

THE VALIDATION OF CERTIFICATE DATA SHEET

日期/Data: 2016-11-28

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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

	中国民用航空局认可数据单号、版次和颁发日期 CAAC Validation Data Sheet Number, Revision and issuance date	型号合格证数据单号、版次和颁发日期 Type Certificate Data Sheet Number, Revision and issuance date
当前 Current	Mi -171 VTC0333A REV 0 2016-11-28	Mi -171 No. 90-171 Rev 1 22 09 2016
历史 History	Mi-171 VTC081A 1997-03-18 Mi-171 VSTC056 2000-07-06	Mi-171 No. 90-171 29 12 1995 Mi-171 No. 90-171D01 05 12-1997

2. 认可当局/Validation Authority:

中国民用航空局/CAAC

审定当局/Certifying Authority:

俄罗斯联邦航空运输署 (注释 2)

FEDERAL AIR TRANSPORT AGENCY OF RUSSIAN
FEDERATION (FATA) (Note 2)

3. 型号合格证 Type Certificate Number:

No. 90-171

型号合格证持有人/Type Certificate Holder:

Mil Moscow Helicopter Plant, SC
26/1, Garshina str., Tomilino twm, Lyubertsy district,
Moscow Region, Russia, 140070

型号合格证持有人记录

不适用

Type Certificate Holder Record

N/A

4. 进口要求/Import Requirement

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, 即: 本架航空器符合 CAAC 所批准的型号设计, 并处于可安全运行的状态。

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

2部分 型号数据
SECTION 2 TYPE DATA**I.型号: MI-171****TYPE NUMBER: MI-171****一、 产品型别和批准日期/THE PRODUCT MODEL AND APPROVAL DATE**

CAAC 认可日期 1997-3-18

CAAC Validated Date

1. 型号合格证数据单号 **No. 90-171**

Type Certificate Data Sheet No.

2. 型号、衍生型或型别 Type / Variant or Model

(a) 型号/Type **Mi-171**

(b) 衍生型或型别 Variant or Model:

3. 适航类别 运输类旋翼航空器

Airworthiness Category A 类和 B 类

Transport category A and B

4. 型号合格证持有人 Mil Moscow Helicopter Plant, SC

Type Certificate Holder: 26/1, Garshina str., Tomilino tw, Lyubertsy district,
Moscow Region, Russia, 140070

5. 国外适航当局申请日期 不适用

Foreign Authority Application Date: N/A

6. 国外适航当局型号审定日期 1995 年 12 月 29 日

Foreign Authority Type Certification 29 12 1995

Date:

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 Validation Certification Basis

CAAC 型号认可审定基础定义如下:

- 1 合格证数据单 No. 90-171 中确定的审定基础。
- 2 CAAC 附加技术条件/ CAAC Additional Technical Requirement :
 - 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) 依据 第 29.2 条 特别追溯要求

对于 2003 年 8 月 1 日以后制造的各旋翼航空器, 申请人必须表明每个乘员座椅均装有满足本条(a)、(b)和(c)要求的安全带和肩带。

(a)每个乘员座椅必须具有一套单点脱扣的组合式安全带和肩带。每个驾驶员的组合式安全带和肩带必须允许驾驶员在系上安全带和肩带就座时能够完成飞行操作所有必需的功能。安全带和肩带不使用时必须有措施将其固定, 以免妨碍旋翼航空器的操作和应急情况下的快速撤离。

(b)必须用安全带加上能防止头部与任何伤害性物体碰撞的肩带, 保护每个乘员免受严重的头部损伤。

(c) 在适用的情况下, 安全带和肩带必须满足旋翼航空器型号审定基础规定的静强度和动强度要求。

(d)对本条而言, 旋翼航空器的制造日期按下列日期确定:

<1>反映旋翼航空器完工并满足中国民用航空总局(以下简称民航总局)批准的型号设计资料的验收检查记录或等效记录的日期; 或

<2>外国适航当局证明该旋翼航空器完工并颁发初始标准适航证或等效文件的日期。
 - 3). 燃油应符合“中国国标 3 号喷气燃料-GB6537”的规范要求

CAAC validation basis was defined as follows:

- 1 Certification basis which defined in TCDS No. 90-171
- 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) As per CCAR 29.2 Special retroactive requirements.

For each rotorcraft manufactured after August 01, 2003, each applicant must show that each occupant's seat is equipped with a safety belt and shoulder harness that meets the requirements of paragraphs (a), (b), and (c) of this section.

(a) Each occupant's seat must have a combined safety belt and shoulder harness with a single-point release. Each pilot's combined safety belt and shoulder harness must allow each pilot, when seated with safety belt and shoulder harness fastened, to perform all functions necessary for flight operations. There must be a means to secure belts and harnesses, when not in use, to prevent interference with the operation of the rotorcraft and with rapid egress in an emergency.

(b) Each occupant must be protected from serious head injury by a safety belt plus a shoulder harness that will prevent the head from contacting any injurious object.

(c) The safety belt and shoulder harness must meet the static and dynamic strength requirements, if applicable, specified by the rotorcraft type certification basis.

(d) For purposes of this section, the date of manufacture is either –

<1> The date the inspection acceptance records, or equivalent, reflect that the rotorcraft is complete and meets the CAAC-Approved Type Design Data; or

<2> The date that the foreign civil airworthiness authority certifies the rotorcraft is complete and issues an original standard airworthiness certificate, or equivalent, in that country.

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

CAAC 型号认可证申请日期
CAAC Validation of Type Certificate
Application Date

2015-01-21

(1). 国外适航当局合格审定基础
Foreign Authority Certification Basis:
(2) 生产依据
Production Basis

C B 17.29, Revision 2

№ОП22-ПВС
Ulan-Ude Aviation Plant, SC
Ulan-Ude, Russia

三、 技术特性和使用限制/TECHNICAL CHARACTERISTICS AND OPERATIONAL LIMITATIONS

型号设计定义	型号设计定义包含在主图纸清单 171-0000ППЧ。	
Type Design Definition:	The description of Type design is contained in Master Drawing List 171-0000ППЧ;	
中文标牌和标识	中文标牌和标识包含在图纸 8AMT.0005.000CB (外部涂漆和表)中。	
Chinese Placards and marking	The Chinese placards and marking is contained in the Drawings 8AMT.0005.000CB (External coating and markings)	
1.发动机	2 台涡轮轴 T B 3-117 B M 或 T B 3-117 B M 02 系列发动机	
Engine	Two TB3-117BM or TB3-117BM ser. 02 turbo shaft engines,	
	国外适航当局发动机 TCDS №34-Д 1993 年 06 月 24 日	
	Foreign Authority Engine TCDS №34-Д dated June 24, 1993	
	CAAC 型号认可证数据单编号: VTC0090E 版次: 1 2008 年 05 月 22 日	
	CAAC VTCDS No. VTC0090E Rev: 1 dated May 22, 2008	
2.发动机限制	起飞模式、2.5 分钟 OEI 及 30 分钟 OEI 状态	101,0% (19 732,7 r.p.m.)
Engine Limitations	下的最大压气机转速	
	Maximum permissible RPM of turbo	
	compressor at take-off mode, 2,5-minute and	
	30-minute power ratings with OEI	
	双发工作(AEO)	
	Two engines operative (AEO) for TB3-117BM and TB3-117BM cep. 02	
	最小起飞功率	2x2 000 h.p.
	Minimum take-off power	最大连续使用 maximum continuous
		operation- 6 min.
	最大连续功率	2x1 700 h.p.
	Maximum continuous power	
	一台发动机不工作 (OEI)	
	One Engine Inoperative (OEI) for TB3-117BM and TB3-117BM cep. 02	
	2.5 分钟功率	1x2 200 h.p.
	2,5-minute power rating	最大连续使用 maximum continuous
		operation - 2,5 min.
	30 分钟功率	1x2 000 h.p.
	30-minute power rating	最大连续使用 maximum continuous
		operation - 30 min
	涡轮间温度限制	
	Turbine Inlet Temperature Limits	
	双发工作	990 °C
	At take off two engines operative (AEO)	
	2.5 分钟功率	
	2,5-minute power rating	
	30 分钟功率	
	30-minute power rating	

	双发最大连续	955 °C
	At maximum continuous power rating (AEO)	
	单发最大连续	
	At maximum continuous power rating(OEI)	
3 螺旋桨和螺旋桨限制 Propeller And Propeller Limitation	不适用 N/A	
4 旋翼转速限制 Rotor Limitation	<u>旋翼允许最大转速（指示器 %）:</u> - 发动机飞行、时间少于 20 秒状态下..... 103(208,2 r.p.m.) - 自转下降状态下..... 105(212,2 r.p.m.) <u>旋翼允许最小转速（指示器 %）:</u> 75%(151,6 .p.m.) - 双发工作飞行中过渡状态下、时间少于 30 88 (177,9 r.p.m.) - 自转下降状态下..... 88 (177,9 r.p.m.) <u>Maximum permissible main rotor rpm (% as per indicator):</u> - in engine flight mode, for no more than 20 seconds..... 103(208,2 r.p.m.) - in <u>autorotation mode</u>..... 105(212,2 r.p.m.) <u>Minimum permissible main rotor rpm (% as per indicator):</u> 75%(151,6 .p.m.) - in transient modes with operative engines for not more than 30 seconds..... 88 (177,9 r.p.m.) - in <u>autorotation</u> mode 88 (177,9 r.p.m.)	
5 传动系统扭矩限制 Transmission Torque Limits:	不适用 N/A	
6.辅助动力装置和辅助动力装置限制 Auxiliary Power Unit (APU):	АИ-9В Type Certificate No. CT 143-В Д dated June 27,1997; Safir 5K/G MI, Type Certificate No. CT 221-ВД dated July 09,2003.	
7 燃油 Fuel	Т С -1, PT (ГОСТ-10227-86)及混合, 和防冰液“И” (ГОСТ 8313-88)的混合. (对国外燃油等级, 参看飞行手册) Т С -1, PT (ГОСТ-10227-86) and its mixtures, and also its mixtures with anti-icing fluid “И” (ГОСТ 8313-88). (For foreign grade of fuel, please, refer to Flight Manual) 3 号喷气燃料。 No.3 Jet Fuel.	
7.1 燃油容量 Fuel capacities:	2615 L ((main tanks)主油箱) 3530 L ((main tanks and one auxiliary tank)主油箱加一个辅助油箱)	
8 滑油 Oil	可用于减速器的滑油牌号 Oil grade allowed for use in gear boxes	

Б -3B Russia TY38-101295-75

ЛІ 3 -240 TY301-04-010-92

发动机滑油

Engine oil

Castrol 98 DERD 2487 (Castrol)

Mobil Jet Oil 11 Mil-L-23699 (Mobil Oil)

Mobil Jet 254 Oil Mil-L-23699 (Mobil Oil)

Castrol 5000 Mil-1-23699 (Castrol)

Castrol 599 DERD 2497 (Castrol)

Turbonycoil 525-2A Mil-L-23699 (Nyco)

Exxon Turbo Oil 25 DOD-L-85734 (Exxon)

Aeroshell Turbine Oil 560 DERD 2499 (Shell)

其他限制及推荐参考批准的 Mi-171 直升机运行文件。

For other limitations and recommendations refer to the approved operation document
tation of the Mi-171 helicopter.

8.1. 滑油容量

不适用

Oil capacities

N/A

9 空速限制

指示空速限制

Airspeed limits:

飞行高度在 0-1000 m	不可超越速度 VNE
飞行重量小于 11 100 kg	250 km/h
飞行重量大于 11 100 kg	230 km/h
飞行高度大于 1000 m	参考批准的 RFM

Indicated Speed Limits

At flight altitude 0-1000 m	Never-exceed speed VNE
At flight weight less 11 100 kg	250 km/h
At flight weight over 11 100 kg	230 km/h
At flight altitude more than 1000 m	Refer to the approved RFM

10. 最大使用升限及温度

安装氧气设备后的高度限制

Maximum Operating Altitude
and Temperature:

	使用升限 (m)	
起飞重量 (kg)	防冰系统关闭	防冰系统打开
至 12 000	5 000 m	5 000 m
12 000 至 13 000	4 800 m	4 500 m

温度 -50°C up to +50°C

Altitude Limits with oxygen equipment installed

	Operating ceiling, m	
Take-off weight, kg	With anti-icing system OFF	With anti-icing system ON
Up to 12 000	5 000 m	5 000 m
from 12 000 to 13 000	4 800 m	4 500 m

Ambient Air Temperatures -50°C up to +50°C

11. 重心范围

前后重心限制 (相对于主旋翼轴)

Centre of Gravity Range:	起飞重量	
	至 12,500 kg	大于 12,500 kg
	前, mm	+300
	后, mm	-95
Forward and aft CG limits (relative to the main rotor axis)		
	Take-off weight	
	up to 12,500 kg	over 12,500 kg
	Forward, mm	+300
	Aft, mm	-95
12.最大重量	最大起飞重量	A 类 12000 千克
Maximum Weights:		B 类: 13000 千克
	机身内最大载重量	4000 千克
	外挂最大载重量	4000 千克
	货舱和外挂同时运货的总重量	4000 千克
13. 测量基准	不适用	
Datum:	N/A	
14. 水平测量措施	不适用	
Leveling Means:	N/A	
15.平局气动弦	不适用	
MAC	N/A	
16. 最小飞行机组	3 人 (驾驶员、副驾驶、飞行工程师) 货物运输	
Minimum Flight Crew:	4 人 (驾驶员、副驾驶、飞行工程师、乘务员) 旅客运输	
	3 persons (pilot, co-pilot, flight engineer) for cargo transportation	
	4 persons (pilot, co-pilot, flight engineer, flight attendant) for passenger transportation	
17.座位数量	26 人	
Passenger Seating Capacity:	26	
18 操纵面运动范围	不适用	
Control movement:	N/A	
19.制造序号	不适用	
Eligible serial numbers:	N/A	
20. 设备	不适用	
Equipment	N/A	
21.其他	不适用	
Other	N/A	
22.注释	无	
Note	None	

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

1. 飞行手册文件号 旋翼航空器飞行手册
Rotorcraft Flight Manual, Rotorcraft Flight Manual 171.0000.00 PJ᠑;
Document No
2. 维护手册文件号 维护手册 171.0000.00P᠑-01.第 004 章;
Maintenance Manual, Document 维护计划 171.0000.000PO-01;
No: 技术规范 171.0000.00TY, 版次 2.
Maintenance Manual 171.0000.00P᠑-01.Section 004;
Maintenance Schedule 171.0000.000PO-01;
Technical Specifications 171.0000.00TY, Revision 2.
3. 服务信件和服务通告 不适用
Service Letters and Service N/A
Bulletins:
4. 必备设备 不适用
Required Equipment: N/A

第 3 部分所有型号相关数据**SECTION 3 DATA PERTINENT TO ALL MODELS**

不适用

N/A

第 4 部分注释**SECTION 4 NOTES****注释 1** 审定历史数据

Note 1 限制类型号合格证 No. 90-171, 29.12.1995;
补充型号合格证 No. 90-171/᠓1, 05.12.1997;
补充型号合格证 No. 90-171/᠓2, 27.08.2007;
补充型号合格证 No. 90-171/᠓3, 24.10.2011.

Initial Certification Data

Type Certificate Restricted Category Aircraft No. 90-171, 29.12.1995;
Supplement to Type Certificate No. 90-171/᠓1, 05.12.1997;
Supplement to Type Certificate No. 90-171/᠓2, 27.08.2007;
Supplement to Type Certificate No. 90-171/᠓3, 24.10.2011.

注释 2 俄罗斯联邦政府 2015 年 11 月 28 日签署的第 1283 号决议, 取消原授予国际航空委员会 (IAC) 的飞行器、
Note2 发动机和螺旋桨适航审定职能, 以上职能分配至俄罗斯联邦航空运输署。

Basing on the Decree of the Government of the Russian Federation dated November 28, 2015 #1283, the Aircraft Type Certification of Aircraft, Engine and Propeller, which authorized to IAC, was canceled, the FEDERAL AIR TRANSPORT AGENCY OF RUSSIA (FATA) is responsible for it.

- THE END -