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第1部分 概述

SECTION 1 GENERAL

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

	中国民用航空总局认可数据单号、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	VTC108A, R1, 2008-04 08	H3WE, R22, (其中600N数据单为第19版) H3WE, R22, (Revision 19 for 600N only)
历史 history	VTC-108A, R0, 2000-09-13	

2. 类别/Category: 正常类 Normal Category
3. 认可当局/Validation Authority: CAAC
审定当局/Certifying Authority: FAA
4. 型号合格证持有人/Type Certificate Holder: MD Helicopters Inc(MDHI)
4555 N McDowell Road
Mesa, Arizona 85215-9797
U.S.A
5. 资料批准Service Information

CAAC接受注明有FAA批准字样的服务通告、旋翼航空器飞行手册和旋翼航空器维护手册第四章等使用维护资料。FAA的这些批准代表了CAAC的批准且仅限于本数据单所列型号设计。

Service bulletins, rotorcraft flight manuals, and rotorcraft maintenance manuals chapter 4, which contain a statement that the document is FAA approved, are accepted by the CAAC and are considered CAAC-approved. These approvals pertain to the type design only.

第2部分 369E型

SECTION 2 Model 369E

1. 认可审定基础 Validation Basis

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

The CAAC validation basis is consists of the FAA certification basis as applicable and the CAAC additional technical conditions, as follows:

1.1 FAA审定基础的适用要求 FAA certification basis as applicable

- 适航标准及其修正案水平 Airworthiness Standards and Amendment Levels

CAR6,1956年12月20日颁发, 包括修正案6-1到6-4。

CAR 6 dated December 20, 1956, including Amendments 6-1 through 6-4.

- 专用条件 Special Condition:

与民用航空条例第6.10 部份对轻型涡轮动力直升机要求等效安全的补偿因素确定条件,
1962年10月2日颁发, 1966年2月8日修订。

"Conditions Establishing Compensating Factors Providing an Equivalent Level of Safety Under Civil Air Regulations, Section 6.10, for Light Turbine Powered Helicopters," dated October 2, 1962, as revised February 8, 1966.

- 豁免 Exemptions

无 None

- 等效安全项目 Equivalent Safety Findings

无 None

1.2 CAAC附加技术条件 CAAC additional technical conditions

- 根据认可审定基础中的适用要求为旅客所设置的所有文字标记和标牌以及各应急出口的内外标记至少用中文表述, 如在客舱、行李舱和贮存舱的内部和外部有关安全说明和应急撤离说明的标记和标牌。

The placards and markings for passengers and for emergence exit as required by the applicable requirements of this validation basis, such as safe and emergence instructions located inside or outside of passenger cabin, baggage and stowage compartments, must be presented in at least Chinese, or Chinese and English languages.

2. 技术特性 Technical Characteristics

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

MD500/600有效图纸清单 (2008年1月2日)

Active Controlled Drawing List 500/600 Full Report (ACDL), Dated 01/02/2008

2.2 设备 Equipment (Note 3)

认可审定基础中适用条款所要求的基本设备必须安装在航空器上。所有要求必须安装的设备 and 选装设备在Hughes (原TC持有人) 报告中给出清单。

The basic required equipment as prescribed in the applicable airworthiness regulations of the validation basis must be installed in the helicopter. All required equipment that must be installed as well as optional equipment installations are listed in Hughes Reports:

369E	369-E-5009	Model 369E Equipment List
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FAA批准的旋翼航空器飞行手册

FAA Approved Rotorcraft Flight Manuals

369E	dated November 23, 1982
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2.3 发动机 Engines

- 数量 Numbers: 1
- 型别 Model: Rolls-Royce公司 (前身为Allison Engine)
Rolls-Royce Corporation (formerly Allison Engine Company) 250-C20R/2
- 限制 Limits: (标准海平面条件下Standard sea level condition)

250-C20R/2额定值 Ratings for 250-C20 R/2

	起飞 (5分钟) Takeoff (5 min)	最大连续 Max. Continuous
轴马力 Shaft Horsepower	375	350
扭矩 Torque	318 ft. - lb. (87.2 psi)	297 ft. - lb. (81.3 psi)
燃气发生器转速, N1 Gas Producer rpm, N ₁	53519 (105%)	53519 (105%)
输出轴转速, N2 Output Shaft rpm, N ₂	6196 (103%)	6196 (103%)
测量燃气温度 Measured Gas Temp.	1490°F (810°C)	1385°F (752°C)

250-20R/2的瞬态限制

Transient Limits for 250-20R/2

测量燃气温度 (6秒限制) Measured Gas Temp. (6 sec. limit)	1490°F (810°C) 1550°F (843°C) - C20B only 1650°F (899°C) - C20R/2 only
测量燃气温度 起动期间 (10秒限制) Measured Gas Temp. During Start (10 sec. limit)	1490°F (810°C) to 1700°F (927°C) (1 Sec. 1700°F)

燃气发生器转速 N1 （15秒限制） Gas Producer rpm, N ₁ (15 Sec. limit)	54028 (106%)
输出轴转速N2 （15秒限制） Output Shaft rpm, N ₂ (15 Sec. limit)	6798 (113%) at Idle to 6316 (105%) at Takeoff

2.4 燃油 Fuel

- 规格 Specification: 中国3号喷气燃油
MIL-DTL-5624, Grade JP-4, and JP-5 Aviation Fuels
MIL-DTL-83133 Grade JP-8 Aviation Fuel
ASTM D-1655 Jet A,A-1 or Jet B
ASTM D-6615 Jet B
其他燃油规格参见飞行手册
- Chinese Specification GB6537-94 Grade RP-3;
MIL-DTL-5624, Grade JP-4, and JP-5 Aviation Fuels
MIL-DTL-83133 Grade JP-8 Aviation Fuel
ASTM D-1655 Jet A,A-1 or Jet B
ASTM D-6615 Jet B
Refer to Flight Manual for others.

- 容量 Capacity:

燃油系统 Fuel System	总容量 Total Tank Capacity (lbs.)	残余燃油 Trapped Fuel * (lbs.)	不可用燃油 Total Unusable Fuel ** (lbs.)	可用燃油容量 Usable Fuel Capacity (lbs.)
369A8100	416	0	12.5	403
369H90029 (self sealing)	402	0	12.5	389

*残余燃油是指在正常地面姿态下无法排除的燃油。

*Fuel which cannot be drained from the tanks through the drain provided - with the helicopter in the normal ground attitude.

**不可用燃油是指在各种飞行姿态下无法使用的燃油，且必须被空载重量所包含，这还包括了残余燃油。

**Fuel which cannot be used safely in all flight attitudes, and which must be included in the empty weight. This includes trapped fuel.

注：总燃油容量包括了上述所有的燃油容量，燃油的重量是基于JP-4燃油特性计算的。

Note: Fuel capacities are total tank capacities over and above unusable fuel. Fuel weights are based on JP-4 fuel.

2.5 发动机滑油 Engine oil

- 规格 Specification: 参见飞行手册
Refer to Flight Manual.
- 容量 Capacity: 6.00 lbs

2.6 MGB和TGB减速器滑油 MGB&TGB oil

- 规格 Specification: 参见 飞行手册
Refer to Flight Manual.
- 容量 Capacity: 11.60 lbs

2.7 空速限制 Airspeed Limits

在海平面上 V_{NE} 为152 knots(175 mph) CAS, 考虑高度和温度发生变化造成 V_{NE} 减小后为: 在海平面上369E 自转时 V_{NE} 为130 knots(150 mph) CAS。

V_{NE} (Never Exceed Speed) at sea level is 152 knots (175 mph) CAS. For reduction of V_{NE} with altitude and temperature: The 369E autorotation V_{NE} at sea level is 130 knots (150 mph) CAS.

2.8 旋翼限制 Rotor Limitations

250-20R/2的限制和转速 Limits and Speeds for 250-C20R/2

无动力时(旋翼) Power Off (rotor)	有动力时 (发动机) Power ON (engine)
最大523 rpm Maximum: 523 rpm	最大492 rpm/103 % N_2 Maximum: 492 rpm/103 % N_2
最小410 rpm* Minimum: 410 rpm*	最小487 rpm / 102% N_2 Minimum: 487 rpm / 102% N_2

*当安装4个叶片的尾桨时最小为: 415 rpm

*Minimum with 4-bladed tail rotor installed: 415 rpm

2.9 最大使用高度 Maximum Operating Altitude:

- 飞行 Flight Hp = 16 000 ft 气压高度 density altitude

2.10 批准的运行类别 Approved Kinds of Operation

参见飞行手册
Refer to Flight Manual.

2.11 最大重量 Maximum Weights:

3000 lb.
参见飞行手册Refer to Flight Manual

2.12 重心范围 C.G Range:

	纵向 Longitudinal		横向 Lateral	
总重 Gross Weight (lb.)	前 Forward (Sta.)	后 Aft* (Sta.)	左 Left (in.)	右 Right (in.)
3000	99	103	-3	+3
1538	99	107.4	-3	+3

*在给定点间线形变化

Varies linearly between points shown.

注：正面朝前，相对于直升机的中线：“+”表明右，“-”表明左。

NOTE: Facing forward, + indicates right, and - indicates left of helicopter centerline.

- 2.13 调平方法 Leveling means: 站位92.64 的铅锤
Plumb bob at Sta. 92.64
- 2.14 最小机组人数 Minimum Crew: 1 名驾驶员
1 (pilot)
- 2.15 最大座位数 Max. Seat Capacity: 5 (含飞行员座位)
对于基本构型，站位71.5处1人，站位73.5处2人，站位105人2人。
5 (including pilot seats)
1 at Sta. 71.5, 2 at Sta. 73.5, 2 at Sta. 105 for basic configuration Only. 1 pilot
- 2.16 载货 Baggage Loading 在站位78.5到124之间，
Sta. 78.5 to 124
- 最大载货量 Max. Loading: 1300 lb.
- 最大分布载荷 Max. load 115 lb./sq. ft

3. 使用说明 Operating and Service Instructions

3.1 CAAC飞行手册 CAAC Flight Manual:

- FAA批准的飞行手册（第16版），或FAA批准的后续版本。
FAA approved Flight Manual(RN 16), or later FAA approved revisions.

3.2 持续适航文件 Continued Airworthiness Documents

- 369E 主使用手册第四章，适航限制（FAA批准的最新版本）
369E Master Servicing Manual Chapter 04, Airworthiness Limitations (latest effective
FAA-approved revision).
- 369E 维护手册
369E Maintenance Manual,
- 369E 结构修理手册
369E Structural Repair Manual
- 369E 零件图解目录
369E Illustrated Part Catalogue

4. 注释/Notes

- 注释1 Note 1: 生产许可（FAR-21）：No. 715NM (1999/11/05)
Production certificate (FAR-21): No. 715NM (1999/11/05)

- 注释2 Note 2: 噪声特性: 采用Rolls-Royce公司250-C20R/2作为选装发动机未造成直升机的声学更改, 因此配装Rolls-Royce公司250-C20R/2发动机的369E型直升机仍然是1阶段直升机。
- NOISE CHARACTERISTICS. Substitution of Rolls-Royce Corporation 250-C20R/2 engine results in no acoustic change. Thus, Model 369E aircraft with the 250-C20R/2 engine installed is also Stage 1 helicopters.
- 注释3 Note 3: 369E 的可选装设备见文件 369D290000 “List-Options Model 369D-K Series Helicopters”。
- Refer to (applicant) Doc. No. 369D290000 “List-Options Model 369D-K Series Helicopters” for 369E model Optional Equipment.
- 注释4 Note 4: 重量及装载说明中的重量-平衡细分项目(包括一系列设备), 在初次单机适航审查时必须安装或装载到直升机上。为获得最相符的重量-平衡结果, 每一直升机应采用支撑点而非起落架进行称重。当直升机的更改影响到重量平衡时, 应符合飞行手册中有关重量-平衡的要求
- The weight and balance breakdown including the list of equipment items incorporated in the weight and loading instructions, must be provided for each helicopter at the time of original airworthiness certification. To obtain the most consistent weight and balance results, all helicopter should be weighed on jack-points rather than on wheels. When changes are made to the helicopter which affect the weight and balance, refer to the Flight Manual for weight and balance instructions.
- 注释5 Note 5: 进口中国的飞机系列号 0001及以后
- Series Nos. imported to China 0001 and up

****适用于偏航稳定增益系统 Applicable to the yaw stability augmentation system.**

- 豁免 Exemptions

无 None

- 等效安全项目 Equivalent Safety Findings

无 None

1.2 CAAC附加技术条件 CAAC additional technical conditions

- 根据认可审定基础中的适用要求为旅客所设置的所有文字标记和标牌以及各应急出口的内外标记至少用中文表述，如在客舱、行李舱和贮存舱的内部和外部有关安全说明和应急撤离说明的标记和标牌。

The placards and markings for passengers and for emergence exit as required by the applicable requirements of this validation basis, such as safe and emergence instructions located inside or outside of passenger cabin, baggage and stowage compartments, must be presented in at least Chinese, or Chinese and English languages.

2. 技术特性 Technical Characteristics

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

MD500/600有效图纸清单（2008年1月2日）

Active Controlled Drawing List 500/600 Full Report (ACDL) , Dated 01/02/2008

2.2 设备 Equipment

认可审定基础中适用条款所要求的基本设备必须安装在航空器上。所有要求必须安装的设备 and 选装设备包括在MD500/600有效图纸清单（2008年1月2日）中给出清单。

The basic required equipment as prescribed in the applicable airworthiness regulations of the validation basis must be installed in the helicopter. All required equipment that must be installed as well as optional equipment installations are listed in “Active Controlled Drawing List 500/600 Full Report (ACDL) ” , Dated 01/02/2008.

FAA批准的旋翼航空器飞行手册，1991年12月12日版。

FAA Approved Rotorcraft Flight Manual - 500N, dated September 12, 1991

2.3 发动机 Engines

- 数量 Numbers: 1
- 型别 Model: Rolls-Royce公司（前身为Allison Engine公司）250-C20R/2
Rolls-Royce Corporation (formerly Allison Engine Company)
250-C20R/2
- 限制 Limits: (标准海平面条件下 Standard sea level condition)

额定值 Ratings

	起飞 (5分钟) Takeoff (5 min)	最大连续 Max. Continuous
轴马力 Shaft Horsepower	425	375
扭矩 Torque	371.0 ft. - lb. (101.8 psi)	327.4 ft. - lb. (89.8 psi)
燃气发生器转速N1 Gas Producer rpm, N ₁	53519 (105%)	53519 (105%)
输出轴转速 N2 Output Shaft rpm, N ₂	6016 (100%)	6016 (100%)
测量燃气温度 Measured Gas Temp.	1490°F (810°C)	1385°F (752°C)

瞬态限制 Transient Limits

测量燃气温度 (6秒限制) Measured Gas Temp. (6 sec. limit)	1490°F (810°C) to 1650°F (899°C)
测量燃气温度 起动期间 (10秒限制) Measured Gas Temp. During Start (10 sec. limit)	1490°F (810°C) to 1700°F (927°C) (1 Sec. 1700°F)
燃气发生器转速 N1 (15秒限制) Gas Producer rpm, N ₁ (15 Sec. limit)	55028 (106%)
输出轴转速N2 (15秒限制) Output Shaft rpm, N ₂ (15 Sec. limit)	6798 (113%) at Idle to 6316 (105%) at Takeoff

2.4 燃油 Fuel

- 规格 Specification:

中国3号喷气燃油

MIL-DTL-5624, Grade JP-4, and JP-5 Aviation Fuels

MIL-DTL-83133 Grade JP-8 Aviation Fuel

ASTM D-1655 Jet A, A-1 or Jet B

ASTM D-6615 Jet B

其它燃油规格参见飞行手册

Chinese Specification GB6537-94 Grade RP-3

MIL-DTL-5624, Grade JP-4, and JP-5 Aviation Fuels

MIL-DTL-83133 Grade JP-8 Aviation Fuel

ASTM D-1655 Jet A, A-1 or Jet B

ASTM D-6615 Jet B

Refer to Flight Manual for others.

- 容量 Capacity:

燃油系统Fuel System	总容量 Total Tank Capacity (lbs.)	残余燃油 Trapped Fuel * (lbs.)	不可用燃油 Total Unusable Fuel ** (lbs.)	可用燃油容量 Usable Fuel Capacity (lbs.)
369A8100	416	0	12.5	403
369H90029 (self sealing)	402	0	12.5	389

*残余燃油是指在正常地面姿态下无法排除的燃油。

Fuel which cannot be drained from the tanks through the drain provided - with the helicopter in the normal ground attitude.

**不可用燃油是指在各种飞行姿态下无法使用的燃油，且必须被空载重量所包含，这还包括了残余燃油。

Fuel which cannot be used safely in all flight attitudes, and which must be included in the empty weight. This includes trapped fuel.

注：总燃油容量包括了上述所有的燃油容量，燃油的重量是基于JP-4燃油特性计算的。

Note: Fuel capacities are total tank capacities over and above unusable fuel. Fuel weights are based on JP-4 fuel.

2.5 发动机滑油 Engine oil

- 规格 Specification: 参见飞行手册Refer to Flight Manual.

- 容量 Capacity: 6.00 lbs

2.6 MGB和TGB减速器滑油 MGB&TGB oil

- 规格 Specification: 参见飞行手册Refer to Flight Manual.

- 容量 Capacity: 11.60 lbs

2.7 空速限制 Airspeed Limits

在海平面上 V_{NE} 为152 knots(175 mph) CAS，考虑高度和温度发生变化造成 V_{NE} 减小后为：在海平面上500N 自转状态时 V_{NE} 为127 knots(146 mph) CAS。

V_{NE} (Never Exceed Speed) at sea level is 152 knots (175 mph) CAS. For reduction of V_{NE} with altitude and temperature: The 500N autorotation V_{NE} at sea level is 127 knots (146 mph) CAS.

2.8 旋翼限制 Rotor Limitations

无动力时(旋翼) Power Off (Rotor)	有动力时 (发动机) Power ON (Engine)
Maximum: 508 rpm	Maximum: 477 rpm / 100% N ₂
Minimum: 410 rpm	Minimum: 473 rpm / 99% N ₂

2.9 最大使用高度 Maximum Operating Altitude:

- 飞行 Flight

Hp = 20 000 ft 气压高度

Hp = 20 000 ft density altitude

2.10 批准的运行类别 Approved Kinds of Operation

参见飞行手册

Refer to Flight Manual.

2.11 最大重量 Maximum Weights:

3350 lb.

参见飞行手册 Refer to Flight Manual

2.12 重心范围 C.G Range:

纵向 Longitudinal			横向 Lateral		
总重 Gross Weight (lb.)	前 Forward * (Sta.)	后 Aft** (Sta.)	Gross Weight (lb)	左 left*** (in.)	右 Right*** (in.)
3350	99	105.5	3350	-3	+3
2600	99	107.8	2000	-3	+3
1796	101.4	110.3	1796	-2.2	+2.2

*在2600 lbs 和1796 lbs之间线形变化。

Varies linearly between 2600 lbs. and 1796 lbs

**在3350 lbs 和 1796 lbs 之间线形变化。

Varies linearly between 3350 lbs. and 1796 lbs.

*** 在2000 lbs 和1796 lbs 之间线形变化。

Varies linearly between 2000 lbs. and 1796 lbs.

注：正面朝前，相对于直升机的中线：“+”表明右，“-”表明左。

NOTE: Facing forward, + indicates right, and - indicates left of helicopter centerline.

2.13 调平方法 Leveling means:

站位92.64 的铅锤

Plumb bob at Sta. 92.64

2.14 最小机组人数 Minimum Crew:

1名飞行员

1 (pilot)

- 2.15 最大座位数 Max. Seat Capacity:** 5 (含飞行员座位including pilot seats)。
对于基本构型，站位71.5处1人，站位73.5处2人，站位105处2人。
1 at Sta. 71.5, 2 at Sta. 73.5, 2 at Sta. 105 for basic configuration Only. 1 pilot
- 2.16 载货 Baggage Loading** 在站位78.5到124之间， Sta. 78.5 to 124
- 最大载货量 Max. Loading: 1300 lb.
 - 最大分布载荷 Max. load 115 lb./sq. Ft
参见飞行手册
Refer to Flight Manual

3. 使用说明 Operating and Service Instructions

3.1 CAAC飞行手册 CAAC Flight Manual:

- FAA批准的飞行手册（第3版），或FAA批准的后续版本。
FAA approved Flight Manual(RN 3), or later FAA approved revisions.

3.2 持续适航文件 Continued Airworthiness Documents

- 500N 主使用手册第四章，适航限制（FAA批准的最新版本）
500N Master Servicing Manual Chapter 04, Airworthiness Limitations (latest effective FAA-approved revision).
- 500N 维护手册
500N Maintenance Manual,
- 500N 结构修理手册
500N Structural Repair Manual
- 500N 零件图解目录
500N Illustrated Part Catalogue

4. 注释/Notes

- 注释1 Note 1:** 生产许可(far-21): No. 715NM (1999/11/05)
Production certificate (FAR-21): No. 715NM (1999/11/05)
- 注释2 Note 2:** 噪声特性：500N型飞机已经表明对于FAR36部附件H修正案36-18的符合性，为2阶段直升机
NOISE CHARACTERISTICS. The Model 500N has demonstrated compliance with FAR Part 36, Appendix H, through Amendment 36-18, for Stage 2 helicopters.
- 注释3 Note 3:** 500N 的可选装设备见文件 500N90000 “List-Options Model 500N Series Helicopters” 。
Refer to (applicant) Doc. No. 500N90000 “List-Options Model 500N Series Helicopters” for 500N model Optional Equipment.

第3部分 500N型

SECTION 4 Model 500N

1. 认可审定基础 Validation Basis

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

The CAAC validation basis is consists of the FAA certification basis as applicable and the CAAC additional technical conditions, as follows:

1.1 FAA审定基础的适用要求 FAA certification basis as applicable

- 适航标准及其修正案水平 Airworthiness Standards and Amendment Levels

CAR6,1956年12月20日颁发,包括修正案6-1到6-4。

CAR 6 dated December 20, 1956, including Amendments 6-1 through 6-4.

- 附加CAR6修正案6-7(1963年10月8日颁发)中的6.111和6.116部分规定的在7000ft高度进行的高速飞行测试的要求,

In addition, height velocity testing is required to 7000 feet, in accordance with paragraphs 6.111 and 6.116, as amended by Amendment 6-7, issued October 8, 1963.

- 专用条件 Special Condition:

与民用航空条例第6.10部份对轻型涡轮动力直升机要求等效安全的补偿因素确定条件, 1962年10月2日颁发, 1966年2月8日修订。

"Conditions Establishing Compensating Factors Providing an Equivalent Level of Safety Under Civil Air Regulations, Section 6.10, for Light Turbine Powered Helicopters," dated October 2, 1962, as revised February 8, 1966.

- FAR 36 部修正案 36-18 FAR 36, through Amendment 36-18

- FAR 27部中下列条款适用于500N无尾桨系统:

FAR 27 sections listed below are applicable to the NOTAR system:

规章Regulations	修正案Amendments
27.143* (a), (b), (c), (d), (e)	27-21
27.399	27-1
27.571	27-18
27.605 (b)	27-16
27.672**	27-21
27.927 (b)	27-12
27.1529	27-18

*替代CAR6.121 (a), (b), (c), (e)条款 Replaces CAR 6.121 (a), (b), (c), (e)

注释4 Note 4: 重量及装载说明中的重量-平衡细分项目（包括一系列设备），在初次单机适航审查时就必须安装或装载到直升机上。为获得最相符的重量-平衡结果，每一直升机应采用支撑点而非起落架进行称重。当直升机的更改影响到重量平衡时，应符合飞行手册中有关重量-平衡的要求。

The weight and balance breakdown including the list of equipment items incorporated in the weight and loading instructions, must be provided for each helicopter at the time of original airworthiness certification. To obtain the most consistent weight and balance results, all helicopter should be weighed on jackpoints rather than on wheels. When changes are made to the helicopter which affect the weight and balance, refer to the Flight Manual for weight and balance instructions.

注释5 Note 5: 进口中国的飞机系列号
Series Nos. imported to China
LN001 and subsequent

第4部分 600N型

SECTION 4 Model 600N

1. 认可审定基础 Validation Basis

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

The CAAC validation basis is consists of the FAA certification basis as applicable and the CAAC additional technical conditions, as follows:

1.1 FAA审定基础的适用要求 FAA certification basis as applicable

- 适航标准及其修正案水平 Airworthiness Standards and Amendment Levels

FAR 27部, 1964年10月2日颁发, 经过修正案27-30, 具有下列背离:

排除27.562和27.863 (早期型号没有这些要求);

27.561在修正案27-24;

27.607在修正案27-3;

27.785在修正案27-20;

27.1325在修正案27-12.

FAR 36部, 附录J, 在修正案36-21;

Far 27, dated October 2, 1964, through Amendment 27-30 with the Following deviations:

27.562 and 27.863 excluded (earlier models did not have these requirements);

27.561 at Amendment 27-24;

27.607 at Amendment 27-3;

27.785 at Amendment 27-3030;

27.1325 at Amendment 27-12.

FAR 36, Appendix J, Amendment 36-21.

- 专用条件 Special Condition:

高强度电磁辐射场 (HIRF) 保护, 根据1997年1月29日生效的FAR 21.16.

High Intensity Electromagnetic Radiation Fields (H.I.R.F) protection, Special Condition Per FAR 21.16 effective January 29, 1997, as published in the Federal Register FR 66, Page No.4134, dated January 29, 1997.

- 豁免 Exemptions

无 None

- 等效安全项目 Equivalent Safety Findings

N1转速表采用等效安全符合27.1549(b)

Equivalent safety finding for compliance to 27.1549(b) for the N1 gage.

1.2 CAAC附加技术条件 CAAC additional technical conditions

无 None

2. 技术特性 Technical Characteristics

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

MD500/MD600 有效图纸清单 (2000年6月7日)
MD500/MD600 active drawing list (June 7, 2000)

2.2 设备 Equipment

直升机必须装备适用的适航规章 (见审定基础) 中要求的基本设备。此外要求以下各项设备:
FAA批准的旋翼机飞行手册CSP-600NRFM-1或最新改版。

The basic required equipment as prescribed in the applicable Airworthiness regulations (see Certification Basis) must be installed in the helicopter for certification. In addition, the following items of equipment are required:

Approved Flight Manual CSP-600NRFM-1 or latest FAA approved revision.

2.3 发动机 Engines

- 数量 Numbers: 1
- 型别 Model: 英国罗尔斯-罗伊斯 (美国) 艾利森公司250-C47M
Rolls-Royce Allison 250-C47M
- 限制 Limits:

	轴马力 (Shp) Shaft Horsepower (shp)	扭矩 磅-英尺 Torque Lb-ft	涡轮温度℃ Turbine Temp ℃	燃气发生器速度%(RPM) Gas, Gen Speed%(RPM)
起飞 (5分钟) Take-off (5 min.)	600	524	779	1025(53,550)
最大连续 Max. Continuous	530	463	727 (见注1) 680 (见注2)	105(53,550)

注1: 低于10,000英尺压力高度。

Note1: less than 10,000 ft pressure altitude.

注2: 10,000英尺压力高度或以上

Note 2: 10,000 ft. pressure altitude or greater.

瞬态限制 Transient Limits

状态 Condition	时间限制 Time Limit	参数限制 Parameter Limit
扭矩 Torque	10秒 10 seconds	576英尺 576 ft-lbs

2.4 燃油 Fuel

- 规格 Specification:

牌号	规范
3号喷气发动机燃油 No.3 Jet Fuel	中国 GB6537-94 China GB 6537-94
Aviation turbine fuels Jet A or A-1 or Jet B	美国 ASTM D 1655 U.S.A. ASTM D1655
JP-4 or JP-5	美国 Mil-T-5624 U.S.A Mil-T-5624
JP-8	美国 Mil-T-83133 U.S.A Mil-T-83133

燃油温度限制见旋翼航空器飞行手册。

See Rotorcraft Flight Manual for fuel temperature limitations.

- 容量 Capacity:

可用 usable	不可用 Unusable
433.8升 (114.6美加仑) 433.8 litres (114.6 US Gal.)	6.1升 (1.6美加仑) 6.1 litres (1.6 US Gal.)

2.5 滑油 Engine oil

- 规格 Specification:

发动机滑油符合MIL-L-7808G或MIL-L-23699以及后续改版的标准。对于经批准的滑油制造商，见Allison发动机公司使用和维修手册CSP21004（最新版）。

Engine oil conforming to MIL-L-7808G or Mil-L-23699 and subsequent revisions are authorized for use. See Allison Engine Company Operation and Maintenance Manual, CSP21004 (latest revision), for approved oil manufacturers.

- 容量 Capacity:

发动机 Engine	主减 Transmission
2.95升 (0.78美加仑) 2.95 litres (0.78 US Gal)	6.62升 (1.75美加仑) 6.62 litres (1.75 US Gal)

2.6 主减速器限制 Transmission Limits

	扭矩限制 % Torque Limits %
起飞 Take-off	100
最大连续 Maximum Continuous	100

2.7 旋翼限制 Rotor Limits

无动力	有动力
最大506 rpm (106.4%) Maximum - 506 rpm (106.4%)	最大480.1rpm 101%(注3) N ₂ Maximum – 480.1 rpm/ 101%(Note3) N ₂
最小428 rpm (90%) Minimum – 428 rpm (90%)	最小470.6 rpm 99%(注3) N ₂ Minimum – 470.6rpm/99%(Notes)N ₂

注3: ECU控制旋翼转速在99.25%和100.75%之间。

Notes: ECU Governs rotor RPM between 99.25% and 100.75%.

2.8 空速限制 Airspeed Limits

V_{NE}(不可超越速度)对3600磅或更少的内部总重时在海平面带动力IAS是155海里（每小时178英里）；对3601磅到3800磅内部总重是145海里（每小时167）英里；对3801磅或更高内部总重是135海里（每小时156英里）。无动力VNE（自旋）海平面IAS是115海里（每小时132英里）。V_{NE}随高度和温度的减小，见旋翼航空器飞行手册批准部分。

V_{NE} (Never Exceed Speed) power-on at sea level is 155 knots (178 mph) IAS for 3600 lbs, or less internal gross weight; 145 knots (167 mph) IAS for 3601 lbs or more internal gross weight. V_{NE} power-off (autorotation) at sea level is 115 knots (132 mph) IAS. For reduction of VNE with altitude and temperature, see FAA approved Rotorcraft Flight Manual.

2.9 高度限制 Altitude Limits:

使用 JP-4 或 Jet B 燃油时为 20,000 英尺密度高度，19,000 英尺压力高度；或使用Jet A，Jet A-1，JP-5，或 JP-8 燃油时为 20,000 英尺压力高度，低者为限。

20,000 ft. density altitude, 19,000 ft. pressure altitude with JP-4 or Jet B, or 20,000 ft. pressure altitude with Jet A,JP-5, or JP-8 whichever is lower.

2.10 OAT 限制 OAT Limits

-40℃到+51.9℃（-40°F到+125°F）

（OAT随高度变化见旋翼航空器飞行手册）

-40℃ to +51.9℃（-40°F to +125°F）

(OAT at Sea Level See RFM for aviation at altitude)

2.11 最大重量 Maximum Weights:

海平面4100磅（1860公斤）。最大重量随质量高度变化见旋翼航空器飞行手册。

4,100 lbs. (1860 kg) at sea level. See RFM for variation of maximum weight with density altitude.

2.12 重心限制 C.G Limits:

重心随总重的变化见旋翼航空器飞行手册。名义限制在纵向是91到100，横向是-5.0到+5.0。

See FAA approved Rotorcraft Flight Manual for variation of CG limit with gross weight, nominal limits are 91.0 to 100.0 longitudinal, -5.0 to +5.0 lateral.

- 2.13 基准 Datum 直升机主旋翼中心线前方100英寸。
100 inches forward of main rotor centerline.
- 2.14 调平方法 Leveling means: 站位81.54的铅锤
Plumb bob at sta. 81.54
- 2.15 最小机组人数 Minimum Crew: 1名驾驶员
1(pilot)
- 2.16 最大座位数 Max. Seat Capacity: 8 (包括机组)
8 (include crew)
- 2.17 最大载货 Maximum Cargo 站位48.5到124, 每平方英尺115磅, 承载1350磅。
站位48.5到124, 每平方英尺561.5公斤, 承载612公斤。
1350 lbs. at 115 lb/sq. ft., sta. 48.5 to 124.0.
612 kg at 561.5 kg/sq meter, sta. 48.5 to 124.0.

3. 使用说明 Operating and Service Instructions

3.1 批准的出版物 Approved Publications

1. FAA批准的旋翼机飞行手册 CSP-600NRFM-1或最新改版。
 2. MD600N 基本维修指令手册第四部分适航限制CSP-600HMI-2。
1. Approved Rotorcraft Flight Manual CSP-600NRFM-1 or latest FAA approved revision.
 2. Airworthiness Limitation Section (ALS) Section 04-00-00 of the MDHS Model Helicopters Model 600N Basic Handbook of Maintenance Instructions CSP 600HMI-2.

3.2 持续适航文件 Continued Airworthiness Documents

见MD600N 基本维修指令手册持续适航部分。
See Continued Airworthiness Section of HMI for the Instructions for Continued Airworthiness for 600N aircraft.

3.3 寿命限制件 Life Limited Parts

见MD600N基本维修指令手册适航限制部分有关寿命件内容。
See Airworthiness Limitations Section of HMI for the life limited components for 600N aircraft.

3.4 标牌 Placards

以下标牌必须位于驾驶员前方并清晰可见: THIS HELICOPTER BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS SPECIFIED IN THE APPROVED FLIGHT MANUAL.

批准的飞行手册中列出的所有标牌必须安装于规定的位置。

The following placard must be displayed in front of and in clear view of the pilot: "THE HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH OPERATING LIMITATIONS SPECIFIED IN THE APPROVED FLIGHT MANUAL". All placards listed in the approved Flight Manual must be installed in the specified locations.

For additional placards, see Rotorcraft Flight Manual.

4. 注释/Notes

注释1 Note 1: 生产基础: 1999年2月18日以前, MD600N根据生产许可证PC410生产。1999年2月19日到1999年11月, MD600N根据生产许可证PC714生产。1999年11月以后, MD600N根据生产许可证PC175生产。各生产许可证适用范围如下:

Basis of Production: Production certificate No.410NM was utilized through February 18,1999 for the 369, 369A, 269HM, 369HS, 369HE, 369D, 369E, 369, 369FF, 500N ,and 600N helicopters. Effective February 18,1999 the Type Certificate (TC) No.H3WE was transferred to MD Helicopters Inc. (MDHI), the new TC holder. MDHI has licensed back to McDonnell Douglas Helicopter Company (MDHC) to build the 369E,369FF,500N, and 600N helicopters under a new Production Certificate NO.714NM. Effective February 19, 1999 the following serial number helicopters and subsequent will be Built under PC 714NM. Effective since Nov 1999, MDHI begins production under new PC 715NM starting at the following serial numbers.

型号 MODEL	PC410	PC714	PC715
369E	0542和以前 0542 and prior	0543	0544和以后 0544 and sub
369FF	0134和以前 0134 and prior	0317	0318和以后 0138 and sub
500N	LN086和以前 LN086 and prior	LN089	LN090和以后 LN090 and sub
600N	RN047和以前 RN047 and prior	RN054	RN053, RN055和以后 RN053, RN055 and sub

注释2 Note 2: 审定噪声水平在批准的旋翼航空器飞行手册中详细说明。
Certification Noise Levels are detailed in the approved Rotorcraft Flight Manual.

注释3 Note 3: 合格的序号: S/N RN003 和以后
Serial Numbers Eligible S/N RN003 and subsequent