ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-3C-1 (Rerated)
UNIQUE ID NUMBER: 1CM006
ENGINE TYPE: TF
BYPASS RATIO: 5.1
PRESSURE RATIO (π_{oo}): 21.3
RATED OUTPUT (F_{oo}) (kN): 82.29

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	9.5	104.6	45.2	3.9
AS % OF ORIGINAL LIMIT	48.6 %	88.6 %	54.7 %	15.5 %
AS % OF CAEP/2 LIMIT (NOx)			68.4 %	
AS % OF CAEP/4 LIMIT (NOx)			82.9 %	
AS % OF CAEP/6 LIMIT (NOx)			92.6 %	
AS % OF CAEP/8 LIMIT (NOx)			111.5 %	

DATA STATUS

- \- PRE-REGULATION
- \- CERTIFICATION
- x 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	0.872	0.05	0.9	16.6	3
CLIMB OUT	85	2.2	0.732	0.05	1	14.7	2.4
APPROACH	30	4.0	0.273	0.08	4.2	8	2.5
IDLE	7	26.0	0.111	2.86	38.1	3.8	2.1
LTO TOTAL FUEL (kg) or EMISSIONS (g)			372	507	7002	3210	-
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)				6.18	85.2	39	3
SIGMA (D_p/F_{oo} in g/kN, or SN)				1.05	6.4	0.78	0.4
RANGE (D_p/F_{oo} in g/kN, or SN)				5.47-7.38	79.7-92.2	38.2-40.0	2.5-3.2

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	95.98-97.49
TEMPERATURE (K)	279 - 286
ABS HUMIDITY (kg/kg)	.002-.009

FUEL

SPEC	Jet A
H/C	1.93
AROM (%)	16

MANUFACTURER: CFMI
TEST ORGANIZATION: CFM56 Evaluation Engineering
TEST LOCATION: Peebles Site IVD
TEST DATES: FROM 11 Nov 83 TO 14 Nov 83

REMARKS

1. Ref GE Report R84AEB579.
2. Engine S/N 692441.
3. Revised based on 3/89 production status cycle.
4. Data also apply to CFM56-3-B1 engines rerated to 82.3 kN (18,500 Lb.) thrust for B737-500 aircraft.

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