



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW4168A
UNIQUE ID NUMBER: 4PW067
ENGINE TYPE: TF

BYPASS RATIO: 5.1
PRESSURE RATIO (π_{oo}): 33.1
RATED OUTPUT (F_{oo}) (kN): 302.48

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	6.0	35.5	75.6	5.1
AS % OF ORIGINAL LIMIT	30.6 %	30.1 %	71.2 %	29.2 %
AS % OF CAEP/2 LIMIT (NOx)			89.0 %	
AS % OF CAEP/4 LIMIT (NOx)			103.3 %	
AS % OF CAEP/6 LIMIT (NOx)			116.0 %	
AS % OF CAEP/8 LIMIT (NOx)			134.2 %	

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	2.836	0.03	0.72	42.39	4
CLIMB OUT	85	2.2	2.327	0.04	0.74	33.91	2.6
APPROACH	30	4.0	0.798	0.15	1.75	14.66	0.7
IDLE	7	26.0	0.221	3.29	23.51	4.15	0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			963	1179	8754	19704	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				3.9	28.9	65.2	4
SIGMA (D_p/F_{oo} in g/kN, or SN)				-	-	-	-
RANGE (D_p/F_{oo} in g/kN, or SN)				-	-	-	-

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
STAGE BLEED 0 % CORE FLOW AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.3
TEMPERATURE (K)	273.5
ABS HUMIDITY (kg/kg)	0.0018

FUEL

SPEC	Jet A
H/C	1.89
AROM (%)	21.85

MANUFACTURER: Pratt & Whitney
TEST ORGANIZATION: Pratt & Whitney
TEST LOCATION: East Hartford, CT
TEST DATES: FROM 14 Feb 93 TO 17 Feb 93

REMARKS

Data from X821-3 with Floatwall Combustor

If REVISED, this data supersedes databank UID
Compliance with fuel venting requirements:

0 ('x' if complies, PR if pre-regulation)