



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION:PW1127GA-JM

UNIQUE ID NUMBER:18PW121

ENGINE TYPE:TF

BYPASS RATIO:12.3

PRESSURE RATIO (π_{oo}):31.7

RATED OUTPUT (F_{oo}) (kN):120.4

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D _p /F _{oo} (g/kN) or SN	0.6	35.1	27.3	14.8
AS % OF ORIGINAL LIMIT	3.1 %	30.0 %	26.0 %	66.0 %
AS % OF CAEP/2 LIMIT (NOx)			33.0 %	
AS % OF CAEP/4 LIMIT (NOx)			39.0 %	
AS % OF CAEP/6 LIMIT (NOx)			44.0 %	
AS % OF CAEP/8 LIMIT (NOx)			51.0 %	

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

xDATA 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	0.800	0.02	0.22	18.82	13.4296924
CLIMB OUT	85	2.2	0.670	0.04	0.3	15.3	10.53052927
APPROACH	30	4.0	0.232	0.02	5.36	9.07	0.452741054
IDLE	7	26.0	0.080	0.43	27.93	4.84	1.151943375
LTO TOTAL FUEL (kg) or EMISSIONS (g)			303	59	3819	3096	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				9	9	9	9
AVERAGE D _p /F _{oo} (g/kN) or AVERAGE SN (MAX)				0.51	32.43	25.3	13.4296924
SIGMA (D _p /F _{oo} in g/kN, or SN)				-	-	-	-
RANGE (D _p /F _{oo} in g/kN, or SN)				-	-	-	-

ACCESSORY LOADS

POWER EXTRACTION0(kW)AT-POWER SETTINGS

STAGE BLEED0% CORE FLOWAT-POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.56 - 101.71
TEMPERATURE (K)	265.6 - 278.15
ABS HUMIDITY (kg/kg)	0.00071 - 0.00203

FUEL

SPEC	Jet-A
H/C	1.86
AROM (%)	15.1% - 16.6%

MANUFACTURER:Pratt & Whitney

TEST ORGANIZATION:Pratt & Whitney

TEST LOCATION:X8 Test Stand, East Hartford, CT

TEST DATES:FROM 11 Mar 14TO 14 Mar 14

REMARKS

1. Data from Certification Report PWA-11521, 3 engines tested, block C combustor
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)