ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-5A5
UNIQUE ID NUMBER: 4CM036
ENGINE TYPE: TF

BYPASS RATIO: 6
PRESSURE RATIO (π_{oo}): 25.1
RATED OUTPUT (F_{oo}) (kN): 104.53

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	4.3	37.2	48.5	18.4
AS % OF ORIGINAL LIMIT	22.0 %	31.5 %	53.7 %	78.7 %
AS % OF CAEP/2 LIMIT (NOx)			67.1 %	
AS % OF CAEP/4 LIMIT (NOx)			81.9 %	
AS % OF CAEP/6 LIMIT (NOx)			93.1 %	
AS % OF CAEP/8 LIMIT (NOx)			112.2 %	

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	0.972	0.23	1.1	24.79	14.3
CLIMB OUT	85	2.2	0.799	0.23	1.1	19.98	12.6
APPROACH	30	4.0	0.276	0.45	2.8	8.94	4.4
IDLE	7	26.0	0.098	1.53	18.5	4.29	2.4
LTO TOTAL FUEL (kg) or EMISSIONS (g)			365	297	3175	4367	-
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)				2.8	30.3	41.8	14.3
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)	94.70-95.60
TEMPERATURE (K)	280-291
ABS HUMIDITY (kg/kg)	.0026-.0034

FUEL

SPEC	Jet A
H/C	1.95
AROM (%)	18

MANUFACTURER: CFMI
TEST ORGANIZATION: CFM56 Evaluation Engineering
TEST LOCATION: Peebles Site IIIC
TEST DATES: FROM 19 Nov 86 TO 20 Nov 86

REMARKS

1. Ref GE Reports R89AEB316 and R87AEB386
2. Engine S/N 730002/2

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