



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW815GA

BYPASS RATIO: 5.6

UNIQUE ID NUMBER: 19PW128

PRESSURE RATIO ( $\pi_{oo}$ ): 35.0

ENGINE TYPE: TF

RATED OUTPUT ( $F_{oo}$ ) (kN): 71.2

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D <sub>p</sub> /F <sub>oo</sub> (g/kN) or SN	0.1	23.4	50.5	0.3
AS % OF ORIGINAL LIMIT	0.5 %	19.8 %	45.9 %	1.2 %
AS % OF CAEP/2 LIMIT (NOx)			57.4 %	
AS % OF CAEP/4 LIMIT (NOx)			63.1 %	
AS % OF CAEP/6 LIMIT (NOx)			67.9 %	
AS % OF CAEP/8 LIMIT (NOx)			75.4 %	

DATA STATUS

- PRE-REGULATION

x CERTIFICATION

x REVISED (SEE REMARKS)

TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES

x DEDICATED ENGINES TO PRODUCTION STANDARD

- OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
(ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)

- OUT OF PRODUCTION

- OUT OF SERVICE

MEASURED DATA

MODE	POWER SETTING (%F <sub>oo</sub> )	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	0.699	0	0	24.88	0.3
CLIMB OUT	85	2.2	0.573	0	0	18.89	0.2
APPROACH	30	4.0	0.201	0.02	1.5	11.47	0.2
IDLE	7	26.0	0.071	0.05	13.4	6.41	0.2
LTO TOTAL FUEL (kg) or EMISSIONS (g)			264	7	1557	3422	-
NUMBER OF ENGINES				4	4	4	4
NUMBER OF TESTS				6	6	6	6
AVERAGE D <sub>p</sub> /F <sub>oo</sub> (g/kN) or AVERAGE SN (MAX)				0.1	21.9	48.1	0.3
SIGMA (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)				0.07	1.38	1.11	0.11
RANGE (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)				0.0 - 0.2	19.9 - 23.3	47.0 - 51.7	0.0 - 0.5

ACCESSORY LOADS

POWER EXTRACTION0(kW)AT-POWER SETTINGS

STAGE BLEED0% CORE FLOWAT-POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.1 - 101.7
TEMPERATURE (K)	253 - 297
ABS HUMIDITY (kg/kg)	0.0005 - 0.0098

FUEL

SPEC	Jet A-1
H/C	0.158 - 0.161
AROM (%)	15.7 - 20.1

MANUFACTURER: Pratt & Whitney Canada Corp.

TEST ORGANIZATION: PW800 Development Engineering, Production

TEST LOCATION: Longueuil & Mirabel, Quebec, Canada

TEST DATES: FROM 23 Jun 14 TO 13 Mar 15

REMARKS

1. Data from Certification Repor P&WC ER 7572 rev A
2. Engines tested: 5738/01, GA0008/01, GA0009/01, GA0011/01
3. Data extrapolation used for GA0008/01, GA0009/01, GA0011/01 due to cold ambient
4. Future revision to remove extrapolated data and include additional engine data
5. Export Classification: P-ECCN 9E991, ECL NLR
6. Certification in accordance with Part III, Chapter 2, of Amendment 8 of ICAO Annex 16 Vol. II.
7. NOx levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

If REVISED, this data supersedes databank UID

Compliance with fuel venting requirements: x ('x' if complies, PR if pre-regulation)