 SHP/572 SHP (102% NR)
	起飞 5 分钟/Take Off Power(5 min)	735 SHP/572 SHP (102% NR)
OEI(应急/emergency):	最大连续/ Maximum Continuous	735 SHP/646 SHP (102% NR)
	2.5 分钟/2.5 min	815 SHP/745 SHP (102% NR)

更详细的信息参考 EASA 批准的 RFM

6. 液体/Fluids (燃油/滑油/附加/Fuel/ Oil/ Additives)

6.1 燃油/Fuel

所有温度情况下: ASTM D-1655 Jet A; ASTM D-1655 Jet A 1;
MIL-T-5624 JP-5;MIL-T-83133 JP-8; GOST 10227-86 R.T.;
GSTU 320.00149943.007-97 R.T.;GOST 10227-86 TS-1; GSTU
320.00149943.011-99 TS-1
For all temperatures: ASTM D-1655 Jet A; ASTM D-1655 Jet A 1;
MIL-T-5624 JP-5;MIL-T-83133 JP-8; GOST 10227-86 R.T.;
GSTU 320.00149943.007-97 R.T.;GOST 10227-86 TS-1; GSTU
320.00149943.011-99 TS-1

详细信息: 参考 EASA 批准的飞行手册

For detailed information refer to EASA approved RFMs.

6.2 滑油/Oil

发动机滑油规范/Engine oil applicable specifications MIL-PRF-23699,
传动系统滑油规范/Transmission oil applicable MIL-PRF-23699,
specifications DOD-PRF85734

更多详细信息: 参考 EASA 批准的飞行手册

For additional detailed information refer to EASA
approved RFMs.

7. 液体容量/Fluid capacities

7.1 燃油/Fuel

可用燃油/Total usable: 563 l (148.7 US Gal)

不可用燃油见 EASA 批准的 RFM

See EASA approved RFMs for unusable fuel

7.2 滑油/Oil

发动机/Engine(PW207C):5,12l(1,35USGal) 每个发动机/for each engine
传动系统/Transmission: 11,0 l (2,90 USGal)

不可用滑油量见 EASA 批准的 RFM

See EASA approved RFMs for non-drainable lubricant.

8 空速限制/Airspeed limits:

168 Kts power on

128 Kts power off

更多详细信息参见 EASA 批准的 RFM

For additional detailed information refer to EASA approved RFMs.

9. 旋翼转速限制/

Rotor Speed Limits

AEO 有动力/Power on AEO: 99% 最小/Min

101% 最大连续/Max continuous

无动力/Power off: 95% 最小/Min

110% 最大/Max

更多详细信息参见 EASA 批准的飞行手册

For additional detailed information refer to EASA approved RFMs.

10. 最大使用升限及温度/Maximum Operating Altitude and Temperature

最大使用升限/Maximum Operating Altitude 6096m (20000 ft)

见 EASA 批准的旋翼航空器飞行手册“起飞和着陆高度”及温度限制章节

See EASA approved Rotorcraft Flight Manuals for “Take-off and Landing altitude” and for temperature limitations.

11. 使用限制/Operating Limitations:

11.1 一般/General 无结冰条件下, 白天和夜间目视飞行, A 类运行, (同样参考 EASA 批准的 RFM 109G0040A018, 109G0040A019, 109G0040A020, 109G0040A021)。

VFR/IFR day and night, in non-icing conditions, “Category A” operations, (Refer also to EASA approved RFM 109G0040A018, 109G0040A019, 109G0040A020, 109G0040A021)

11.2 起飞和着陆附加限制/ Additional limitations for take-off and landing

见 EASA 批准的旋翼航空器飞行手册

See EASA approved RFM – Section 1.

12. 最大重量/Maximum Certified Weight 最大总重量 3175kg (7000 lb)

13. 重心范围/Centre of Gravity Range: 纵向和横向重心包线见 EASA 批准的 RFM。

See EASA approved RFMs for longitudinal and lateral CG envelopes.

14. 基准/Datum:

纵向基准线原点(SAT 0)位于前支撑点前 1635mm(64,4 in)处

侧向基准线位于两侧主支撑点 ± 450 mm (± 18 in)中间, 与纵向基准线相交, 详见飞行手册。

Longitudinal datum line (STA 0) is located at 1635 mm (64,4 in) forward of the front jack point. Lateral datum line (BL 0) is located at ± 450 mm (± 18 in) inboard of each of the two main jack points and it coincides with the helicopter longitudinal plane of symmetry.

For detailed information refer to RFMs.

15. 水平方法/Levelling Means:

水平仪放置在机舱顶部右侧参考柱上

详见飞行手册

The spirit level plate is to be placed on cabin roof right stanchion reference. For details information refer to RFMs

16. 最小飞行机组 /Minimum Flight Crew:

右侧单驾驶员可操纵直升机

One (1) pilot who shall operate the helicopter from the cockpit right seat

17. 最大乘客座位数 /Maximum Passenger Seating Capacity:

7 人

7 (seven) passengers

18. 乘客应急出口/

两个, 客舱每侧一个

Passenger Emergency Exit:

2 (two), one on each side of the passengers cabin

19. 最大行李/货物装载/Maximum Baggage:

位置/Location

最大载荷/装载 Max Load/Loading

行李舱/ Baggage compartments

根据 RFM 定义的负载分布为 120kg (265 lbs)

货舱地板最大承载 500 kg/m² (102 lb/ft²)
 货舱固定点上的最大承载为 91kg(200 lbs)。
 120 kg (265 lbs) according to load distribution defined in the RFMs.
 Maximum load on cargo compartment floor: 500 kg/m² (102 lb/ft²)
 Maximum load on securing points of cargo compartment: 91Kg (200 lbs).

20. 桨叶控制移动范围/Rotor Blade control movement 主旋翼/Main -1° 24' / 12°
 尾桨/Tail 右脚蹬/RH pedal -7°
 左脚蹬/LH pedal +24°
 操纵系统详细参数见 A109SP AMP
 For rigging information refer to the AW109SP AMP

21. 辅助动力装置/Auxiliary Power Unit (APU): 不适用/ N.A.

22. 寿命件/Life-limited parts: 对于序列 22201,22203, 22214 和其后的直升机:
 参考 EASA 批准的持续适航限制 OB-B-AMPI-OO-P, 第 4 章 OB-B-04-10-00-00A-000B-A 节。
 For helicopter s/n 22201, 22203, 22214 and subs:
 Refer to EASA Approved Airworthiness Limitations OB-B-AMPI-OO-P, Chapter 4, Section OB-B-04-10-00-00A-000B-A.
 对于序列 22202,22204 到 22213:
 参考 EASA 批准的持续适航限制 OB-C-AMPI-OO-P, 第 4 章 OB-C-04-10-00-00A-000B-A 节。
 For helicopter s/n 22202, 22204 thru 22213:
 Refer to EASA Approved Airworthiness Limitations OB-C-AMPI-OO-P, Chapter 4, Section OB-C-04-10-00-00A-000B-A.

23. 机轮和轮胎/Wheels and Tyres: 不适用/ N.A.

IV. 使用和维护技术资料/Operating and Service Instructions

1.旋翼航空器飞行手册文件号/ Rotorcraft Flight Manual Document No:
 109G0040A018 AW109SP Issue B 及后续批准版本
 109G0040A019 AW109SP Optional Equipment Supplement Issue B 及后续批准版本 (关于按注 10 进行 NVIS 运行, 参考增补 10)
 109G0040A018 AW109SP Issue B and subsequent approved revisions
 109G0040A019 AW109SP Optional Equipment Supplement Issue B and subsequent approved revisions (for NVIS operation as per note 10, refer to supplement 10)

 Rega 定制的直升机(Customization P/N 109-B810-12-101):
 109G0040A020 AW109SP REGA RFM Issue B 及后续批准版本

109G0040A021AW109SP REGA Optional Equipment Supplement
Issue B 及后续批准版本 (关于按注 10 进行 NVIS 运行, 参考增补 9.1-2)
For helicopter with Rega Customization (P/N 109-B810-12-101):
109G0040A020 AW109SP REGA RFM Issue B and subsequent
approved revisions
109G0040A021AW109SP REGA Optional Equipment Supplement
Issue B and subsequent approved revisions (for NVIS operation as per
note 10, refer to supplement 9.1-2).

3. 维修手册文件号/Maintenance Manual, Document No:

直升机序列 22201,22203, 22214 及其后:

AMPI OB-B-AMPI-OO-P => Chapter 00(首次发布更改 2 及后续, AgustaWestland 批准版本)
Chapter 04(第二次发布更改 2 及后续, EASA 批准版本)以及:
- Retirement lives (OB-B-04-10-00-00A-000B-A)
- Mandatory inspections (OB-B-04-20-00-00A-000B-A)
- CMR (OB-B-04-30-00-00A-000B-A)

Chapter 05(首次发布-更改 11 以及后续, AgustaWestland 批准版本)

For helicopter s/n 22201,22203, 22214 and subsequent:

AMPI OB-B-AMPI-OO-P => Chapter 00(first issue change 2 and subs. AgustaWestland approved Revisions)

Chapter04(second issue change 2 and subs. EASA approved revisions) with:

- Retirement lives (OB-B-04-10-00-00A-000B-A)
- Mandatory inspections (OB-B-04-20-00-00A-000B-A)
- CMR (OB-B-04-30-00-00A-000B-A)

Chapter 05(first issue—change 11 and subs. AgustaWestland approved revisions)

直升机序列 22202,22204 到 22213:

AMPI OB-C-AMPI-OO-P => Chapter 00(第二次发布变更及后续, AgustaWestland 批准版本)
Chapter 04(首次发布变更 3 及后续, EASA 批准版本)以及:
- Retirement lives (OB-C-04-10-00-00A-000B-A)
- Mandatory inspections (OB-C-04-20-00-00A-000B-A)
- CMR (OB-C-04-30-00-00A-000B-A)

Chapter 05(第二次发布-变更 2 及后续, AgustaWestland 批准版本)

For helicopter s/n 22202,22204 thru 22213:

AMPI OB-C-AMPI-OO-P => Chapter 00(second issue change/ and subs. AgustaWestland approved Revisions)

Chapter04(first issue change 3 and subs. EASA approved revisions) with:

- Retirement lives (OB-C-04-10-00-00A-000B-A)
- Mandatory inspections (OB-C-04-20-00-00A-000B-A)
- CMR (OB-C-04-30-00-00A-000B-A)

Chapter 5(second issue—change 2 and subs. AgustaWestland approved revisions)

所有直升机:

AMP OB-A-AMP-OO-X => Chapter 06 及后续(首次发布及后续, AgustaWestland 批准版本)

For all helicopter:

AMP OB-A-AMP-OO-X => Chapter 06 and subs(first issue and subs. AgustaWestland approved Revisions)

3. 服务信件和服务通告/ Service Letters and Service Bulletins:

As published by AgustaWestland (See Note 3)

4. 必备设备/Required Equipment

见 EASA 批准的旋翼航空器飞行手册上批准的必装和选装设备。

Refer to EASA approved Rotorcraft Flight Manuals for the approved mandatory and optional equipment

V. 注/Notes

1. 符合的系列号/Eligible serial numbers

组装图纸号 109-9000-09-105/-107(ref.Type Design Doc.n° 109G0000X006/09)从 s/n 22201 到 s/n 22499
Assembly Drawing 109-9000-09-105/-107(ref.Type Design Doc.n° 109G0000X006/09) from s/n 22201 to s/n 22499.

2 名称/Designation:

Agustawestland AW109SP 直升机市场销售名称为 GrandNew。

The marking designation GrandNew is also used for AgustaWestland AW109SP helicopters.

3 从 2011 年 6 月 1 日起, Agusta S.p.A. 更名为 AgustaWestland S.p.A., Agusta Aerospace Corporation 更名为 AgustaWestland Philadelphia Corporation。

Effective 01 June 2011, the Agusta S.p.A. name was changed to AgustaWestland S.p.A. and the Agusta Aerospace Corporation name was changed to AgustaWestland Philadelphia Corporation.

4 中文标牌和标识包含在图纸 109-5704-04-127, ISS.H 或 CAAC 批准的更新版本中。

Chinese Placards and markings are included in Drawing 109-5704-04-127, 1SS.H or later revisions CAAC approved.

IV. 型号: A119MKII

TYPE NUMBER: A119MKII

一. 产品型别和批准日期/THE PRODUCT MODEL AND APPROVAL DATE

CAAC 数据单更新日期 2018-06-11
CAAC VTCDS updating date

CAAC 认可日期 2015-01-15
CAAC Validated Date 15 Jan 2015

1. 型号合格证数据单号 EASA.R.005
Type Certificate Data Sheet No.

2. 型号、衍生型或型别 Type/Variant or Model

(a) 型号/Type A109
(b) 型别/Model AW119MKII
(c) 衍生型 Variant n/a
3. 适航类别 小型旋翼航空器
Airworthiness Category Small Rotorcraft

4. 制造 Manufacturer Agusta Westland Philadelphia Corporation
3050 Red Lion Road
Philadelphia, PA 19114
USA
(see Note 5)

5 国外适航当局申请日期 ENAC 申请日期 2006-08-04
Foreign Authority Application Date ENAC Application Date 04 Aug 2006

6 设计批准国家 EASA

State of Design Authority:

国外适航当局型号审定日期 EASA 型号审定日期 2007-06-11
Foreign Authority Type Certification Date: EASA Type Certification Date 11 June 2007

二. 合格审定基础和生产依据 CERTIFICATION BASIS AND PRODUCTION BASIS:

CAAC 型号认可审定基础

CAAC 型号认可审定基础定义如下:

CAAC Validation Certification Basis

1 EASA 确定的产品型号设计或设计更改的合格审定基础

2 CAAC 附加技术条件/CAAC Additional Technical Requirements:

1) 依据 CCAR21.29 (五) 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。

2) 燃油应符合“中国国标 3 号喷气燃料-GB6537-2006”的规范要求。

CAAC validation basis was defined as follows:

1 Certification basis as established by EASA for the product type design and design change.

2 CAAC Additional Technical Requirement

1) As per CCAR21.29(5) The manuals, placards, listings and instrument markings required by the applicable airworthiness regulation, noise requirements, are presented in Chinese or English language. Below items must be at least in Chinese language.

1. All literal markings and placards on an airplane used for indicating, warning and informing passengers.
2. All literal markings and placards on an airplane used for indicating passengers or outboard rescue personnel of the location of doors and their means of opening.
3. The operation and use instructions of emergency equipments which passengers will use.

2) Fuel conforming to Specification "PRC National Standard No.3 Jet Fuel-GB6537-2006".

CAAC 型号认可证申请日期

2011-02-17

CAAC Validation of Type Certificate

17 February 2011

Application Date

(1) 国外适航当局合格审定基础

确定适用条款的参考日期: 2006-08-04

Foreign Authority Certification Basis

适航要求:

CS27/JAR27/FAR27 修正案定义见一下 (参见 CRI A-01 Issue 1) .

所有影响的区域、系统、部件或设备, 以下相应 CS27 章节修正案/日期 2003-11-14 适用:

CS27.1;JAR27.2 b)2)i); CS27.25; CS27.351; CS27.397; CS27.602;CS27.610;CS27.805;CS27.865;CS27.1529;CS 附件 A.

未更改区域、系统、部件及设备, JAR27 小型旋翼航空器 版次 1, 日期 1993-9-6 适用, 处以下:

- JAR 27.561 由 FAR27.561 Base Amdt. 替代;
- JAR 27.562
- JAR27.785 由 FAR27.2 Amdt.28 和 FAR27.785 Base Amdt.替代;
- JAR 27.952
- JAR27.963 由 FAR27.963 Amdt.23 替代;
- JAR27.971 由 FAR27.971 Base Amdt.替代;
- JAR27.973 由 FAR27.973 Base Amdt.替代;

专用技术条件:

依据

HIRF Protection according to JAA Interim Policy , Paper No. INT/POL/27&29/1 issue date 1 June 1997 for EEC System only.

HIRF Protection according to JAA Interim Policy Paper No. INT/POLI27&29/1 issue 3 dated 1 October 2003 for helicopters equipped with kit 109G4600F01-101 "G1000H installation kit"(ref. CRI F-01 issue 3).

保留及豁免:

无

等效安全:

无

环境标准包括噪声:

噪声: 见 TCDSN EASA.R.005.

排出物: ICAO Annex 16, Ed 1993, Vol II, Part II, Chapt. 2 (see Note 1 in this section)

Reference Date for determining the applicable requirements:

04 Aug 2006

Airworthiness Requirements

CS27/JAR27/FAR27 Amdt. as defined here below (Ref CRI A-01 Issue 1).

For all the affected areas,systems,parts or appliances,the following paragraphs of the CS 27 Amdt./ dated 14 November 2003 apply:

CS27.1;JAR27.2b)2)i);CS27.25;CS27.351;CS27.397;CS27.602;CS27.610;CS27.805;CS27.865;CS27.1529;CS Appendix A.

For all the unchanged areas, systems, parts or appliances, JAR 27 Small rotorcraft Issue 1, dated 6 September1993 apply, except the following paragraphs:

- JAR 27.561 replaced by FAR27.561 Base Amdt.;
- JAR 27.562
- JAR27.785 replaced by FAR27.2 Amdt.28 and FAR27.785 Base Amdt.;
- JAR 27.952
- JAR27.963 replaced by FAR27.963 Amdt.23;
- JAR27.971 replaced by FAR27.971 Base Amdt.;
- JAR27.973 replaced by FAR27.973 Base Amdt.;

Special Conditions:

HIRF Protection according to JAA Interim Policy , Paper No.

INT/POL/27&29/1 issue date 1 June 1997 for EEC System only.

HIRF Protection according to JAA Interim Policy Paper No. INT/POLI27&29/1 issue 3 dated 1 October 2003 for helicopters equipped with kit 109G4600F01-101 "G1000H installation kit"(ref. CRI F-01 issue 3).

Reversion and Exemptions:

None

Equivalent Safety Findings:

None

Environmental Standards including Noise:

Noise: see TCDSN EASA.R.005.

Emissions: ICAO Annex 16, Ed 1993, Vol II, Part II, Chapt. 2 (see Note 1 in this section)

(2) 生产依据

Production Basis

AgustaWestland Philadelphia Corporation

3050 Red Lion Road

Philadelphia, PA 19114 – USA

Federal Aviation Administration certified in accordance to Production Certificate N° 120NE

三. 技术特征和使用限制/TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

1. 型号设计定义

型号设计定义文件 109G0000X016 Rev.A 及其后版次。

Type Design Definition:

Refer to Type Design Definition 109G0000X016 Rev.A and subsequent

2 描述/Description

由电子发动机控制（EEC）控制的单发旋翼航空器，4 片复合材料主旋翼桨叶，铰接式（具有弹性轴承）主旋翼，两片复合材料桨叶跷跷板式尾桨，滑撬式起落架，1 名飞行员和 7 名成员座位设置。

Single engine rotorcraft controlled by Electronic Engine Control (EEC), four (4) composite MR blades, articulated (with elastomeric bearings) main rotor, twin (2) composite blade teetering tail rotor, skid landing gear, one (1) pilot and seven (7) passengers capacity.

3 设备/Equipment

适航规则所需的基本设备（见认证基础）应安装在直升机上以备适航取证。此外，还需要下列设备：

-由 IDS 和外部探头 P/N E22307—2-4 提供的与外部空气温度有关的数据批准的强制性和可选设备列出在报告 109G0840W030 “AW119MKII 图 A - 设备清单”，并在报告 109G0840W046 为 AW119MKII 直升机配置安装包 109G4600 F01-101 “G1000 H 安装包”。

请参阅飞行手册的设备清单。

Basic equipment required by the airworthiness rules (see Certification Basis) shall be installed on the helicopter for the Airworthiness Certificate release.

Besides, the following equipment are required:

- Data relevant to outside air temperature, provided by IDS and external probe P/N E22307-2-4

Approved mandatory and optional equipment are listed in the report 109G0840W030 "AW119MKII Chart A – Equipment List" and in the report 109G0840W046 for AW119MkII helicopters equipped with kit 109G4600F01-101 "G1000H Installation kit".
Refer also to the Equipment list in RFM

4 尺寸 Dimensions

机身/Fuselage	长/ Length	m 11.14
	宽/Width	m 2.88
	高/Height	m 3.60

主旋翼/ Main Rotor 直径 Diameter m 10.830

尾桨/ Tail Rotor 直径 Diameter m 1.94

5 发动机

Engine

加拿大 Pratt & Whitney 公司
1 台 PT6B-37A
制造专用条件 No.1242
Pratt & Whitney Canada
1x PT6B-37A
Build Specification No.1242
国外适航当局发动机 TCDS n°: TCCA E-20
Foreign Authority Engine TCDS n°: TCCA E-20
EASA TC/TCDS n°: EASA.IM.E.039
EASA 数据单号 n°: EASA.IM.E.039
CAAC 认可证号: VTC 172 E, VTCDS 版次为 R1
CAAC VTC NO.: VTC172E, VTCDS R1

发动机限制	起飞(5 分钟)	917SHP, 108,5%TQ, (102% NR)
Engine Limitations	最大连续	847SHP, 100%TQ, (100% NR)
	见 EASA 批准的旋翼航空器飞行手册所定义的 ITT 和 N1 限制	
传动装置扭矩限制	Take Off (5 minutes)	917SHP, 108,5%TQ, (102% NR)
Transmission Torque Limits	Maximum Continuous	900SHP, 106,5%TQ, (102% NR)
	See EASA approved Rotorcraft Flight Manuals for ITT and N1 limits	

螺旋桨和螺旋桨限制

Propeller And Propeller N/A

Limitations

旋翼转速限制	有功率状态:	最大	103%(396rpm)
Rotor Limitations		最小	95%(365rpm)
	无动力状态	最大	110%(422rpm)
		最小	90%(346rpm)
	参见 EASA 批准的飞行手册-第一部分		
	Power on:	Max	103%(396rpm)
		Min	95%(365rpm)
	Power off:	Max	110%(422rpm)
		Min	90%(346rpm)

Refer to approved RFM Section 1 for detailed information

传动系统扭矩限制	起飞(5 分钟)	917SHP, 108,5%TQ, (102% NR)
Transmission Torque Limits	最大连续	900SHP, 106,5%TQ, (102% NR)
	Take Off (5 minutes)	917SHP, 108,5%TQ, (102% NR)
	Maximum Continuous	900SHP, 106,5%TQ, (102% NR)
6 辅助动力装置和辅助动力装置限制	不适用	
Auxiliary Power Unit (APU) and APU limitations	N/A	
7 燃油	(适用于所有温度情况下)	
Fuel	ASTM D1655 Type Jet A; ASTM D1655 Jet A-1; MIL-T-5624 Type JP-5; MIL-T-83133 Type JP-8; 3 号喷气燃料 (GB6537-2006)	
	详细信息: 见参考 EASA 批准的飞行手册第一部分	
	For all temperatures:	
	ASTM D1655 Type Jet A; ASTM D1655 Jet A-1; MIL-T-5624 Type JP-5; MIL-T-83133 Type JP-8; No.3 Jet Fuel (GB6537-2006).	
	For detailed information: see EASA approved RFMs-Section 1.	
7.1 燃油容量	可用燃油: 595.0 升 (157 US Gal)	
Fuel capacities	安装辅助油箱时的可用燃油和不可用燃油量见 EASA 批准的旋翼航空器飞行手册	
	Total usable: 595.0 litres (157 US Gal)	
	Refer to RFM for unusable fuel and for fuel capacity	
	When installed auxiliary tanks	
8. 滑油	发动机	MIL-PRF-23699(MIL-L-23699), or PWA-521
Oil	传动系统滑	MIL-PRF-23699(MIL-L-23699) or DOD-L-85734
	详细信息: 见参考 EASA 批准的飞行手册第一部分	
	Engine:	MIL-PRF-23699(MIL-L-23699), or PWA-521
	Transmission:	MIL-PRF-23699(MIL-L-23699) or DOD-L-85734
	For detailed information refer to EASA approved RFM-Section 1.	
8.1 滑油容量	发动机:	10,45l(2,76 USGal)
Oil capacities	传动系统:	10,3 l (2,72 USGal)
	不可用滑油量见旋翼航空器飞行手册第 6 章	
	Engine:	10,45 l(2,76 USGal)
	Transmission:	10,3 l (2,72 USGal)
	(Refer to approved RFM Section 6 for non-drainable lubricant)	
9 空速限制	152 Kts IAS	
Airspeed limits:	详细信息参见 EASA 批准的飞行手册第一部分	
	Refer to approved RFM for reduction in VNE with altitude and other speed limitations.	
10. 最大使用升限及温度	高度	15000ft (4572m) Hp

Maximum Operating Altitude and Temperature	对于 AW119MkII 直升机配置了件号 109G4600F01-101 "G1000H Installation kit"和件号 109G0200F01: 24 000 ft (7 315 m) Hp 或 25 000 ft (7 620 m) 先到者为先 温度: OAT 限制参考批准的飞行手册-第一部分 Altitude 15000ft (4572m) Hp For AW119MkII helicopters equipped with kit 109G4600F01-101 "G1000H Installation kit" and kit 109G0200F01: 24 000 ft (7 315 m) Hp or 25 000 ft (7 620 m) whichever comes first Temperature: Refer to approved RFM Section 1 for OAT limitations
10.1 使用限制 Operating Limitations	白天和夜间目视飞行 非结冰条件下 起飞和着陆附加限制见批准的飞行手册-第一部分 VFR day and night Non-icing conditions Additional limitations for TO and LDG refer to approved RFM Section 1
11. 重心范围 Centre of Gravity Range	重心包线见 EASA 批准的飞行手册 Refer to approved RFM for CG envelope
12. 最大审定重量 Maximum Certified Weight	2850kg (6283 lb)
12.1 最大行李/货物装载 Maximum Baggage/Cargo Load	在 STA4880mm(192in)处 150kg(330lbs)或依据飞行手册第六部分载荷分布定义。 货舱地板最大载荷 500kg/m²(102lb/ft²) 最大货舱安全挂点载荷为 91kg(200lbs). 150kg (330lbs) at STA 4880 mm (192 in) or according to load distribution defined in the RFM - Section 6. Maximum load on cargo compartment floor: 500 kg/m²(102lb/ft²) Maximum load on securing points of cargo compartment: 91 kg (200 lb)
13. 测量基准 Datum:	纵向 基准线原点(SAT 0)位于前支撑点前 1785mm(70,3 in)处 横向 基准线位于两侧主支撑点+/-450 mm (+/-18 in)中间, 与纵向基准线相交, 详见飞行手册-第六部分。 Longitudinal: The datum line (STA 0) is located at 1785mm (70,3 in) forward of the front jack point. Lateral: The datum line (BL 0) is located at +/-450 mm (+/-18 in) inboard of each of the two main jack points and it coincides with the helicopter longitudinal plane of symmetry. Refer to RFM Section-6 for detailed information.
14. 水平测量措施 Levelling Means:	顶棚参考点垂钓铅锤到位于座舱地板制定平台, 详见飞行手册-第六部分 Plumb line from ceiling reference point to the index plate located on passengers compartment floor or the spirit level plate is to be placed on cabin roof right stanchion reference. Refer to Maintenance Manual

15. 平局气动弦 MAC	不适用 N/A
16. 最小飞行机组 Minimum Flight Crew:	右侧单驾驶员 One (1) pilot (right seat)
17. 座位数量 Passenger Seating Capacity:	7 人 7 (seven) passengers
17.1 乘客应急出口 Passenger Emergency Exit:	两个, 客舱每侧一个 2 (two), one on each side of the passengers cabin
18. 桨叶控制移动范围 Rotor Blade and control movement	主旋翼 (总距) min -2° max +12° 尾桨 右脚蹬 -8° 左脚蹬 +24° 操纵系统详细参数见 A119/AW119MKII 维护手册 Main Rotor (Collective) min -2° max +12° Tail Rotor RH pedal -8° LH pedal +24° For rigging information refer to the Maintenance Manual
19. 制造序号 Eligible serial numbers	安装图纸 119-9000-01-111 从 from s/n 14701 至 s/n 14999 直升机序号 s/n14701 至 s/n 14999 装有 109G4600F01-101"G1000H Installation kit"组件, 参见注释 3 Assembly drawing 119-9000-01-111 from s/n 14701 to s/n 14999 Assembly drawing 119-9000-01-111 from s/n 14701 to s/n 14999 Helicopters from s/n 14701 to s/n 14999 are equipped with kit 109G4600F01-101"G1000H Installation kit ". See Note 3
20. 设备 Equipment	依据适航规范 (见审定基础) 要求的基本设备, 为适航许可须按安装在直升机上。另外, 要求安装以下设备: - 与外界温度有关的数据, 由 IDS 和外部探头 P/N E22307-2-4 提供 - 批准的强制和选装设备清单列在报告 109G0840W030 "AW119MKII Chart A – Equipment List" 及装有 109G4600F01-101"G1000H Installation kit "组件的 AW119MKII 列在报告 109G0840W046 中 参见旋翼航空器飞行手册中的设备清单。 Basic equipment required by the airworthiness rules (see Certification Basis) shall be installed on the helicopter for the Airworthiness Certificate release. Besides, the following equipment are required: - Data relevant to outside air temperature provided by IDS and external probe P/N E22307-2-4 - Approved mandatory and optional equipment are listed in the report 109G0840W030. "AW 119MKII Chart A - Equipment List" and in the report 109G0840W046 for AW119MkII helicopters equipped with kit 109G4600F01-101"G1000H Installation kit". Refer also to the Equipment list in RFM

21. 其他

Other:

21.1 寿命件

Life-limited parts:

参考 EASA 批准的 A119/AW119MKII 维护大纲第 4A 章

Refer to EASA Approved Chapter 04A of the A119/AW119MKII Maintenance Planning Manual

21.2 机轮和轮胎

Wheels and Tyres:

不适用

N/A.

21. 注释 Notes

1. 发动机关车时，喷油管排出的燃油会被收集到主燃油箱中，相应的图纸编号：109-0613-67
The fuel vented from the injector line at the engine shutdown, is recollected into the main fuel tank according to the Drawing 109-0613-67.
2. 旋翼航空器飞行手册：
RFM109G0040A017 适用于 AW119MKII.
RFM109G0040A033 适用于装有 109G4600F01-101"G1000H Installation kit"组件的 AW119MKII 直升机
Rotorcraft Flight Manual
RFM109G0040A017 is applicable to the AW119MKII.
RFM109G0040A033 is applicable to the AW119MKII helicopters equipped with kit 109G4600F01-101"G1000H Installation kit".
3. 制造系列号
安装图纸 119-9000-01-111 从 s/n 14701 至 s/n 14999
直升机序号 s/n14901 至 14999 装有 109G4600F01-101"G1000H Installation kit"组件。
Manufacturer's eligible serial numbers:
Assembly drawing 119-9000-01-111 from s/n 14701 to s/n 14999
Helicopters from s/n 14901 to s/n 14999 are equipped with kit 109G4600F01-101"G1000H Installation kit"
4. AW119Ke 和 Koala 是 AW119MKII 的直升机市场名字。
AW119Kx 是装有 109G4600F01-101"G1000H Installation kit" 的 AW119MKII 直升机市场名字
AW119Ke and Koala enhanced are used as marketing designation for AW119MKII helicopters. AW119Kx is used as marketing designation for AW119MKII helicopters equipped with kit 109G4600F01-101 "G1000H Installation kit".
5. 中文标牌和标识包含在图纸 109-0812-91, ISS.B 或 CAAC 批准的更新版本中。
Chinese Placards and markings are included in Drawing 109-0812-91, ISS.B or later revisions CAAC approved.

四. IV使用 and 维修技术资料/Operating and Service Instructions

1. 飞行手册文件号

Rotorcraft Flight Manua

109G0040A017 Issue 1 Rev. – 批准信函 n° EASA

D(2007)CPRO/MMA/52311 批准日期 2007-06-11 及后续批准版次

- 1109G0040A033 Issue 1 Rev.- (见本节注释 2)批准信函 n°10054263 and 10054264,批准日期 2015-07-30 及后期批准版次
109G0040A017 Issue 1 Rev. -, approval letter n° EASA D(2007)CPRO/MMA/52311 dated 11 June 2007, and later approved revisions.
109G0040A033 Issue 1 Rev.- (see Note 2 in this section) approval letters n°10054263 and 10054264, dated 30 July 2015, and later approved revisions.
2. 维修手册文件号
Maintenance Manual
A119/AW119MKII-MPM Issue 1 Rev. 0 - 维护计划大纲
A119/AW119 MKII-MM Issue 1 Rev. 0 维护手册及相关批准(如需)版次
A119/AW119MKII-MPM Issue 1 Rev. 0 Maintenance Planning Manual
A119/AW119 MKII-MM Issue 1 Rev. 0 Maintenance Manual
and subsequent approved (when required) revisions.
3. 服务信件和服务通告 Service Letters and Service Bulletins:
由 Leonardo S.p.A. Helicopters.发布的(见注释 5)
As published by the Leonardo S.p.A. Helicopters.
4. 必备设备
Required Equipment
参见上述第三节和批准的旋翼航空器飞行手册及相关补充章节中批准的必装和选装设备
Refer to the section III.3 above and to approved Rotorcraft Flight Manuals and related supplements for the approved mandatory and optional equipment

第 3 部分所有型号相关数据

SECTION 3 DATA PERTINENT TO ALL MODELS

N/A

第 4 部分注释

SECTION 4 NOTES

The End