



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

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

BYPASS RATIO: 6.0
PRESSURE RATIO (π_{00}): 25.2
RATED THRUST (F_{00}) (kN): 106.8

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (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 (NO _x)			68.6	
AS % OF CAEP/4 LIMIT (NO _x)			83.6	
AS % OF CAEP/6 LIMIT (NO _x)			95.0	
AS % OF CAEP/8 LIMIT (NO _x)			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 (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	1.114	0.04	0.90	20.40	7.9
CLIMB OUT	85	2.2	0.911	0.04	0.90	17.30	4.2
APPROACH	30	4.0	0.318	0.08	3.40	8.70	2.5
IDLE	7	26.0	0.130	1.13	23.50	4.30	2.0
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 ₀₀ (g/kN) or AVERAGE SN (MAX)				2.3	48.5	42.8	7.9
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.4	2.5	0.8	0.6
RANGE (D _p /F ₀₀ in g/kN, or SN)				1.82-2.63	47-51.4	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)	96-97.5
TEMPERATURE (K)	279-286
ABS HUMIDITY (kg/kg)	0.002-0.009

FUEL

SPEC	Jet A
H/C	1.93
AROM (%)	16

MANUFACTURER: CFM International
TEST ORGANIZATION: CFM56 Evaluation Engineering
TEST LOCATION: Peebles Site IVD
TEST DATES: 11/11/1983-14/11/1983

REMARKS

1. Ref GE Report R83AEB631.
2. Engine S/N 692441.
3. Applicable to CFM56-2A2 and -2A3.

Compliance with Fuel Venting requirements:

- ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)