



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-5B1
UNIQUE ID NUMBER: 2CM012
COMBUSTOR:
ENGINE TYPE: TF

BYPASS RATIO: 5.7
PRESSURE RATIO (π_{00}): 30.2
RATED THRUST (F_{00}) (kN): 133.5

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	7.1	49.7	67.7	13.5
AS % OF ORIGINAL LIMIT	36.1	42.1	67.4	61.7
AS % OF CAEP/2 LIMIT (NO _x)			84.3	
AS % OF CAEP/4 LIMIT (NO _x)			100.4	
AS % OF CAEP/6 LIMIT (NO _x)			114.0	
AS % OF CAEP/8 LIMIT (NO _x)			134.0	

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)	HC	CO	NO _x	SMOKE NUMBER
TAKE-OFF	100	0.7	1.359	0.10	0.50	35.10	8.6
CLIMB OUT	85	2.2	1.113	0.10	0.50	27.20	10.5
APPROACH	30	4.0	0.364	0.12	1.57	10.80	0.0
IDLE	7	26.0	0.117	3.21	28.40	4.60	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			474	617	5423	7783	-
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)				4.6	40.5	58.4	10.5
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.3	0.3	0.7	1.4
RANGE (D _p /F ₀₀ in g/kN, or SN)				4.28-4.86	40.1-40.8	58-59.2	8.9-11.4

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.5-98.2
TEMPERATURE (K)	283.4-293.9
ABS HUMIDITY (kg/kg)	0.0067-0.0076

FUEL

SPEC	Jet A
H/C	1.93
AROM (%)	16.8

MANUFACTURER: CFM International
TEST ORGANIZATION: CFM56 Evaluation Engineering
TEST LOCATION: Peebles Site IIIB
TEST DATES: 07/10/1992-08/10/1992

REMARKS

1. Ref GE Report R92AEB262.
2. Engine S/N 779101

Compliance with Fuel Venting requirements:

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