



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1524G

UNIQUE ID NUMBER: 16PW111

ENGINE TYPE: TF

BYPASS RATIO: 11.1

PRESSURE RATIO (π_{oo}): 38.7

RATED OUTPUT (F_{oo}) (kN): 108.5

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D _p /F _{oo} (g/kN) or SN	0.4	16.3	39.8	4.1
AS % OF ORIGINAL LIMIT	2.0 %	13.8 %	33.9 %	17.7 %
AS % OF CAEP/2 LIMIT (NOx)			42.4 %	
AS % OF CAEP/4 LIMIT (NOx)			47.2 %	
AS % OF CAEP/6 LIMIT (NOx)			52.2 %	
AS % OF CAEP/8 LIMIT (NOx)			59.0 %	

DATA STATUS

- PRE-REGULATION

x CERTIFICATION

- REVISED (SEE REMARKS)

TEST ENGINE STATUS

- 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 _{oo})	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	0.790	0.1	0	28.1	3.4
CLIMB OUT	85	2.2	0.650	0.1	0.1	21.2	2.8
APPROACH	30	4.0	0.230	0.1	1.6	11.1	2.4
IDLE	7	26.0	0.080	0.1	13	6.1	2.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			299	30	1719	4125	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F _{oo} (g/kN) or AVERAGE SN (MAX)				0.3	15.1	37.6	3.8
SIGMA (D _p /F _{oo} in g/kN, or SN)				-	-	-	-
RANGE (D _p /F _{oo} in g/kN, or SN)				0.2 - 0.4	14.6 - 15.5	36.5 - 38.3	1.7 - 5.7

ACCESSORY LOADS

POWER EXTRACTION0(kW)AT-POWER SETTINGS

STAGE BLEED0% CORE FLOWAT-POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.22 - 101.35
TEMPERATURE (K)	259.5 - 282.0
ABS HUMIDITY (kg/kg)	0.00081 - 0.00317

FUEL

SPEC	Jet-A
H/C	1.9
AROM (%)	16.4% - 18.1%

MANUFACTURER: Pratt & Whitney

TEST ORGANIZATION: Pratt & Whitney

TEST LOCATION: Mirabel Aerospace Centre - Quebec

TEST DATES: FROM 15 Jan 16 TO 10 May 16

REMARKS

1. Data from Certification Report PWA-10061
2. Certification in accordance with Part III, Chapter 2, of Amendment 8 of ICAO Annex 16 Vol. II.
3. 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)