



TYPE-CERTIFICATE DATA SHEET

No. IM.E.041

for Engine
PW100 series engines

Type Certificate Holder
Pratt & Whitney Canada

1000 Marie-Victorin
Longueuil Quebec
J4G 1A1
Canada

For Models:

PW118	PW124B
PW118A	PW125B
PW119B	PW126
PW119C	PW126A
PW120	PW127
PW120A	PW127B
PW121	PW127D
PW121A	PW127E
PW123	PW127F
PW123AF	PW127G
PW123B	PW127M
PW123C	PW127N
PW123D	PW127XT-M
PW123E	



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I. General

1. Type / Models

PW118, PW118A, PW119B, PW119C, PW120, PW120A, PW121, PW121A, PW123, PW123AF, PW123B, PW123C, PW123D, PW123E, PW124B, PW125B, PW126, PW126A, PW127, PW127B, PW127D, PW127E, PW127F, PW127G, PW127M, PW127N, PW127XT-M

2. Type Certificate Holder

Pratt and Whitney Canada Corp.
1000 Marie Victorin
Longueuil, Québec, J4G 1A1
Canada

Design Organisation Approval No.: n/a

3. Manufacturers

Pratt and Whitney Canada

4. EASA Certification/JAA Validation Application Date

07 March 2007 for PW127M
26 September 2013 for PW127N
29 May 2020 for PW127XT-M

5. Validation Reference Date

16 December 1983

6. EASA Type Certification Date

PW118	PW118A	PW119B	PW119C	PW120
30 December 1986 DGAC-F Type Certificate M-IM 15	21 April 1988 LBA Motor- Kennblatt Nr. 7028	08 October 1993 LBA Motor- Kennblatt Nr. 7028	07 June 1996 LBA Motor- Kennblatt Nr. 7028	06 September 1985 DGAC-F Type Certificate M-IM 15

PW120A	PW121	PW121A	PW123	PW123AF
06 September 1985 DGAC-F Type Certificate M-IM 15	03 March 1988 DGAC-F Type Certificate M-IM 15	07 December 1995 DGAC-F Type Certificate M-IM 15	12 November 1990 DGAC-F Type Certificate M-IM 15	27 October 1994 ⁽¹⁾ Aircraft TC ENAC A402 Bombardier CL- 215-6B11

PW123B	PW123C	PW123D	PW123E	PW124B
18 June 1993 LBA Motor- Kennblatt Nr. 7028	22 December 1997 LBA Motor- Kennblatt Nr. 7028	22 December 1997 LBA Motor- Kennblatt Nr. 7028	22 March 1995 ⁽¹⁾ Aircraft TC EASA.IM.A.191 Bombardier DHC-8- 201/202/315	31 August 1989 DGAC-F Type Certificate M-IM 15



PW125B	PW126	PW126A	PW127	PW127B
28 February 1992 DGAC-F Type Certificate M-IM 15	21 April 1988 LBA Motor- Kennblatt Nr. 7028	30 November 1989 CAA-UK Letter 9/80/EZ5	06 November 1992 DGAC-F Type Certificate M-IM 15	2 May 1995 CAA-UK Letter 9/80/PW100/C01/9A

PW127D	PW127E	PW127F	PW127G	PW127M
7 February 1994 CAA-UK Letter 9/80/C/402/11	07 July 1995 DGAC-F Type Certificate M-IM 15	13 January 1997 DGAC-F Type Certificate M-IM 15	02 December 1999 ⁽¹⁾ Aircraft TC EASA.A.186 EADS CASA C295	20 December 2007

PW127N	PW127XT-M
04 June 2014	08 September 2022

Except for PW127M, PW127N and PW127XT-M engine models, EASA Type-Certification for the above mentioned engine models is granted in accordance with the following Articles of EU Commission Regulation (EU) No 748/2012 as amended by EU Commission Regulation (EU) No 69/2014:

- Article 3 paragraph 1.(a) based on the respective DGAC France, LBA Germany and CAA United Kingdom validation letters issued following NAA approvals prior to 28 September 2003.
- For models marked (1) Article 3 paragraph 1.(b) based on NAA approvals of aircrafts equipped with these engine models prior to 28 September 2003.

II. Certification Basis

1. Reference Date for determining the applicable airworthiness requirements:

10 June 1981

2. Transport Canada Certification Basis details

see Transport Canada TCDS E-19

3. EASA Certification Basis

3.1. Airworthiness Standards

- For all models except PW127XT-M:

JAR-E Change 6 dated 28 August 1981 (based on BCAR, Section C, Issue 13)

Amended for the PW127 by:

- JAR-E Change 8 AMJ 20X-1 Certification of Aircraft Propulsion Systems Equipped with Electronic Controls

Amended for the PW121A, PW127E and PW127F by:

- Bird Strike and Ingestion: Additional Technical Conditions as defined in JAA INT/POL/E/02 Issue 1
- Rain and Hail: Additional Technical Conditions as defined in JAA INT/POL/E/01 Issue 2 and AIA Advisory Circular PC338-1



- JAR-E Change 8 AMJ 20X-1 Certification of Aircraft Propulsion Systems Equipped with Electronic Controls

Amended for the PW127M by:

- Inclement Weather: CS-E 790 Ingestion of Rain and Hail (CS-E as issued by EASA Decision N°2003/9/RM, on October 24, 2003)
- Bird Strike and Ingestion: CS-E 800 Bird Strike and Ingestion (CS-E as issued by EASA Decision N°2003/9/RM, on October 24, 2003)
- JAR-E Change 8 AMJ 20X-1 Certification of Aircraft Propulsion Systems Equipped with Electronic Controls

Amended for the PW127N by:

- Inclement Weather: CS-E 790 Ingestion of Rain and Hail (CS-E as issued by EASA Decision N°2003/9/RM, on October 24, 2003)
- Bird Strike and Ingestion: CS-E 800 Bird Strike and Ingestion (CS-E as issued by EASA Decision N°2003/9/RM, on October 24, 2003)
- JAR-E 50 (Controls) Change 8, including AMJ 20X-1 (Certification of Aircraft Propulsion Systems Equipped with Electronic Controls)

-For model PW127XT-M:

CS-E Amendment 2 effective 18 December 2009

3.2. Special Conditions (SC)

None

3.3. Equivalent Safety Findings (ESF)

None for all models except PW127XT-M

For PW127XT-M model only:

CS-E 840 and CS-E 850, HP Rotor Integrity and HP Shaft Failure

3.4. Deviations

None

3.5. Environmental Protection

Fuel Venting for engines up to PW127M included: ICAO Annex 16, Volume II, Part II,(2nd Edition, July 1993), Amendment 5 dated 24th November 2005

Fuel Venting for PW127N: ICAO Annex 16, Volume II, Parts II,(3rd Edition, July 2008), Amendment 7 dated 17 November 2011

Fuel Venting for PW127XT-M: CS-34, Amendment 4 in accordance with CS-E 1010



III. Technical Characteristics

1. Type Design Definition

<u>Engine Model</u>	<u>Engine Assembly Drawing</u>	<u>Engine Model</u>	<u>Engine Assembly Drawing</u>
PW118	3104700	PW123E	3038400
PW118A	3041200	PW124B	3041900
PW119B	3049700	PW125B	3035600
PW119C	3049700	PW126	3035600
PW120	3104500	PW126A	3035600
PW120A	3104500	PW127	3047600
PW121	3104500	PW127B	3048000
PW121A	3120200	PW127D	3040963
PW123	3038400	PW127E	3047600
PW123AF	3038400	PW127F	3047600
PW123B	3038400	PW127G	3045350
PW123C	3038400	PW127M	3073453
PW123D	3038400	PW127N	3079388
PW127XT-M	3135900		



2. Description

The PW100 series turboprop engines comprise a three spool turbomachine (including a free turbine), and a reduction gearbox.

For all models, the engine control is made via a single channel Electronic Engine Control (EEC) unit, with a hydro-mechanical back-up.

3. Equipment

Approved equipment is defined in the applicable engine model approved Engine Parts List.

4. Dimensions and Weight

Engine Model	Overall Length (mm)	Overall Width (mm)	Dry Spec. Weight (kg)
PW118	2046	635	390.5
PW118A	2046	635	392.8
PW119B	2046	635	411.4
PW119C	2046	635	411.4
PW120	2130	635	417.3
PW120A	2130	635	423.2
PW121	2130	635	423.2
PW121A	2130	635	434.0
PW123	2130	660	450.0
PW123AF	2130	660	450.0
PW123B	2130	660	450.0
PW123C	2130	660	450.0
PW123D	2130	660	450.0
PW123E	2130	660	450.0
PW124B	2130	679	480.8
PW125B	2130	679	480.8
PW126	2130	679	480.8
PW126A	2130	679	480.8
PW127	2130	720	480.8
PW127B	2130	720	480.8
PW127D	2130	679	480.8
PW127E	2130	720	480.8
PW127F	2130	720	480.8
PW127G	2130	679	484.4
PW127M	2130	720	481.7
PW127N	2130	720	481.7
PW127XT-M	2130	720	494.7

5. Ratings

See Notes 1 & 2.

Engine Model Ratings at Sea Level	Maximum Take-off Power – 5 min. (*)		Normal Take-off Power – 5 min. (*)		Maximum Continuous Power	
	Shaft Power (kW)	Maximum Air Temp for Rated Power (°C)	Shaft Power (kW)	Maximum Air Temp for Rated Power (°C)	Shaft Power (kW)	Maximum Air Temp for Rated Power (°C)
PW118	-	-	1342	33	1342	33
PW118A	-	-	1342	42	1342	42
PW119B	1625	31	1380	48	1380	48
PW119C	1625	36	1380	48	1380	53
PW120	1491	28	1342	28	1268	28
PW120A	1491	28	1342	28	1342	33
PW121	1603	26	1454	26	1454	28
PW121A	1640	25	1476	25	1417	30
PW123	1775	35	1598	35	1604	45
PW123AF	1775	35	-	-	1603	45
PW123B	1865	30	1687	30	1603	30
PW123C	1604	26	1454	26	1454	34
PW123D	1604	45	1454	45	1454	53
PW123E	1775	41	1598	41	1604	45
PW124B	1790	34	1611	34	1790	34
PW125B	1864	30	1678	30	1603	45
PW126 (**)	-	-	1648	28	1648	28
PW126A	1985	29	1787	29	1769	41
PW127	2051	32	1846	32	1864	41
PW127B	2051	30	1846	30	1864	41
PW127D	2051	33	1846	33	2051	33
PW127E	1790	45	1611	45	1790	45
PW127F	2051	35	1846	35	1864	44
PW127G	2178	35	1973	35	2178	35
PW127M	2051	39	1846	39	1864	48
PW127N	2051	44	1846	44	1864	48
PW127XT-M	2051	39	1846	39	1864	48

(*) See Note 2

(**) PW126 Contingency Power Ratings: see Table below

Engine Model Ratings at Sea Level	Maximum Contingency Power (2 ½ min.)		Intermediate Contingency Power	
	Shaft Power (kW)	Maximum Air Temp for Rated Power (°C)	Shaft Power (kW)	Maximum Air Temp for Rated Power (°C)
PW126	1978	32	1766	39



6. Control System

For all models, the fuel control is made via a single channel Electronic Engine Control (EEC) unit, with a hydro-mechanical back-up. The hardware and software configuration of this system and the associated engine fuel pump and hydro mechanical unit are controlled by the approved engine equipment list for each specific engine model and aircraft application.

7. Fluids (Fuel, Oil, Coolant, Additives)

7.1 Fuel Type

For all models except PW127XT-M, refer to the applicable Maintenance Manual, Chapter 72-00-00.

For the PW127XT-M model, refer to chapter 73.00.00 of the applicable Maintenance Manual or Appendix A of the applicable Installation Manual.

7.2 Oil Type

For all models except PW127XT-M, refer to the applicable Maintenance Manual, Chapter 72-00-00.

For the PW127XT-M model, refer to chapter 73.00.00 of the applicable Maintenance Manual or Appendix A of the applicable Installation Manual.

8. Aircraft Accessory Drives

For accessory drives specifications, refer to the applicable engine model Installation Manual and Installation Drawing.

9. Maximum Permissible Air Bleed Extraction

Maximum External (HP):

All models: 10% of inlet airflow up to a maximum of 15 Kg/min.

Maximum External (LP):

For PW118, PW118A, PW120, PW120A, PW121 and PW121A:
8% of inlet airflow.

For PW119B, PW119C, PW123, PW123AF, PW123B, PW123C, PW123D, PW123E, PW124B, PW125B, PW126, PW126A, PW127, PW127B, PW127D, PW127E, PW127F, PW127G, PW127M, PW127N and PW127XT-M:
10% of inlet airflow.

Maximum during start:

Bleed flow equivalent to that obtained from 0.5 cm diameter orifice at the engine bleed port.



IV. Operating Limitations

See Notes 3 and 13.

1. Temperature Limits

1.1. Maximum Inter-Turbine Temperature (ITT)

Rating	Maximum Take-off (°C)	Normal Take-off (°C)	Maximum Continuous (°C)	Transient 20 secs (°C)	Transient 5 secs (°C)	Starting 5 secs (°C)
PW118	N/A	816	800	850	-	950
PW118A	N/A	816	800	850	-	950
PW119B	800	800	800	850	-	950
PW119C	800	800	800	850	-	950
PW120 (**)	816	785	800	850	-	950
PW120A (**)	816	785	800	850	-	950
PW121 (*) (**)	816	785	800	850	-	950
PW121A	816	791	800	850	-	950
PW123 (*)	800	765	800	840	-	950
PW123AF	800	-	800	840	-	950
PW123B (*)	800	765	800	840	-	950
PW123C (*)	800	770	800	840	-	950
PW123D (*)	800	770	800	840	-	950
PW123E (*)	800	765	800	840	-	950
PW124B (*)	800	765	800	840	-	950
PW125B (*)	800	765	800	840	-	950
PW126 (*)	N/A	760	760	840	-	950
PW126A (*)	800	765	800	840	-	950
PW127 (*)	800	765	800	840	-	950
PW127B (*)	800	773	800	840	-	950
PW127D (*)	800	750	800	840	-	950
PW127E (*)	800	765	800	840	-	950
PW127F (*)	800	765	800	840	-	950
PW127G (*)	800	765	800	840	-	950
PW127M (*)	800	765	800	840	-	950
PW127N (*)	800	765	800	840	-	950
PW127XT-M (*)	800	765	800	840	-	950

(*) see Note 6

(**) see Note 8

1.2. Oil Temperature

Refer to Installation Manual.

1.3. Fuel Inlet Temperature

Refer to Installation Manual.



2. Maximum Permissible Rotor Speeds:

2.1. Maximum Output Shaft Speed:

Rating	Maximum Take-off (RPM)	Normal Take-off (RPM)	Maximum Continuous (RPM)	Transient 20 secs (RPM)	Transient 5 secs (RPM)	Starting 5 secs (RPM)
PW118		1313	1313	1430	-	-
PW118A		1313	1313	1430	-	-
PW119B	1339	1339	1339	1430	-	-
PW119C	1339	1339	1339	1430	-	-
PW120	1212	1212	1212	1320	1440	-
PW120A	1212	1212	1212	1320	1440	-
PW121	1212	1212	1212	1320	1440	-
PW121A	1212	1212	1212	1320	1440	-
PW123	1212	1212	1212	1320	-	-
PW123AF	1212	-	1212	1320	-	-
PW123B	1212	1212	1212	1320	-	-
PW123C	1212	1212	1212	1320	-	-
PW123D	1212	1212	1212	1320	-	-
PW123E	1212	1212	1212	1320	-	-
PW124B	1212	1212	1212	1380	-	-
PW125B	1212	1212	1212	1380	-	-
PW126	1212 (*)	1212	1212	1380	-	-
PW126A	1212	1212	1212	1380	-	-
PW127	1212	1212	1212	1296	1440	-
PW127B	1212	1212	1212	-	1440	-
PW127D	1212	1212	1212	-	1440	-
PW127E	1212	1212	1212	1296	1440	-
PW127F	1212	1212	1212	1296	1440	-
PW127G	1212	1212	1212	-	1440	-
PW127M	1212	1212	1212	1296	1440	-
PW127N	1212	1212	1212	1296	1440	-
PW127XT-M	1212	1212	1212	1296	1440	-

(*) PW126 Max Contingency 2 ½ minutes max. and Intermediate Contingency ratings

2.2 Maximum HP Spool Speed:

Rating	Maximum Take-off (RPM)	Normal Take-off (RPM)	Maximum Continuous (RPM)	Transient 20 secs (RPM)	Transient 5 secs (RPM)	Starting 5 secs (RPM)
PW118	-	33300	33300	33966	-	-
PW118A	-	33966	33966	33966	-	-
PW119B	34200	34200	34200	34700	-	-
PW119C	34200	34200	34200	34700	-	-
PW120 (*)	34350	-	34150	34675	-	-
PW120A (*)	34350	-	34150	34675	-	-
PW121 (*)	34350	-	34150	34675	-	-
PW121A	34380	33975	34160	34675	-	-
PW123	34200	33633	34200	34550	-	-
PW123AF	34200	-	34200	34550	-	-
PW123B	34200	33633	34200	34550	-	-



Rating	Maximum Take-off (RPM)	Normal Take-off (RPM)	Maximum Continuous (RPM)	Transient 20 secs (RPM)	Transient 5 secs (RPM)	Starting 5 secs (RPM)
PW123C	34200	33633	34200	34550	-	-
PW123D	34200	33633	34200	34550	-	-
PW123E(*)	34200	-	34200	34550	-	-
PW124B	34200	33633	34200	34550	-	-
PW125B	34200	33750	34200	34550	-	-
PW126	34550 (**)	33600	33600	34550	-	-
PW126	34200 (***)	-	-	-	-	-
PW126A	34190	33670	34190	34500	-	-
PW127	34360	33930	34360	35440	-	-
PW127B	34360	33850	34360	34730	-	-
PW127D	34360	33850	34360	34730	-	-
PW127E	34360	33930	34360	35440	-	-
PW127F	34360	33930	34360	35440	-	-
PW127G	34530	34050	34530	35440	-	-
PW127M	34360	33930	34360	35440	-	-
PW127N	34360	33930	34360	35440	-	-
PW127XT-M	34360	33930	34360	35440	-	-

(*) See Note 5

(**) PW126 Max Contingency 2 ½ minute max power rating

(***) PW126 Intermediate Contingency power rating

2.3 Maximum LP Spool Speed:

Rating	Maximum Take-off (RPM)	Normal Take-off (RPM)	Maximum Continuous (RPM)	Transient 20 secs (RPM)	Transient 5 secs (RPM)	Starting 5 secs (RPM)
PW118	-	27700	27700	28531	-	-
PW118A	-	28808	28808	28808	-	-
PW119B	28900	28900	28900	29340	-	-
PW119C	28900	28900	28900	29340	-	-
PW120 (*)	-	-	-	-	-	-
PW120A (*)	-	-	-	-	-	-
PW121 (*)	-	-	-	-	-	-
PW121A (*)	-	-	-	-	-	-
PW123	28800	28170	28800	28900	-	-
PW123AF	28800	-	28800	28900	-	-
PW123B	28800	28270	28800	28900	-	-
PW123C	28800	28270	28800	28900	-	-
PW123D	28800	28270	28800	28900	-	-
PW123E	28800	28170	28800	28900	-	-
PW124B	28800	28170	28800	28900	-	-
PW125B	28800	28140	28800	28900	-	-
PW126	28900 (**)	27900	27900	28900	-	-
PW126	28500 (***)	-	-	-	-	-
PW126A	28900	28280	28900	28900	-	-
PW127	28870	28090	28870	29575	-	-
PW127B	28870	28000	28870	29500	-	-
PW127D	28870	28000	28870	29500	-	-
PW127E	28870	28090	28870	29575	-	-



Rating	Maximum Take-off (RPM)	Normal Take-off (RPM)	Maximum Continuous (RPM)	Transient 20 secs (RPM)	Transient 5 secs (RPM)	Starting 5 secs (RPM)
PW127F	28870	28090	28870	29575	-	-
PW127G	28990	28500	28990	29575	-	-
PW127M	28870	28090	28870	29575	-	-
PW127N	28870	28090	28870	29575	-	-
PW127XT-M	28870	28090	28870	29575	-	-

(*) see Note 9

(**) PW126 Max Contingency 2 ½ minutes max power rating

(***) PW126 Intermediate Contingency power rating

3. Maximum Output Torque:

Rating	Maximum Take-off (Nm)	Normal Take-off (Nm)	Maximum Continuous (Nm)	Transient 20 secs (Nm)	Transient 5 secs (Nm)	Starting 5 secs (Nm)
PW118	-	10846	9860	12569	-	-
PW118A	-	10846	9860	12569	-	-
PW119B	12324	-	12324	14331	-	-
PW119C	12324	-	12324	14331	-	-
PW120 (*)	14913	13557	13557	17285	-	-
PW120A (*)	14913	13557	13557	17285	-	-
PW121 (*)	14913	13557	13557	17285	-	-
PW121A	14913	13557	13557	17285	-	-
PW123	14913	13558	13558	17286	-	-
PW123AF	14913	-	13558	17287	-	-
PW123B	15181	13558	13558	17286	-	-
PW123C	13612	-	13612	17286	-	-
PW123D	13612	-	13612	17286	-	-
PW123E	14913	13558	13558	17286	-	-
PW124B	15144	12818	14597	17734	-	-
PW125B	14870	13409	12758	19390	-	-
PW126	15795 (**)	15145	15145	17734	-	-
PW126	15145 (***)	-	-	-	-	-
PW126A	15795	15795	15795	17734	-	-
PW127	17354	17354	17354	19578	-	-
PW127B	17354	17354	17354	17896	-	-
PW127D	17354	17354	17354	19578	-	-
PW127E	17354	17354	17354	19578	-	-
PW127F	17354	17354	17354	19578	-	-
PW127G	17625	17625	17625	19578	-	-
PW127M	17354	17354	17354	19578	-	-
PW127N	17354	17354	17354	19578	-	-
PW127XT-M	17354	17354	17354	19578	-	-

(*) See Note 10

(**) PW126 Max Contingency 2 ½ minutes max power rating

(***) PW126 Intermediate Contingency power rating



4. Pressure Limits

4.1. Fuel Pressure:

Refer to Installation Manual.

4.2. Oil Pressure:

Refer to Installation Manual.

5. Installation Assumptions

The installation assumptions are quoted in the applicable engine model Installation Manual.

6. Time Limited Dispatch (TLD)

There is no Time Limited Dispatch for the EEC of this engine.

V. Operating and Service Instructions

1. Manuals:

Engine Model	Engine Installation Manual	Engine Maintenance Manual	Engine Overhaul Manual
PW118	PW118	3034622	3034623
PW118A	PW118A	3034622	3034623
PW119B (*)	PW119B/PW119C	3072152	-
PW119C (*)		3072152	3038553
PW120	PW120	3034642	3034643
PW120A	PW120A	3034632	3034633
PW121(BS717)	PW121	3034632	3034633
PW121(BS722,BS725)		3034642	3034643
PW121A	PW121A	3034642	3036433
PW123	PW123	3036432	3036433
PW123AF	PW123AF	3034538	3034539
PW123B	PW123B	3036432	3036433
PW123C	PW123C	3036432	3036433
PW123D	PW123D	3036432	3036433
PW123E	PW123E	3036432	3036433
PW124B	PW124B	3037332	3037333
PW125B	PW125B	3034932	3034933
PW126	PW126	3034922	3034923
PW126A	PW126A	3034922	3034923
PW127	PW127	3037332	3037333
PW127B (*)	PW127B	-	3034933
PW127D	PW127D	3034922	3034923
PW127E	PW127E	3037332	3037333
PW127F	PW127F	3037332	3037333
PW127G	PW127G	3044822	3044823
PW127M	PW127M	3037332	3037333



PW127N	PW127N (3079820)	3037332	3037333
PW127XT-M	PW127XT-M (3136239)	3136182	(**)

(*) See Note 18

(**) See Note 19

2. Approved Conversion Service Bulletins:

For Approved Conversion Service Bulletins, refer to Transport Canada TCDS E-19.

VI. Notes

1. For all engine models the engine ratings are based on dry sea level static ICAO Standard atmospheric conditions, with 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 port and intake defined in the Installation Manual.
2. For all engine models take-off ratings that are nominally limited to 5 minutes duration may be used for up to 10 minutes for One Engine Inoperative operations without adverse effects upon engine airworthiness. Such operations are anticipated on an infrequent basis (as engine failure at take-off events are uncommon) and no limits or special inspections are required.
3. The PW120, PW120A, PW121, PW121A, PW123, PW123B, PW123C, PW123D, PW123E, PW124B, PW125B, PW126, PW126A, PW127, PW127B, PW127D, PW127E, PW127F, PW127G, PW127M, PW127N and PW127XT-M engine models include provision for automatic power increase from Normal Take-off Power to Max. Take-Off Power. The limitations stated for Normal Take-off are to ensure that the Maximum Take-off limitations are not exceeded in the event of an automatic power increase to Maximum Take-off Power.
4. For PW121 engines built to Build Specification (BS) 722 and 725 (ATR 42 installations) see PW120/120A/121 Installation Manual for the approved ratings and limits. These engines have reduced operating ratings for increased thermal capability.
5. For the PW120, PW120A, PW121 and PW123E engine models, the Normal Take-off HP Spool Speed limitation is variable with ambient temperature to ensure the maximum spool speed is not exceeded in the event of an automatic power increase to Maximum Take-off. Refer to the engine Installation Manual for the Normal Take-off limit.
6. Normal Take-off ITT and LP Spool Speed limitations may vary with the ambient temperature for the following engine models:
PW121, PW123, PW123B, PW123C, PW123D, PW123E, PW124B, PW125B, PW126A, PW127, PW127B, PW127D, PW127E, PW127F, PW127G, PW127M, PW127N and PW127XT-M.
Refer to the engine Installation Manual for the curves defining these limits.
7. Reserved.
8. For PW120, PW120A and PW121 engine models not incorporating SB 20231 or SB 20970 or SB 21059 or SB 21092 the Maximum Continuous ITT limit is 785°C, the Maximum Take-off and



Maximum Continuous HP Spool Speed limit is 33300 rpm, and the 20 second transient HP Spool Speed limit is 33966 rpm.

9. The speed relationship between the low compressor spool and the high compressor spool is controlled by new engine acceptance procedure and the Overhaul Manual for the PW120, PW120A, PW121 and PW121A.
10. PW120, PW120A and PW121 engine models not incorporating SB 20316 or SB 20380 have the following limits: Output Torque Maximum Continuous 11572 Nm, Take-off 13355 Nm and 20 second transient 14914 Nm.
11. The Electronic Engine Control (EEC) system conforms to the lightning test defined by SAE AE4L committee report. For specific capabilities and installation requirements refer to the Installation Manual.
12. For PW118, PW120, PW120A and PW121 models, the software contained in the Electronic Control Unit (ECU) has been developed, documented and tested in accordance with the provisions of the Critical Category of RTCA/DO 178 November 1981.
13. The software contained in the ECU for the PW118A, PW119B, PW119C, PW121A, PW123, PW123AF, PW123B, PW123C, PW123D, PW123E, PW124B, PW125B, PW126, PW126A, PW127, PW127B, PW127D, PW127E, PW127F and PW127G engine models have been designed, developed, documented and tested in accordance with the provisions of the Critical Category of RTCA/DO 178A, March 1985.

The PW127M and PW127XT-M software are identical and are modifications of the PW127F software and the PW127N software is a modification of the PW127M software. The modifications have been designed, developed, documented and tested in accordance with the provision of the Level A of RTCA/DO 178B, December 1992.

14. All engine models have been approved with a propeller overspeed "get-home" capability to cater for propeller control malfunction. The engine Installation Manual operating limits define this overspeed limit.
15. The EASA approved Airworthiness Limitations Section of the Instructions for Continued Airworthiness is published in the applicable "Engine Maintenance Manual" document, chapter "Airworthiness Limitations".
16. All engine models, except those identified in Note 17, are acceptable with both 6-blade and 4-blade propellers.
17. The PW125B, PW126, PW126A, PW127A, PW127B, PW127D, PW127E (BS1034), PW127F (BS1033), PW127G, PW127M, PW127N and PW127XT-M engine models are acceptable with 6-blade propeller installation only.
18. PW127B (BS812/813) Maintenance instructions are provided in the form of source data to the airframe manufacturer. The EASA approved Airworthiness Limitations Section of the Instructions for Continued Airworthiness for the PW127B is published in the Airworthiness Limitations Manual 3040349.



19. The PW127XT-M Overhaul Manual is not available at the time of issue of this revision of the TCDS. No overhaul or shop maintenance is permitted for the PW127XT-M.

20. For PW124B, PW127, PW127E, PW127F, PW127J, PW127M, PW127N and PW127XT-M engine models equipped with a software based Auto-Feather Unit [AFU], the hardware has been designed, developed, and tested in accordance with RTCA/DO-254 for DAL A equipment, and the software has been designed, developed, and tested in accordance with RTCA/DO-178C, DO-331, and DO-330 for Level A software, except for the Boot Loader (BL) software which was developed to DO-178B on a previous certified program and is re-used in accordance with the guidance of FAA AC 20-115D.



SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

n/a

II. Type Certificate Holder Record

n/a

III. Change Record

TCDS Issue	Date	Changes	TC issue date
Issue 01	20 December 2007	Addition of PW127M model	Initial Issue, 20 December 2007
Issue 02	06 June 2008	Addition of PW123AF, PW123E and PW127G models	Amended, 06 June 2008
Issue 03	04 June 2014	Addition of PW127N model	Amended, 04 June 2014
Issue 04	08 March 2018	Addition of PW123AF, PW123E and PW127G models to the TCDS	
Issue 05	08 September 2022	Addition of PW127XT-M model to the TCDS, Editorial changes	Amended, 08 September 2022

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