



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-3B-2 BYPASS RATIO: 5.1
 UNIQUE ID NUMBER: 1CM005 PRESSURE RATIO (π_{oo}): 24.1
 ENGINE TYPE: TF RATED OUTPUT (F_{oo}) (kN): 98.3

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	5.3	74.9	49.7	7.7
AS % OF ORIGINAL LIMIT	27.0 %	63.5 %	56.4 %	32.5 %
AS % OF CAEP/2 LIMIT (NOx)			70.5 %	
AS % OF CAEP/4 LIMIT (NOx)			86.4 %	
AS % OF CAEP/6 LIMIT (NOx)			98.2 %	
AS % OF CAEP/8 LIMIT (NOx)			118.9 %	

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)			SMOKE NUMBER
TAKE-OFF	100	0.7	1.056	0.036	0.9	19.4	6
CLIMB OUT	85	2.2	0.878	0.047	0.9	16.7	3
APPROACH	30	4.0	0.314	0.073	3.4	8.7	2.5
IDLE	7	26.0	0.119	1.75	30.1	4.1	2.2
LTO TOTAL FUEL (kg) or EMISSIONS (g)			421	337	5988	4213	-
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)				3.44	61	42.9	6
SIGMA (D_p/F_{oo} in g/kN, or SN)				0.37	3.8	0.81	0.8
RANGE (D_p/F_{oo} in g/kN, or SN)				3.01-3.67	57.6-65.1	42.4-43.9	5.4-6.9

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 R84AEB245.
2. Engine S/N 692441.
3. Revised based on 3/89 production cycle.
4. Data also apply to CFM56-3C-1 engines rerated to 98.3 kN (22,100 Lb.) thrust for B737-300 and -400 aircraft.

If REVISED, this data supersedes databank UID
 Compliance with fuel venting requirements:

0 ('x' if complies, PR if pre-regulation)