



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-2A series
UNIQUE ID NUMBER: 1CM001
ENGINE TYPE: TF

BYPASS RATIO: 6
PRESSURE RATIO (π_{oo}): 25.2
RATED OUTPUT (F_{oo}) (kN): 106.76

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	3.5	59.5	49.6	10.2
AS % OF ORIGINAL LIMIT	17.8 %	50.5 %	54.9 %	43.7 %
AS % OF CAEP/2 LIMIT (NOx)			68.6 %	
AS % OF CAEP/4 LIMIT (NOx)			83.6 %	
AS % OF CAEP/6 LIMIT (NOx)			95.0 %	
AS % OF CAEP/8 LIMIT (NOx)			114.4 %	

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)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	1.114	0.04	0.9	20.4	7.9
CLIMB OUT	85	2.2	0.911	0.04	0.9	17.3	4.2
APPROACH	30	4.0	0.318	0.08	3.4	8.7	2.5
IDLE	7	26.0	0.130	1.13	23.5	4.3	2
LTO TOTAL FUEL (kg) or EMISSIONS (g)			446	242	5176	4571	-
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)				2.26	48.5	42.8	7.9
SIGMA (D_p/F_{oo} in g/kN, or SN)				0.41	2.5	0.8	0.6
RANGE (D_p/F_{oo} in g/kN, or SN)				1.82-2.63	47.0-51.4	42.3-43.7	7.3-8.5

ACCESSORY LOADS

POWER EXTRACTION 0 (kW)
STAGE BLEED 0 % CORE FLOW

AT - POWER SETTINGS
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 R83AEB631.
2. Engine S/N 692441.
3. Applicable to CFM56-2A2 and -2A3.

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

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