



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-5C4/P
UNIQUE ID NUMBER: 7CM047
ENGINE TYPE: MTF
BYPASS RATIO: 6.6
PRESSURE RATIO (π_{oo}): 30.5
RATED OUTPUT (F_{oo}) (kN): 149.9

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	9.3	48.9	59.0	15.4
AS % OF ORIGINAL LIMIT	47.4 %	41.4 %	58.4 %	72.7 %
AS % OF CAEP/2 LIMIT (NOx)			73.0 %	
AS % OF CAEP/4 LIMIT (NOx)			86.8 %	
AS % OF CAEP/6 LIMIT (NOx)			98.4 %	
AS % OF CAEP/8 LIMIT (NOx)			115.4 %	

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	1.395	0	0.8	34.1	12
CLIMB OUT	85	2.2	1.143	0	0.7	26.7	9.6
APPROACH	30	4.0	0.370	0	1.6	9.9	1
IDLE	7	26.0	0.115	5	31.6	4.1	1.1
LTO TOTAL FUEL (kg) or EMISSIONS (g)			478	897	5964	7641	-
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)				6	39.9	50.9	12
SIGMA (D_p/F_{oo} in g/kN, or SN)				-	-	-	-
RANGE (D_p/F_{oo} in g/kN, or SN)				-	-	-	-

ACCESSORY LOADS

POWER EXTRACTION 0 (kW)
STAGE BLEED 0 % CORE FLOW
AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.77 - 98.11
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 IV-D
TEST DATES: FROM Jun 91 TO -

REMARKS

1. Ref GE Report R91AEB471 and FAA Certification Report CR-897/P, July 2003
2. Engine S/N 740-105
3. Data also apply to CFM56-5C4/1P.
4. Core engine Smoke Numbers reported

If REVISED, this data supersedes databank UID
Compliance with fuel venting requirements: 0 ('x' if complies, PR if pre-regulation)