



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1133GA-JM

UNIQUE ID NUMBER: 18PW125

ENGINE TYPE: TF

BYPASS RATIO: 11.6

PRESSURE RATIO (π_{oo}): 38.1

RATED OUTPUT (F_{oo}) (kN): 147.3

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D _p /F _{oo} (g/kN) or SN	0.4	26.9	33.6	16.7
AS % OF ORIGINAL LIMIT	2.0 %	23.0 %	29.0 %	78.0 %
AS % OF CAEP/2 LIMIT (NOx)			36.0 %	
AS % OF CAEP/4 LIMIT (NOx)			40.0 %	
AS % OF CAEP/6 LIMIT (NOx)			45.0 %	
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

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	1.023	0.02	0.23	25.46	15.17499915
CLIMB OUT	85	2.2	0.839	0.05	0.22	19.84	13.91840405
APPROACH	30	4.0	0.278	0.02	3.44	9.4	0.542451144
IDLE	7	26.0	0.099	0.26	24.06	5.31	1.001038861
LTO TOTAL FUEL (kg) or EMISSIONS (g)			375	48	3971	4736	-
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)				0.35	24.88	31.3	15.17499915
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)	100.8559 - 103.0230
TEMPERATURE (K)	266.2 - 298.7
ABS HUMIDITY (kg/kg)	0.000362 - 0.01437

FUEL

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

MANUFACTURER: Pratt & Whitney

TEST ORGANIZATION: Pratt & Whitney

TEST LOCATION: X7 Test Stand, East Hartford, CT

TEST DATES: FROM 02 Mar 17 TO 19 Sep 17

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)