



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-5B2/P
UNIQUE ID NUMBER: 3CM024
COMBUSTOR:
ENGINE TYPE: TF

BYPASS RATIO: 5.6
PRESSURE RATIO (π_{00}): 31.6
RATED THRUST (F_{00}) (kN): 137.9

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	7.9	33.4	64.9	7.0
AS % OF ORIGINAL LIMIT	40.3	28.3	62.9	32.3
AS % OF CAEP/2 LIMIT (NO _x)			78.7	
AS % OF CAEP/4 LIMIT (NO _x)			92.5	
AS % OF CAEP/6 LIMIT (NO _x)			104.5	
AS % OF CAEP/8 LIMIT (NO _x)			121.9	

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)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	1.361	0.10	0.80	35.10	4.8
CLIMB OUT	85	2.2	1.099	0.20	0.90	27.40	5.1
APPROACH	30	4.0	0.356	0.50	1.90	10.90	0.2
IDLE	7	26.0	0.113	3.60	19.50	4.60	0.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			464	712	3776	7723	-
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)				5.1	27.2	56.0	5.4
SIGMA (D _p /F ₀₀ in g/kN, or SN)							
RANGE (D _p /F ₀₀ 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)	98.2-99.6
TEMPERATURE (K)	281.5-283.6
ABS HUMIDITY (kg/kg)	0.0065-0.0075

FUEL

SPEC	Jet A
H/C	1.92
AROM (%)	19

MANUFACTURER: CFM International
TEST ORGANIZATION: CFM56-5B Eval Engineering
TEST LOCATION: Techspace-Aero Facility, Liege, Belgium
TEST DATES: 01/11/1995

REMARKS

1. FAA Certification Report CR-797/P, June 95.
2. Engine S/N 779-194/1

Compliance with Fuel Venting requirements:

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