



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL

TYPE CERTIFICATE DATA SHEET Nº EM-8503

Type Certificate Holder:

PRATT & WHITNEY CANADA Corp
1000 Marie-Victorin
Longueuil, Quebec, JAG 1A1
CANADA

EM-8503-04

Sheet 01

PRATT & WHITNEY

PW118, PW118A, PW118B, PW120, PW121,
PW121A, PW123, PW123B, PW123C,
PW123D, PW123E, PW124B, PW125B,
PW127, PW127A, PW127B, PW127C,
PW127D, PW127E, PW127F AND PW127M.

July 2008

Engines of models described herein conforming with this data sheet, which is part of Type Certificate No. 8503, meet the minimum standards for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Brazilian Aeronautical Regulations provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other instructions.

I - MODEL PW118, PW118A, PW118B, PW120

TYPE A three spool free-turbine turboprop propulsion engine incorporating two centrifugal compressors, each driven by independent axial turbine, a reverse flow annular combustor, and a two-stage power turbine that drives a gearbox.

RATINGS	Maximum takeoff (5 min.), at sea level:	PW118	PW118A	PW118B	PW120
(See Notes 1 & 9)	Equivalent shaft hp (kW)	#	#	#	2 100 (1 566)
	Shaft hp (kW)	#	#	#	2 000 (1 491)
	Thrust, lb (daN)	#	#	#	250 (111.2)

		PW118	PW118A	PW118B	PW120
LIMITATIONS (See Note 3, 4 & 11) (* See Note 21) (** See Note 17)	Output shaft speed, rpm	#	#	#	1 212
	Maximum Inter-turbine Temp. (ITT) °C (°F)	#	#	#	816 (1 501)*
	Maximum Air Temp. for Rated Power °C (°F)	#	#	#	28 (82)
	H.P. Spool Speed (rpm) (Max.)	#	#	#	34 350 *
	L.P. Spool Speed (rpm) (Max.)	#	#	#	#
	Output Torque lb. ft. (Nm)	#	#	#	11 000 (14 913) **
RATINGS (See Notes 1 & 9)	Normal takeoff at sea level:				
	Equivalent shaft hp (kW)	1 892 (1 411)	1 893 (1 412)	1 892 (1 411)	--
	Shaft hp (kW)	1 800 (1 342)	--	--	--
	Trust, lb (daN)	230 (102.3)	231 (102.8)	230 (102.3)	--
LIMITATIONS (See Note 3, 4 & 11) (* See Note 21) (** See Note 17)	Output shaft speed, rpm	1 313	--	--	1 212
	Maximum Inter-turbine Temp. (ITT) °C (°F)	816 (1 500)	--	--	785 (1 445)
	Maximum Air Temp. for Rated Power °C (°F)	33 (91)	42 (108)	45 (113)	28 (82)
	H.P. Spool Speed (rpm) (Max.)	33 300	33 966	--	See Note 14 (*)
	L.P. Spool Speed (rpm) (Max.)	27 700	28 808	--	#
	Output Torque lb. ft. (Nm)	8 000 (10 846)	--	--	10 000 (13 557) **
RATINGS (See Notes 1 & 9)	Maximum continuous at sea level:				
	Equivalent shaft hp (kW)	1 892 (1 411)	1 893 (1 412)	1 892 (1 412)	1 787 (1 333)*
	Shaft hp (kW)	1 800 (1 342)	--	--	1 700 (1 268)
	Thrust, lb (daN)	230 (102.3)	231 (102.8)	230 (102.8)	217 (965)
LIMITATIONS (See Note 3, 4 & 11) (* See Note 21) (** See Note 17)	Output shaft speed, rpm	1 313	--	--	1 212
	Maximum Inter-turbine Temp. (ITT) °C (°F)	800 (1 472)	--	--	-- *
	Maximum Air Temp. for Rated Power °C (°F)	33 (91)	42 (108)	--	33 (91)
	H.P. Spool Speed (rpm) (Max.)	33 300	33 699	--	34 150 *
	L.P. Spool Speed (rpm) (Max.)	27 700	28 808	--	#
	Output Torque lb. ft. (Nm)	7 272 (9 860)	--	--	10 000 (13 557) **

Legend: "--" Same as preceding model; "#" Not applicable

LIMITATIONS (See Note 3, 4 & 11) (* See Note 21) (** See Note 17)	Transient (20 secs):	PW118	PW118A	PW118B	PW120
	Maximum Inter-turbine Temp. (ITT) °C (°F)	850 (1 562)	--	--	-- *
	Output shaft speed, rpm	1 430	--	--	1 320
	H.P. Spool Speed (rpm) (Max.)	33 966	--	--	34 675
	L.P. Spool Speed (rpm) (Max.)	28 531	28 808	--	#
	Output Torque lb. ft. (Nm)	9 270 (12 569)	--	--	12 750 (17 285) **

LIMITATIONS (See Note 3, 4 & 11) (* See Note 21)	Starting (5 secs):				
	Maximum Inter-turbine Temp. (ITT) °C (°F)	950 (1 742)	--	--	950 (1 742) *
	Transient (5 secs):				
	Output shaft speed, rpm	#	#	#	1 440

II - MODEL

PW121, PW123, PW123B, PW123C

TYPE

A three spool free-turbine turboprop propulsion engine incorporating two centrifugal compressors, each driven by independent axial turbine, a reverse flow annular combustor, and a two-stage power turbine that drives a gearbox.

RATINGS (See Notes 1 & 9)	Maximum takeoff (5 min.), at sea level:	PW121	PW123	PW123B	PW123C
	Equivalent shaft hp (kW)	2 252 (1 695)	2 502 (1 866)	2 626 (1 959)	2 262 (1 687)
	Shaft hp (kW)	2 150 (1 603)	2 380 (1 775)	2 500 (1 865)	2 150 (1 604)
	Thrust, lb (daN)	255 (113.4)	304 (135.2)	315 (1 400)	280 (124.5)

LIMITATIONS (See Note 3, 4 & 11) (* See Note 21) (** See Note 17)	Output shaft speed, rpm				
	Maximum Inter-turbine Temp. (ITT) °C (°F)	1 212	--	--	--
	Maximum Air Temp. for Rated Power °C (°F)	816 (1 500)*	800 (1 472)	--	--
	H.P. Spool Speed (rpm) (Max.)	26 (78)	35 (95)	30 (86)	26 (78)
	L.P. Spool Speed (rpm) (Max.)	34 350 *	34 200	--	--
	Output Torque lb. ft. (Nm)	#	28 800	--	--
		11 000 (14 913) **	--	11 197 (15 181)	10 040 (13 612)

RATINGS (See Notes 1 & 9)	Normal takeoff at sea level:				
	Equivalent shaft hp (kW)	2 044 (1 524)	2 253 (1 681)	2 378 (1 773)	2 054 (1 532)
	Shaft hp (kW)	1 950 (1 454)	2 142 (1 598)	2 261 (1 687)	1 950 (1 454)
	Trust, lb (daN)	235 (104.5)	304 (135.2)	291 (129.4)	258 (114.8)

Legend: "--" Same as preceding model; "#" Not applicable

LIMITATIONS		PW121	PW123	PW123B	PW123C
(See Note 3, 4 & 11) (* See Note 21) (** See Note 17) (***) See Note 15)	Output shaft speed, rpm	1 212	--	--	--
	Maximum Inter-turbine Temp. (ITT) °C (°F)	785 (1 445)***	765 (1 409)***	--	770 (1 418)***
	Maximum Air Temp. for Rated Power °C (°F)	26 (78)	35 (95)	30 (86)	26 (78)
	H.P. Spool Speed (rpm) (Max.)	See Note 14 *	33 633	--	--
	L.P. Spool Speed (rpm) (Max.)	#	28 170	28 270	--
	Output Torque lb. ft. (Nm)	10 000 (13 557) **	--	--	#
RATINGS					
(See Notes 1 & 9)	Maximum continuous at sea level:				
	Equivalent shaft hp (kW)	2 044 (1 524)	2 261 (1 687)	2 150 (1 603)	2 054 (1 532)
	Shaft hp (kW)	1 950 (1 454)	2 150 (1 604)	--	1 950 (1 454)
	Thrust, lb (daN)	235 (104.5)	280 (124.6)	--	258 (114.8)
LIMITATIONS					
(See Note 3, 4 & 11) (* See Note 21) (** See Note 17) 	Output shaft speed, rpm	1 212	--	--	1 212
	Maximum Inter-turbine Temp. (ITT) °C (°F)	800 (1 472)*	--	--	--
	Maximum Air Temp. for Rated Power °C (°F)	28 (82)	45 (113)	--	34 (94)
	H.P. Spool Speed (rpm) (Max.)	34 675 *	34 200	--	--
	L.P. Spool Speed (rpm) (Max.)	#	28 800	--	--
	Output Torque lb. ft. (Nm)	10 000 (13 557) **	--	--	10 040 (13 612)
LIMITATIONS					
(See Note 3, 4 & 11) (* See Note 21) (** See Note 17) 	Transient (20 secs):				
	Maximum Inter-turbine Temp. (ITT) °C (°F)	850 (1 562)*	840 (1 544)	--	--
	Output shaft speed, rpm	1 320	--	--	--
	H.P. Spool Speed (rpm) (Max.)	34 675*	34 550	--	--
	L.P. Spool Speed (rpm) (Max.)	#	28 900	--	--
Output Torque lb. ft. (Nm)	12 750 (17 285) **	--	--	--	
LIMITATIONS					
(See Note 3, 4 & 11) (* See Note 21) 	Starting (5 secs):				
	Maximum Inter-turbine Temp. (ITT) °C (°F)	950 (1 742)	--	--	950 (1 742)
	Transient (5 secs):				
Output shaft speed, rpm	1 440	#	#	#	

III - MODEL

PW123D, PW123E, PW124B, PW125B

TYPE

A three spool free-turbine turboprop propulsion engine incorporating two centrifugal compressors, each driven by independent axial turbine, a reverse flow annular combustor, and a two-stage power turbine that drives a gearbox.

		PW123D	PW123E	PW124B	PW125B
RATINGS (See Notes 1 & 9)	Maximum takeoff (5 min.), at sea level:				
	Equivalent shaft hp (kW)	2 262 (1 687)	2 502 (1 866)	2 522 (1 881)	2 626 (1 958)
	Shaft hp (kW)	2 150 (1 604)	2 380 (1 775)	2 400 (1 790)	2 500 (1 864)
	Thrust, lb (daN)	280 (124.5)	304 (135.2)	305 (135.7)	314 (139.9)
LIMITATIONS (See Note 3 & 11)	Output shaft speed, rpm	1 212	--	--	--
	Maximum Inter-turbine Temp. (ITT) °C (°F)	800 (1 472)	--	--	--
	Maximum Air Temp. for Rated Power °C (°F)	45 (113)	41 (105)	34 (94)	30 (86)
	H.P. Spool Speed (rpm) (Max.)	34 200	--	--	--
	L.P. Spool Speed (rpm) (Max.)	28 800	--	--	--
	Output Torque lb. ft. (Nm)	10 040 (13 612)	11 000 (14 913)	11 170 (15 144)	10 965 (14 870)
RATINGS (See Notes 1 & 9)	Normal takeoff at sea level:				
	Equivalent shaft hp (kW)	2 054 (1 532)	2 253 (1 681)	2 272 (1 694)	2 261 (1 687)
	Shaft hp (kW)	1 950 (1 454)	2 142 (1 598)	2 160 (1 611)	2 150 (1 603)
	Trust, lb (daN)	258 (114.8)	279 (124.1)	279 (124.1)	280 (124.5)
LIMITATIONS (See Note 3 & 11) (* See Note 15)	Output shaft speed, rpm	1 212	--	--	--
	Maximum Inter-turbine Temp. (ITT) °C (°F)	770 (1 418)*	765 (1 409)*	--*	--*
	Maximum Air Temp. for Rated Power °C (°F)	45 (113)	41 (105)	34 (94)	30 (86)
	H.P. Spool Speed (rpm) (Max.)	33 633	See Note 14	33 633	33 750
	L.P. Spool Speed (rpm) (Max.)	28 270	28 170	--	28 140
	Output Torque lb. ft. (Nm)	10 040 (13 612)	10 000 (13 558)	9 454 (12 818)	9 890 (13 409)
RATINGS (See Notes 1 & 9)	Maximum continuous at sea level:				
	Equivalent shaft hp (kW)	2 045 (1 532)	2 261 (1 687)	2 522 (1 881)	2 261 (1 687)
	Shaft hp (kW)	1 950 (1 454)	2 150 (1 604)	2 400 (1 790)	2 150 (1 603)
	Thrust, lb (daN)	258 (114.8)	280 (124.6)	305 (135.7)	280 (124.5)

Legend: "--" Same as preceding model; "*" Not applicable

		PW123D	PW123E	PW124B	PW125B
LIMITATIONS (See Note 3 & 11)	Output shaft speed, rpm	1 212	--	--	--
	Maximum Inter-turbine Temp. (ITT) °C (°F)	800 (1 472)	--	--	--
	Maximum Air Temp. for Rated Power °C (°F)	53 (127)	45 (113)	34 (94)	45 (113)
	H.P. Spool Speed (rpm) (Max.)	34 200	--	--	--
	L.P. Spool Speed (rpm) (Max.)	28 800	--	--	--
	Output Torque lb. ft. (Nm)	10 040 (13 612)	10 000 (13 558)	10 766 (14 597)	9 410 (12 758)
LIMITATIONS (See Note 3 & 11)	Transient (20 secs):				
	Maximum Inter-turbine Temp. (ITT) °C (°F)	840 (1 544)	--	--	--
	Output shaft speed, rpm	1 320	--	1 380	--
	H.P. Spool Speed (rpm) (Max.)	34 550	--	--	--
	L.P. Spool Speed (rpm) (Max.)	28 900	--	--	--
	Output Torque lb. ft. (Nm)	12 750 (17 285)	--	13 080 (17 734)	14 300 (19 390)
Starting (5 secs)	Maximum Inter-turbine Temp. (ITT) °C (°F)	950 (1 742)	--	--	--
	Transient (5 secs)				
	Output shaft speed, rpm	#	#	#	#

N-MODEL

PW127, PW127A, PW127B, PW127C

TYPE

A three spool free-turbine turboprop propulsion engine incorporating two centrifugal compressors, each driven by independent axial turbine, a reverse flow annular combustor, and a two-stage power turbine that drives a gearbox.

		PW127	PW127A	PW127B	PW127C
RATINGS (See Notes 1 & 9)	Maximum takeoff (5 min.), at sea level:				
	Equivalent shaft hp (kW)	2 880 (2 148)	2 620 (1 954)	2 880 (2 148)	--
	Shaft hp (kW)	2 750 (2 051)	2 500 (1 865)	2 750 (2 051)	--
	Thrust, lb (daN)	325 (144.6)	301 (133.9)	325 (144.6)	--

		PW127	PW127A	PW127B	PW127C
LIMITATIONS (See Note 3 & 11)	Output shaft speed, rpm	1 212	--	--	--
	Maximum Inter-turbine Temp. (ITT) °C (°F)	800 (1 472)	--	--	--
	Maximum Air Temp. for Rated Power °C (°F)	32 (89)	41 (106)	30 (86)	--
	H.P. Spool Speed (rpm) (Max.)	34 360	--	--	--
	L.P. Spool Speed (rpm) (Max.)	28 870	--	--	--
	Output Torque lb. ft. (Nm)	12 800 (17 354)	--	--	--
RATINGS (See Notes 1 & 9)	Normal takeoff at sea level:				
	Equivalent shaft hp (kW)	2 594 (1 934)	2 517 (1 877)	2 594 (1 934)	--
	Shaft hp (kW)	2 475 (1 846)	2 400 (1 790)	2 475 (1 846)	--
	Trust, lb (daN)	297 (1 321)	292 (1 299)	297 (132.1)	--
LIMITATIONS (See Note 3 & 11) (* See Note 15)	Output shaft speed, rpm	1 212	--	--	--
	Maximum Inter-turbine Temp. (ITT) °C (°F)	765 (1 409)*	773 (1 423)	--*	765 (1 409)*
	Maximum Air Temp. for Rated Power °C (°F)	32 (89)	34 (93)	30 (86)	--
	H.P. Spool Speed (rpm) (Max.)	33 930	33 850	--	--
	L.P. Spool Speed (rpm) (Max.)	28 090	28 000	--	--
	Output Torque lb. ft. (Nm)	12 800 (17 354)	--	--	--
RATINGS (See Notes 1 & 9)	Maximum continuous at sea level:				
	Equivalent shaft hp (kW)	2 619 (1 953)	2 620 (1 954)	2 619 (1 953)	2 880 (2 148)
	Shaft hp (kW)	2 500 (1 864)	--	--	2 750 (2 051)
	Thrust, lb (daN)	299 (133)	301 (133.9)	--	325 (144.6)
LIMITATIONS (See Note 3 & 11)	Output shaft speed, rpm	1 212	--	--	--
	Maximum Inter-turbine Temp. (ITT) °C (°F)	800 (1 472)	--	--	--
	Maximum Air Temp. for Rated Power °C (°F)	41 (106)	--	--	30 (86)
	H.P. Spool Speed (rpm) (Max.)	34 360	--	--	--
	L.P. Spool Speed (rpm) (Max.)	28 870	--	--	--
	Output Torque lb. ft. (Nm)	12 800 (17 354)	--	--	--

		PW127	PW127A	PW127B	PW127C
LIMITATIONS (See Note 3 & 11)	Transient (20 secs)				
	Maximum Inter-turbine Temp. (ITT) °C (°F)	840 (1 544)	--	--	--
	Output shaft speed, rpm	1 296	#	#	#
	H.P. Spool Speed (rpm) (Max.)	35 440	34 730	--	--
	L.P. Spool Speed (rpm) (Max.)	29 575	29 500	--	--
	Output Torque lb. ft. (Nm)	14 440 (19 578)	13 200 (17 896)	--	14 440 (19 578)
	Starting (5 secs):				
	Maximum Inter-turbine Temp. (ITT) °C (°F)	950 (1 742)	--	--	--
	Transient (5 secs):				
	Output shaft speed, rpm	1 440	--	--	--
V - MODEL	PW127D, PW127E, PW127F, PW121A				
TYPE	A three spool free-turbine turboprop propulsion engine incorporating two centrifugal compressors, each driven by independent axial turbine, a reverse flow annular combustor, and a two-stage power turbine that drives a gearbox.				
RATINGS (See Notes 1 & 9)	Maximum takeoff (5 min.), at sea level:	PW127D	PW127E	PW127F	PW121A
	Equivalent shaft hp (kW)	2 880 (2 148)	2 516 (1 876)	2 880 (2 148)	2 304 (1 718)
	Shaft hp (kW)	2 750 (2 051)	2 400 (1 790)	2 750 (2 051)	2 200 (1 641)
	Thrust, lb (daN)	325 (144.6)	289 (1 285)	325 (144.5)	260 (115.7)
LIMITATIONS (See Note 3 & 11) (** See Note 4)	Output shaft speed, rpm	1 212	--	--	--
	Maximum Inter-turbine Temp. (ITT) °C (°F)	800 (1 472)	--	--	816 (1 501)
	Maximum Air Temp. for Rated Power °C (°F)	33 (91)	45 (113)	35 (95)	25 (77)
	H.P. Spool Speed (rpm) (Max.)	34 360	--	--	34 380
	L.P. Spool Speed (rpm) (Max.)	28 870	--	--	#**
	Output Torque lb. ft. (Nm)	12 800 (17 354)	--	--	11 000 (14 913)
RATINGS (See Notes 1 & 9)	Normal takeoff at sea level:				
	Equivalent shaft hp (kW)	2 594 (1 934)	2 266 (1 690)	2 593 (1 934)	2 075 (1 547)
	Shaft hp (kW)	2 475 (1 846)	2 160 (1 611)	2 475 (1 846)	1 980 (1 476)
	Trust, lb (daN)	297 (132.1)	265 (117.9)	297 (132.1)	238 (105.9)

Legend: "--" Same as preceding model; "#" Not applicable

		PW127D	PW127E	PW127F	PW121A
LIMITATIONS	Output shaft speed, rpm	1 212	--	--	--
(See Note 3, & 11)	Maximum Inter-turbine Temp. (ITT) °C (°F)	750 (1 382)*	765 (1 409)*	--*	791 (1 456)
(* See Note 15)	Maximum Air Temp. for Rated Power °C (°F)	33 (91)	45 (113)	35 (95)	25 (77)
(** See Note 4)	H.P. Spool Speed (rpm) (Max.)	33 850	33 930	--	33 975
	L.P. Spool Speed (rpm) (Max.)	28 000	28 090	--	#**
	Output Torque lb. ft. (Nm)	12 800 (17 354)	--	--	10 000 (13 557)
RATINGS	Maximum continuous at sea level:				
(See Notes 1 & 9)	Equivalent shaft hp (kW)	2 880 (2 148)	2 516 (1 876)	2 619 (1 953)	1 992 (1 485)
	Shaft hp (kW)	2 750 (2 051)	2 400 (1 790)	2 500 (1 864)	1 900 (1 417)
	Thrust, lb (daN)	325 (144.6)	289 (128.5)	297 (132.1)	230 (102.3)
LIMITATIONS	Output shaft speed, rpm	1 212	--	--	--
(See Note 3, 4 & 11)	Maximum Inter-turbine Temp. (ITT) °C (°F)	800 (1 472)	--	--	--
(** See Note 4)	Maximum Air Temp. for Rated Power °C (°F)	33 (91)	45 (113)	44 (112)	30 (86)
	H.P. Spool Speed (rpm) (Max.)	34 360	--	--	34 160
	L.P. Spool Speed (rpm) (Max.)	28 870	--	--	#**
	Output Torque lb. ft. (Nm)	12 800 (17 354)	--	--	10 000 (13 557)
LIMITATIONS	Transient (20 secs):				
(See Note 3, 4 & 11)	Maximum Inter-turbine Temp. (ITT) °C (°F)	840 (1 544)	--	--	850 (1 562)
(** See Note 4)	Output shaft speed, rpm	---	1 296	--	1 320
	H.P. Spool Speed (rpm) (Max.)	34 730	35 440	--	34 675
	L.P. Spool Speed (rpm) (Max.)	29 500	29 575	--	#**
	Output Torque lb. ft. (Nm)	14 440 (19 578)	--	--	12 750 (17 286)
LIMITATIONS	Starting (5 secs):				
(See Note 3, 4 & 11)	Maximum Inter-turbine Temp. (ITT) °C (°F)	950 (1 742)	--	--	--
	Transient (5 secs):				
	Output shaft speed, rpm	1 440	--	--	--

Legend: "--" Same as preceding model; "#" Not applicable

VI - MODEL	PW127M	
TYPE	A three spool free-turbine turboprop propulsion engine incorporating two centrifugal compressors, each driven by independent axial turbine, a reverse flow annular combustor, and a two-stage power turbine that drives a gearbox.	
RATINGS (See Notes 1 & 9)	Maximum takeoff (5 min.), at sea level:	PW127M
	Equivalent shaft hp (kW)	2 880 (2 148)
	Shaft hp (kW)	2 750 (2 051)
	Thrust, lb (daN)	325 (144.6)
LIMITATIONS (See Note 3 & 11) (* See Note 4)	Output shaft speed, rpm	1 212
	Maximum Inter-turbine Temp. (ITT) °C (°F)	800 (1 472)
	Maximum Air Temp. for Rated Power °C (°F)	39 (103)
	H.P. Spool Speed (rpm) (Max.)	34 360
	L.P. Spool Speed (rpm) (Max.)	28 870
	Output Torque lb. ft. (Nm)	12 800 (17 354)
RATINGS (See Notes 1 & 9)	Normal takeoff at sea level:	
	Equivalent shaft hp (kW)	2 594 (1 934)
	Shaft hp (kW)	2 475 (1 846)
	Trust, lb (daN)	297 (132.1)
LIMITATIONS (See Note 3, & 11) (* See Note 15) (* See Note 4)	Output shaft speed, rpm	1 212
	Maximum Inter-turbine Temp. (ITT) °C (°F)	765 (1 409)*
	Maximum Air Temp. for Rated Power °C (°F)	39 (103)
	H.P. Spool Speed (rpm) (Max.)	33 930
	L.P. Spool Speed (rpm) (Max.)	28 090
	Output Torque lb. ft. (Nm)	12 800 (17 354)
RATINGS (See Notes 1 & 9)	Maximum continuous at sea level:	
	Equivalent shaft hp (kW)	2 619 (1 953)
	Shaft hp (kW)	2 500 (1 864)
	Thrust, lb (daN)	299 (133.0)

LIMITATIONS (See Note 3, 4 & 11) (* See Note 4)		PW127M
	Output shaft speed, rpm	1 212
	Maximum Inter-turbine Temp. (ITT) °C (°F)	800 (1 472)
	Maximum Air Temp. for Rated Power °C (°F)	48 (118)
	H.P. Spool Speed (rpm) (Max.)	34 360
	L.P. Spool Speed (rpm) (Max.)	28 870
	Output Torque lb. ft. (Nm)	12 800 (17 354)
LIMITATIONS (See Note 3, 4 & 11) (* See Note 4)	Transient (20 secs):	
	Maximum Inter-turbine Temp. (ITT) °C (°F)	840 (1 544)
	Output shaft speed, rpm	#
	H.P. Spool Speed (rpm) (Max.)	35 440
	L.P. Spool Speed (rpm) (Max.)	29 575
	Output Torque lb. ft. (Nm)	14 440 (19 578)
LIMITATIONS (See Note 3, 4 & 11)	Starting (5 secs):	
	Maximum Inter-turbine Temp. (ITT) °C (°F)	950 (1 742)
	Transient (5 secs):	
	Output shaft speed, rpm	1 440

DATA PERTINENT TO ALL MODELS:**AIR BLEED**

Maximum External (HP) All models on this datasheet – 10% of inlet airflow up to a maximum of 33 lb/min (15 kg/min).

Maximum External (LP) PW118, PW118A, PW118B, PW120, PW121, PW121A – 8% of inlet airflow.

PW123, PW123B, PW123C, PW123D, PW123E, PW124B, PW125B, PW126A, PW127, PW127A, PW127B, PW127C, PW127D, PW127E, PW127F, **PW127M** – 10% of inlet airflow

Maximum during start – Bleed flow equivalent to that obtained from 0.5 cm (0.2 in) diameter orifice at the engine bleed port.

FUEL PRESSURE

Refer to Installation Manual.

**FUEL TEMPERATURE
PUMP INLET**

Refer to Installation Manual.

OIL PRESSURE	Refer to Installation Manual.			
OIL TEMPERATURE	Refer to Installation Manual.			
FUEL TYPE	Fuels conforming to the current P&WC specifications CPW 204 and later revisions. Refer to Maintenance Manual (Chapter 72-00-00).			
OIL LUBRICATION	Maintenance Manual (chapter 72-00-00) defines approved oils.			
OIL TANK CAPACITY	PW118, PW118A, PW118B, PW120, PW121, PW121A	Liters	Imperial Gallons	U.S. gallons
	Usable	3.8	0.83	1.0
	Total	17.7	3.9	4.7
	PW123, PW123B, PW123C, PW123D, PW123E, PW124B, PW125B, PW126A, PW127, PW127A, PW127B, PW127C, PW127D, PW127E, PW127F, PW127M			
	Usable	8.0	1.6	2.0
	Total	19.3	4.57	5.72
EQUIPMENT	Fuel pump, fuel control unit, ignition system without power source, propeller overspeed governor and fuel heater are included as standard equipment as shown in the Approved Parts List. Required equipment also includes a chip detector, or other metallic debris-detecting device to be approved by Transport Canada. For additional information refer to Installation Manual. For output drive specification, accessory drives, principal dimensions, weight and C.G. location refer to Installation Manual, and installation drawing.			
OUTPUT SHAFT LOADS	See Installation Manual			
IMPORT REQUIREMENTS	Each engine imported separately and/or spare parts must be accompanied by an Airworthiness Certificate for Export and/or an Airworthiness Approval Tag, respectively, issued by TCCA Canada (or a third country authority, in case of used engine imported from such country) attesting that the particular engine and/or parts were submitted to the governmental quality control before delivery and are in conformity with the ANAC approved type design. The ANAC type design corresponds to the TCCA approved type design, as stated in ANAC Report V33-0060-0 dated 18 April 2005 or further revisions			

CERTIFICATION BASIS

RBHA 33 corresponding to 14 CFR Part 33 effective 1 February 1965 and amendments 33-1 to 33-9 inclusive, including Canadian Special Requirements as contained in Transport Canada letter to Pratt & Whitney Canada, dated September 20, 1983, which is equivalent to 14 CFR Part 33, Amendment 10 for the following paragraphs: 33.7, 33.14, 33.17, 33.19, 33.23, 33.27, 33.77, 33.87, 33.88, 33.90 and 33.94.

These engines meet the requirements of 14 CFR Part 33.68 for operation in icing conditions as defined in 14 CFR Part 25 Appendix C when the intake system conforms with the P&WC Installation Manual Instructions for inertial separation of snow and icing particles.

Models

PW115*, PW120
 PW118
 PW118A
 PW123
 PW121, PW124B
 PW125B
 PW127, PW127A,
 PW127B, PW127C,
 PW127D
 PW118B
 PW123B, PW123C,
 PW123D, PW123E
 PW127E, PW127F
 PW121A
 PW127M

Application

26 June 1981
 22 May 1986
 17 June 1987
 8 April 1991
 23 October 1991
 11 February 1992
 21 December 1993
 4 March 1996
 30 October 1997
 24 February 2005
 22 February 2007
 17 April 2008

Issued TC

7 May 1985
 27 August 1986
 10 April 1988
 3 November 1992
 3 November 1992
 3 November 1992
 5 May 1994
 17 April 1996
 30 March 1998
 18 April 2005
 25 May 2007
 07 July 2008

* Engine model PW115 was deleted from EM-8503 on 10 April 2005. The above was deleted at request of the type certificate holder. No engines of this model are in existence, nor is there intent to manufacture or convert to this model.

NOTES:

NOTE 1 For all engine models the engine ratings are based on dry sea level static ICAO standard atmospheric conditions. No external accessory loads and air bleed. 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.

NOTE 2 All engine models may be maintained, as two modules when Transport Canada accepted manuals are available: the Turbomachine Module and the Reduction Gearbox as follows:

<u>Engine Model</u>		<u>Turbomachine Module P/N.</u>	<u>Reduction Gearbox Module P/N.</u>
PW118		3104600	3104480
PW118A	PW118B	3041100	3104480
PW120	PW121	3104400	3104280

NOTE 2 (Cont.)	<u>Engine Model</u>		<u>Turbomachine Module P/N.</u>	<u>Reduction Gearbox Module P/N.</u>
	PW121A		3120201-01	3120203-01
	PW123	PW123B	3038300	3036180
	PW123C	PW123D	PW123E	3038300
	PW125B			3035500
	PW124B			3041800
	PW127	PW127A	PW127B	3047900
	PW127C			3050600
	PW127D			3040960
	PW127E	PW127F	PW127M	3047500

NOTE 3 The PW120, PW121, PW121A, PW123, PW123B, PW123C, PW123D, PW123E, PW124B, PW125B, PW127, PW127A, PW127B, PW127C, PW127D, PW127E, PW127F and **PW127M** models include provision for automatic power increase from Normal Takeoff Power to Max. Takeoff Power. The limitations stated for Normal Takeoff are to ensure the Maximum Takeoff limitations are not exceeded in the event of an automatic power increase to Maximum Takeoff Power.

NOTE 4 The speed relationship between the low compressor spool and the high compressor spool is controlled by new engine acceptance procedures and the Overhaul Manual for the PW120, PW121 and PW121A.

NOTE 5 The Electronic Engine Control system meets the lightning protection requirements specified in the SAE AE4L committee report. For specific capabilities and installation requirements refer to the Installation Manual.

NOTE 6 For PW118, PW120 and PW121, models the software contained in the Electronic Control Unit has been developed, documented and tested in accordance with the provisions of the critical category, of RTCA/DO 178, November 1981.

NOTE 7 The software contained in the Electronic Control Unit for the PW118A, PW118B, PW121A, PW123, PW123B, PW123C, PW123D, PW123E, PW124B, PW 125B, PW127, PW127A, PW127B, PW127C, PW127D, PW127E and PW127F models have been designed, developed, documented and tested in accordance with the provisions of the Critical Category, Level 1, of RTCA/DO 178A, March 1985. **The PW127M software is a modification of the PW127F 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.**

NOTE 8 Reserved.

- NOTE 9** For all engine models takeoff ratings that are nominally limited to 5 minutes duration may be used for up to 10 minutes for OEI operations without adverse effects upon engine airworthiness. Such operations are anticipated on an infrequent basis (as engine failure at take-off events is uncommon) and no limits or special inspections have been imposed.
- NOTE 10** The software contained in the Electronic Control Unit for the PW127A and PW127C, models have been designed and developed in accordance with the provisions of the Critical Category, Level 1 of RTCA/DO 178A, March 1985. They have been functionally reviewed for suitability in a flight test program and found acceptable.
- NOTE 11** All engine models have been approved with a propeller overspeed “get-home” capability to cater for propeller control malfunctions. The Engine Installation Manual operating limits defines this overspeed limit.
- NOTE 12** All engine models except those identified in NOTE 13 are acceptable with both 6 blade and 4 blade propeller installations.
- NOTE 13** The PW125B, PW127A, PW127B, PW127D, PW127E (BS 1034), PW127F (BS 1033) and PW127M engines are acceptable with 6 blade propeller installations only.
- NOTE 14** For the PW120, PW121 and PW123E engine models, the Normal Take-off H.P. 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 Max. Takeoff. Refer to the engine Installation Manual for the Normal Takeoff limit.
- NOTE 15** Normal Takeoff 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, PW127, PW127A, PW127B, PW127C, PW127D, PW127E, PW127F and PW127M.
Refer to the engine installation manuals for the curves defining these limits.
- NOTE 16** Approvals for the maximum ITT limits are based upon tests conducted with maximum gas temperature at exit of the compressor turbine nozzle guide vanes according to the following table:
- | | | | |
|-------------------------------|---------------------|-------------------------------|---------------------|
| PW118 | 2 345° F (1 285° C) | PW123E | 2 426° F (1 330° C) |
| PW118A, PW118B | 2 356° F (1 291° C) | PW124B, PW125B | 2 400° F (1 315° C) |
| PW120 | 2 345° F (1 285° C) | PW127, PW127B, PW127C, PW127E | 2 450° F (1 343° C) |
| PW121, PW121A | 2 390° F (1 310° C) | PW127A, PW127D | 2 450° F (1 343° C) |
| PW123, PW123B, PW123C, PW123D | 2 400° F (1 315° C) | PW127F, PW127M | 2 476° F (1 357° C) |

- NOTE 17** PW120 and PW121 engine models not incorporating SB 20316 or SB 20380 have the following limits; output torque maximum continuous 8 535 lb ft (11 572 Nm), takeoff 9 850 lb ft (13 355 Nm), and 20 seconds transient 11 000 lb ft (14 914 Nm).
- NOTE 18** Reserved.
- NOTE 19** PW 127B (Build Spec. 812/813) Maintenance instructions are provide in the form of source data to the airframe manufacture.
- NOTE 20** In accordance with the provisions of RBHA 33.4, corresponding to 14 CFR Part 33.4, 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 authority.
- NOTE 21** For PW120 and PW121 engines not incorporating SB20231 or SB20970 or SB21059 or SB21092 the maximum continuous Interturbine temperature limit is 785°C (1 445°F), the maximum takeoff and maximum continuous HP spool speed limit is 33 300 rpm, and the 20 second HP spool speed transient limit is 33 966 rpm. In the case the maximum gas temperature applicable to PW121 in NOTE 16 is 2 345°F (1 285° C) continuous.
- NOTE 22** For PW121 engines built to Build Specification (B.S.) 722 and 725 (ATR42 installation see PW120/120A/121 Installation Manual for the approved ratings and limits. These engines have reduced operating ratings for increased thermal capability.


for **CLÁUDIO PASSOS SIMÃO**
Gerente Geral, Certificação de Produtos Aeronáuticos
(Manager, Aeronautical Products Certification)