ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW4152   BYPASS RATIO: 4.9
UNIQUE ID NUMBER: 1PW045   PRESSURE RATIO (π_{oo}):   26.9
ENGINE TYPE: TF   RATED OUTPUT (F_{oo}) (kN): 231.27

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	4.9	42.7	52.2	9.0
AS % OF ORIGINAL LIMIT	25.1 %	36.2 %	55.6 %	47.9 %
AS % OF CAEP/2 LIMIT (NOx)			69.5 %	
AS % OF CAEP/4 LIMIT (NOx)			84.1 %	
AS % OF CAEP/6 LIMIT (NOx)			95.5 %	
AS % OF CAEP/8 LIMIT (NOx)			114.1 %	

DATA STATUS

-     PRE-REGULATION
- x   CERTIFICATION
-     REVISED (SEE REMARKS)

TEST ENGINE STATUS

- x   NEWLY MANUFACTURED ENGINES
-     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)
- x   OUT OF PRODUCTION (DATE: -)
-     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	2.129	0.03	0.5	25.3	7
CLIMB OUT	85	2.2	1.783	0.01	0.62	21.1	-
APPROACH	30	4.0	0.613	0.13	2.29	11.1	-
IDLE	7	26.0	0.203	2.24	23.67	4.8	-
LTO TOTAL FUEL (kg) or EMISSIONS (g)			789	734	8023	10381	-
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)				3.2	34.8	45	7
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)	100.2
TEMPERATURE (K)	299
ABS HUMIDITY (kg/kg)	0.01

FUEL

SPEC	Jet A
H/C	1.88
AROM (%)	19.7

MANUFACTURER: Pratt & Whitney
TEST ORGANIZATION: -
TEST LOCATION: -
TEST DATES: FROM 17 Aug 87   TO 23 Aug 87

REMARKS

Data from X698-5 with reduced smoke combustor.

If REVISED, this data supersedes databank UID
Compliance with fuel venting requirements: 0   ('x' if complies, PR if pre-regulation)