ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-5B1/P
UNIQUE ID NUMBER: 3CM023
ENGINE TYPE: TF

BYPASS RATIO: 5.7
PRESSURE RATIO (π_{oo}): 30.47
RATED OUTPUT (F_{oo}) (kN): 133.45

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	8.2	34.4	61.9	7.0
AS % OF ORIGINAL LIMIT	41.8 %	29.2 %	61.3 %	32.0 %
AS % OF CAEP/2 LIMIT (NOx)			76.7 %	
AS % OF CAEP/4 LIMIT (NOx)			91.1 %	
AS % OF CAEP/6 LIMIT (NOx)			103.3 %	
AS % OF CAEP/8 LIMIT (NOx)			121.2 %	

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	1.295	0.1	0.9	33	4.9
CLIMB OUT	85	2.2	1.058	0.2	0.9	26.2	5.2
APPROACH	30	4.0	0.345	0.5	2	10.7	0.2
IDLE	7	26.0	0.110	3.7	19.8	4.5	0.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			448	710	3738	7112	-
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)				5.29	28.05	53.38	5.4
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)	98.2-99.6
TEMPERATURE (K)	281.5-283.6
ABS HUMIDITY (kg/kg)	.0065-.0075

FUEL

SPEC	Jet A
H/C	1.92
AROM (%)	19

MANUFACTURER: GE
TEST ORGANIZATION: CFM56-5B Eval Engineering
TEST LOCATION: Techspace-Aero Facility, Liege, Belgium
TEST DATES: FROM Nov 95 TO -

REMARKS

1. FAA Certification Report CR-797/P, June 95.
2. Engine S/N 779-194/1

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