

型号认可证数据单

TYPE VALIDATION CERTIFICATE DATA SHEET

编号/No.: VTC0101E

版次/Revision: 2

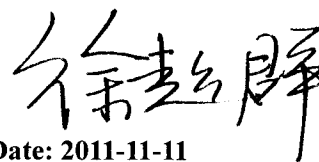
型号/Type:

PW530A

PW535B

PW535E

批准人/Approved by:



日期/Date: 2011-11-11

本数据单是型号认可证（编号：VTC0101E）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: VTC0101E), prescribes condition and limitation under which the product for which the type certificate was issued meets the airworthiness requirements of the Chinese Civil Aviation Regulation.

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

Pratt & Whitney Canada Corp.

1000 Marie-Victorin

Longueuil, Quebec

Canada J4G 1A1

有效页清单/ List of Effective Page:

页数/ Pages	1	2	3	4	5	6	7	8	9	10	11
版次/Revision	2	2	2	2	2	2	2	2	2	2	2

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	VTC101E; 版次: 2; 颁发日期: 2011年11月11日; No.VTC101E; Revision 2; Date of Issue : 2011-11-11	TCCA TCDS E-27; 第10版; 2009年11月02日颁发 No. E-27; Issue No.10; Issue Date:Nov.02,2009
历史 History	VTC101E; 版次: 1; 颁发日期: 2011年6月28日; No.VTC101E; Revision 1; Date of Issue : 2011-6-28	TCCA TCDS E-27; 第10版; 2009年11月02日颁发 No. E-27; Issue No.10; Issue Date:Nov.02,2009
	VTC101E; 版次: 0; 颁发日期: 2000年7月20日; No.VTC101E; Revision 0; Date of Issue : 2000-7-20	TCCA TCDS E-27; 第04版; 1995年12月22日颁发 No. E-27; Issue No.04; Issue Date:Dec.22,1995

2. 类别/Category: 发动机/ Engine
3. 认可当局/Validation Authority: 中国民用航空局/CAAC
审定当局/Certifying Authority: 加拿大运输部/Transport Canada
4. 型号合格证持有人/Type Certificate Holder: Pratt & Whitney Canada Corp.
1000 Marie-Victorin, Longueuil, Quebec Canada J4G 1A1
5. 制造厂/Manufacturer: Pratt & Whitney Canada Corp.
6. ETOPS: 不适用/NA
7. CAAC专用要求/CAAC Special Requirements: 满足中国3号燃油（GB6537-2006）牌号的要求。
/Compliance with requirement of P.R.China JET Fuel No.3 (GB6537-2006).

第2部分 数据单

SECTION 2 DATA SHEET

1、PW530A

型号PW530A/MODEL PW530A				1995年12月22日批准/ Approved Dec. 22, 1995		
额定值和限制值 (见注1) /Ratings and Limitation (See Note 1)		推力 /Jet Thrust daN(lb)	环境限制 /Ambient Limit °C(°F)	最大发动机转速 /Maximum Engine Speed		最大中间涡轮温度 /Maximum Interturbine Temperature °C
				N1 RPM	N2 RPM	
	起飞 /Take-off	1284.2 (2887)	22.8 (73)	15750 (100%)	32150 (100%)	700
	最大连续 /Maximum Continuous	1264.6 (2843)	15 (59)	15750 (100%)	32150 (100%)	700
	瞬态 (20秒) /Transient (20 Seconds)			16065 (102%)	32793 (102%)	740
	起动 (5秒) /Starting (5 Seconds)					740
	飞行慢车最小 /Flight Idle Minimum				15880 (49.4)	

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2、PW535B

型号PW535B/MODEL PW535B				2006年10月27日批准/ Approved Oct. 27, 2006		
额定值和限制值 (见注1) /Ratings and Limitation (See Note 1)		推力 /Jet Thrust daN(lb)	环境限制 /Ambient Limit °C(°F)	最大发动机转速 /Maximum Engine Speed		最大中间涡轮温度 /Maximum Interturbine Temperature °C
				N1 RPM	N2 RPM	
	起飞 /Take-off	1512.4 (3400)	27.2 (81)	15850 (100%)	33970 (100%)	700
	最大连续 /Maximum Continuous	1512.4 (3400)	19.6 (67.3)	15850 (100%)	33970 (100%)	700
	瞬态 (20秒) /Transient (20 Seconds)			16167 (102%)	34649 (102%)	740
	起动 (5秒) /Starting (5 Seconds)					740
	飞行慢车最小 /Flight Idle Minimum				18140 (53.4) (注10) /(NOTE10)	

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3、PW535E

型号PW535E/MODEL PW535E				2009年11月2日批准/ Approved Nov. 2, 2009		
额定值和限制值 (见注1) /Ratings and Limitation (See Note 1)		推力 /Jet Thrust daN(lb)	环境限制 /Ambient Limit ℃(°F)	最大发动机转速 /Maximum Engine Speed		最大中间涡轮温度 /Maximum Interturbine Temperature ℃
				N1 RPM	N2 RPM	
	最大起飞 /Maximum Take-off (见注11) (See NOTE 11)	1494.6 (3360)	33 (91.4)	15850 (100%)	34310 (101%)	725
	正常起飞 /Normal Take-off	1494.6 (3360)	33 (91.4)	15850 (100%)	34310 (101%)	700
	最大连续 /Maximum Continuous	1494.6 (3360)	24 (75.2)	15850 (100%)	33970 (100%)	680
	瞬态 (20秒) /Transient (20 Seconds)			16167 (102%)	34989 (103%)	765
	起动 (5秒) /Starting (5 Seconds)					740
	飞行慢车最小 /Flight Idle Minimum				18717 (55.1) (注12) /(NOTE12)	

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与各发动机型号相关数据（另有说明除外）

/DATA PERTINENT TO ALL MODELS UNLESS OTHERWISE INDICATED

类型/Type	双轴前风扇，喷射推进燃气涡轮发动机/Twin spool front fan, jet propulsion gas turbine
引气/Air Bleed	参见安装手册 第2章/ Refer to Installation Manual, Section 2
燃油压力/ Fuel Pressure	参见安装手册 第6章/ Refer to Installation Manual, Section 6
燃油温度/Fuel Temperature	参见安装手册 第6章/Refer to Installation Manual, Section 6
滑油压力/Oil Pressure	参见安装手册 第2章/Refer to Installation Manual, Section 2
滑油温度/Oil Temperature	参见安装手册 第2章/Refer to Installation Manual, Section 2
燃油牌号/Fuel Type	满足中国3号燃油（GB6537-2006）牌号的要求。 /Compliance with requirement of P.R.China JET Fuel No.3 (GB6537-2006). 参见维修手册 第72章/Refer to Maintenance Manual, Chapter 72
滑油牌号/Oil Type	参见维修手册 第72章/Refer to Maintenance Manual, Chapter 72
滑油容量/Oil Capacity	参见安装手册 第8章/Refer to Installation Manual, Section 8
设备/Equipment	如燃油控制器、放气阀门控制器、流量分配器、燃油泵、燃油滤、备用燃油流量计和发动机后部支架防火罩均作为标准设备包含在已批准的零件目录表中。对于传动输出的说明、附件驱动、标准尺寸、重量、惯性和重心，参见安装手册 /Equipment such as the fuel control unit, bleed valve controller, flow divider, fuel pump, fuel filter, provision for fuel flowmeter, and fire shield for rear engine mount, are standard equipment as shown in the Approved Parts List. For output drive specification, accessory drives, principal dimensions, weights, inertias and C.G. locations, refer to Installation Manual.
审定基础/Basis of Certification	<u>PW530A</u> a) 加拿大适航手册，533章第4版，1993年12月30日颁发（等效于FAR33部15修正案）。 /Canadian Airworthiness Manual, Chapter 533 change 4, dated 30 December 1993 (this is equivalent to FAR 33 up to amendment 15). b) 加拿大适航手册，516章第二版，B分部，“飞机发动机排放”，改版，1993年11月11日生效（等效于ICAO公约附件16第二卷，1993年第二版和FAR34部1990年9月10日）。 /Canadian Airworthiness Manual, Chapter 516 Second Edition, Subchapter B, “Aircraft Engine Emissions”, Change, effective 11 November 1993 (this is equivalent to ICAO Annex 16, Volume II, Second Edition 1993 and FAR 34 dated 10 September 1990). 此外，加拿大普惠公司选择符合一些附加技术条件（ATC）使得美国规章（FAR）与欧

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洲规章（JAR）相协调，附加技术条件中也包括某些欧洲标准（JAR-E）以利于欧洲民航当局的型号认可和某些FAR25部的要求以便支持FAR25飞机型号符合性。这些附加技术条件都在加拿大运输部1994年12月14日颁发的问题纪要500 G-1第1版中加以说明。

/In addition, PWC has elected to comply with some Additional Technical Conditions (ATCs) to reflect efforts to harmonize U.S. regulations (FAR) with European regulations (JAR). Also included as ATC's are certain European standards (JAR-E) to facilitate Type Validation by European authorities, and certain FAR 25 requirements to support FAR 25 aircraft type compliance. These ATC's are defined in Transport Canada Issue Paper 500 G-1 Revision 1, dated 14 December 1994.

PW535B

a) 加拿大适航手册，533章第7版，2004年12月1日颁发（等效于FAR33部20修正案）。

/Canadian Airworthiness Manual, Chapter 533 at Change 533-7, dated December 1, 2004 (this is equivalent to FAR 33 up to amendment 20).

b) 加拿大适航手册，516章B分部第6版“飞机发动机排放”，参照ICAO附件16第二卷，第二版，1993年7月。

/Canadian Airworthiness Manual, Subchapter 516 B at Change 516-06 "Aircraft Engine Emissions" which refers to ICAO Annex 16 Volume II, Second Edition, July 1993.

PW535E

a) 加拿大适航手册，533章第9版，2008年12月30日颁发（等效于FAR33部21修正案）。

/Canadian Airworthiness Manual, Chapter 533 at Change 533-9, dated December 30, 2008 (this is equivalent to FAR 33 up to amendment 21).

b) 加拿大适航手册，516章B分部第6版“飞机发动机排放”，参照ICAO附件16第二卷，第二版，1993年7月。

/Canadian Airworthiness Manual, Subchapter 516 B at Change 516-06 "Aircraft Engine Emissions" which refers to ICAO Annex 16 Volume II, Second Edition, July 1993.

型号合格证申请日期/Dates of Application for Type Certification:

PW530A 1993年8月31日/31 August 1993

PW535B 2005年5月13日/13 May 2005

PW535E 2007年1月24日/24 January 2007

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批准的出版物	<u>PW530A</u>	
/Approved Publications	a) PW530A安装手册/PW530A Installation Manual	
	b) PW530A生产发动机定义的零部件清单是A31J1400-01（见注4）。 /Parts List for the PW530A production engine definition is A31J1400-01 (See NOTE 4).	
	c) 限制寿命的转动部件的使用期限值在PW530A维修手册，适航限制部分中限定。 /Service life values for life limited rotor components as defined in PW530A Maintenance Manual, Airworthiness Limitations Section.	
	<u>PW535B</u>	
	a) PW535B安装手册/PW535B Installation Manual	
	b) PW535B生产发动机定义的零部件清单是A3071463-01（见注4）。 /Parts List for the PW535B production engine definition is A3071463-01 (See NOTE 4).	
	c) 限制寿命的转动部件的使用期限值在PW535B维修手册，适航限制部分中限定。 /Service life values for life limited rotor components as defined in PW535B Maintenance Manual, Airworthiness Limitations Section.	
	d) PW535B的电子控制系统FADEC的界面控制文件为ER6338。 /PW535B FADEC Interface Control Document ER6338.	
	<u>PW535E</u>	
	a) PW535E安装手册/PW535E Installation Manual	
	b) PW535E生产发动机定义的零部件清单是A3072913-01（见注4）。 /Parts List for the PW535E production engine definition is A3072913-01 (See NOTE 4).	
	c) 限制寿命的转动部件的使用期限值在PW535E维修手册，适航限制部分中限定。 /Service life values for life limited rotor components as defined in PW535E Maintenance Manual, Airworthiness Limitations Section.	
	d) PW535E发动机控制系统的界面控制文件为ER6677。 /PW535E Engine Control System Interface Control Document ER6677.	
持续适航说明	a) PW530A维修手册/Maintenance Manual	PW530A P/N 3071112
/Instructions for	b) PW535B维修手册/Maintenance Manual	PW535B P/N 3071822
Continued Airworthiness	c) PW535E维修手册/Maintenance Manual	PW535E P/N 3072702
	d) PW530A大修手册/Overhaul Manual	PW530A P/N 3071113
	e) PW535B大修手册/Overhaul Manual	PW535B P/N 3071823

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f) PW535E大修手册/Overhaul Manual

(见注3/See NOTE 3)

注 1/Note 1

发动机额定值是基于干海平面静态ICAO标准的大气环境，没有额外的附加载荷和放气。引用的额定值可在试验台上获取，该试验台使用指定的燃油和滑油，没有进气装置，使用安装手册中定义的排气管和的进气道。

/The engine ratings are based on dry sea level static ICAO standard atmospheric conditions, no external accessory loads and no airbleed. The quoted ratings are obtainable on a test stand with the specified fuel and oil, without intake ducting and using the exhaust duct and intake specified in the Installation Manual.

注 2/Note 2

保留/Reserved

注 3/Note 3

PW535E型/Model PW535E

为了符合AWM 533.4条款，发动机在完成持续适航文件并且获得批准后才能使用标准适航证在飞机上运行。在加拿大运输部批准大修手册前不允许进行大修。

/In accordance with the provisions of AWM 533.4, engines may not be operated in an aircraft with a standard Certificate of Airworthiness until the Instructions for Continued Airworthiness are completed and accepted by the Minister. Prior to issue of Transport Canada accepted overhaul manuals, overhauls are not permitted.

注 4/Note 4

发动机定义不包括反推装置。考虑安装反推装置的所有型号（PW535E除外）都包括在安装手册中。

/The engine definition does not include a thrust reverser. All models except the PW535E have considerations for the installation of a thrust reverser are contained in the Installation Manual.

注 5/Note 5

保留/Reserved

注 6/Note 6

保留/Reserved

注 7/Note 7

PW535B, PW535E型/Model PW535B, PW535E

高强度磁场（HIRF）和闪电防护及安装要求在安装手册提供。

/HIRF and Lightning conformance and installation requirements are provided in the installation Manual.

注 8/Note 8

PW535B, PW535E型/Model PW535B, PW535E

包含在电子发动机控制器中的软件依据评定类别RTCA/D0178B A级的规定进行设计、开发、测试和文件记录。

/The software contained in the Electronic Engine Control Unit has been designed, developed, tested and documented in accordance with the provisions of the Critical Category, Level A of RTCA/D0178B.

注 9/Note 9

PW535B型发动机执行SB30341/Model PW535B Engines Incorporating SB30341

发动机装有经核准为限制时间签派（TLD）的全权数字式发动机控制单元（FADEC）。签派的标准在维修手册P/N 3071822的适航限制部分中定义。TLD可签派的故障构型在ER6338-05 A部分接口控制文件中定义。

/The engine is equipped with a FADEC which is approved for Time Limited Dispatch (TLD). The dispatch criteria is defined in the Airworthiness Limitations Section of the Maintenance Manual P/N 3071822. The TLD dispatchable fault configuration is defined in ER 6338-05 Part A Interface Control Document.

PW535B型发动机不执行SB30341/Model PW535B Engine Not Incorporating SB30341

发动机装有未核准为限制时间签派（TLD）的全权数字式发动机控制单元（FADEC）。

/The engine is equipped with a FADEC which is not approved for Time Limited Dispatch (TLD).

注 10/Note 10

PW535B, PW535E型/Model PW535B, PW535E

飞行慢车是一种环境压力的运行情况。/Flight idle is a function of Ambient Pressure.

注 11/Note 11

PW535E型/Model PW535E

在机翼防冰引气关闭时，正常起飞等同于最大起飞，并且可以使用10分钟紧急或OEI条件。在机翼防冰引气打开时为最大起飞，可以使用紧急、OEI和单引气条件。

/Normal take off is equal to Maximum take off in conditions where wing anti-ice bleed is OFF and may be used for 10 minutes in emergency or OEI conditions. Maximum take off exists for wing anti-ice bleed ON conditions and is for use in emergency, OEI or mono bleed situations

注 12/Note 12

PW535E型/Model PW535E

发动机装有经核准为限制时间签派（TLD）的全权数字式发动机控制单元（FADEC）。签派的标准在维修手册P/N 3072702的适航限制部分中定义。TLD可签派的故障构型在ER6677-01 A部分接口控制文件中定义。

/The engine is equipped with a FADEC which is approved for Time Limited Dispatch (TLD). The dispatch criteria are defined in the Airworthiness Limitations Section of the Maintenance

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Manual PIN 3072702. The TLD dispatchable fault configuration is defined in ER 6677-01

Part A Interface Control Document

注 13/Note 13

PW535E型/Model PW535E

电子发动机控制未经过防火试验，因此不能安装在指定的火区。

/The electronic engine control has not been fire tested and therefore must not be installed in a designated fire zone.

—完—

—END—