



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-5C3
UNIQUE ID NUMBER: 1CM011
COMBUSTOR:
ENGINE TYPE: MTF

BYPASS RATIO: 6.7
PRESSURE RATIO (π_{00}): 29.9
RATED THRUST (F_{00}) (kN): 144.6

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	10.8	54.6	62.4	15.2
AS % OF ORIGINAL LIMIT	55.0	46.3	62.5	71.0
AS % OF CAEP/2 LIMIT (NO _x)			78.1	
AS % OF CAEP/4 LIMIT (NO _x)			93.3	
AS % OF CAEP/6 LIMIT (NO _x)			106.0	
AS % OF CAEP/8 LIMIT (NO _x)			124.9	

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	1.373	0.01	0.98	34.70	11.8
CLIMB OUT	85	2.2	1.131	0.01	0.82	27.10	9.1
APPROACH	30	4.0	0.370	0.07	1.57	10.40	1.0
IDLE	7	26.0	0.120	5.35	32.60	4.26	1.1
LTO TOTAL FUEL (kg) or EMISSIONS (g)			483	1012	6436	7770	-
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)				7.0	44.5	53.8	11.8
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.5	1.7	0.2	1.6
RANGE (D _p /F ₀₀ in g/kN, or SN)				6.45-7.41	42.7-46.1	53.5-53.9	9.9-12.8

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.8-98.1
TEMPERATURE (K)	286-295
ABS HUMIDITY (kg/kg)	0.0061-0.0074

FUEL

SPEC	Jet A
H/C	1.95
AROM (%)	17.3

MANUFACTURER: CFM International
TEST ORGANIZATION: CFM56 Evaluation Engineering
TEST LOCATION: PTO Site IVD
TEST DATES: 04/06/1991-05/06/1991

REMARKS

1. Ref GE Report R91AEB471.
2. Engine S/N 740-105.
3. Core engine Smoke Numbers reported

Compliance with Fuel Venting requirements:

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