ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW4164-1D
UNIQUE ID NUMBER: 9PW092
ENGINE TYPE: TF

BYPASS RATIO: 5.06
PRESSURE RATIO (π_{oo}): 31.3
RATED OUTPUT (F_{oo}) (kN): 286.9

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	3.0	29.3	52.1	7.5
AS % OF ORIGINAL LIMIT	15.2 %	24.8 %	50.7 %	42.1 %
AS % OF CAEP/2 LIMIT (NOx)			63.4 %	
AS % OF CAEP/4 LIMIT (NOx)			74.8 %	
AS % OF CAEP/6 LIMIT (NOx)			84.5 %	
AS % OF CAEP/8 LIMIT (NOx)			98.8 %	

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) HC	CO	NOx	SMOKE NUMBER
TAKE-OFF	100	0.7	2.721	0	0.16	26.31	5.8
CLIMB OUT	85	2.2	2.239	0	0.17	20.97	5.1
APPROACH	30	4.0	0.775	0.06	1.55	12.1	0.2
IDLE	7	26.0	0.243	1.44	17.13	3.79	0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			975	556	6851	12895	-
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)				1.9	23.9	44.9	5.8
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)	100.80-101.42
TEMPERATURE (K)	281.99-285.65
ABS HUMIDITY (kg/kg)	0.00362-0.00455

FUEL

SPEC	Jet A
H/C	1.89
AROM (%)	17

MANUFACTURER: Pratt & Whitney
TEST ORGANIZATION: Pratt & Whitney
TEST LOCATION: East Hartford, CT
TEST DATES: FROM 12 May 08 TO 13 May 08

REMARKS

Talon IIB combustor with improved exit temperature profile.

If REVISED, this data supersedes databank UID
Compliance with fuel venting requirements: x ('x' if complies, PR if pre-regulation)