ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-5B6/2P
UNIQUE ID NUMBER: 3CM022
ENGINE TYPE: TF

BYPASS RATIO: 6
PRESSURE RATIO (π_{oo}): 24.6
RATED OUTPUT (F_{oo}) (kN): 104.5

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	10.3	110.2	31.7	7.9
AS % OF ORIGINAL LIMIT	52.6 %	93.4 %	35.5 %	33.8 %
AS % OF CAEP/2 LIMIT (NOx)			44.4 %	
AS % OF CAEP/4 LIMIT (NOx)			54.3 %	
AS % OF CAEP/6 LIMIT (NOx)			61.7 %	
AS % OF CAEP/8 LIMIT (NOx)			74.6 %	

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)

- 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	0.970	0.2	3.1	14.2	0.3
CLIMB OUT	85	2.2	0.810	0.2	7.4	11	0.3
APPROACH	30	4.0	0.310	0.4	21.5	8.7	6.7
IDLE	7	26.0	0.110	4.6	44.8	3.6	1.8
LTO TOTAL FUEL (kg) or EMISSIONS (g)			394	849	10205	3020	-
NUMBER OF ENGINES				2	2	2	2
NUMBER OF TESTS				4	4	4	4
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				7.9	96.7	28.8	6.7
SIGMA (D_p/F_{oo} in g/kN, or SN)				-	-	-	-
RANGE (D_p/F_{oo} in g/kN, or SN)				7.6-8.2	95.2-98.2	28.4-29.2	6.2-7.1

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.5-99.74
TEMPERATURE (K)	284.6-292.4
ABS HUMIDITY (kg/kg)	.0081-.0115

FUEL

SPEC	Jet A
H/C	1.93
AROM (%)	17.33

MANUFACTURER: CFM International
TEST ORGANIZATION: GEAE Peebles Testing Facility + Techspace Aero (CFMI)
TEST LOCATION: Peebles Ohio, USE + Liers, Belgium
TEST DATES: FROM Aug 96 TO Sep 96

REMARKS

DAC-II Combustor P/N 1968M99G04

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