ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-5B2/2P
UNIQUE ID NUMBER: 4CM037
COMBUSTOR: DAC-II
ENGINE TYPE: TF

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

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO_X	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	8.0	75.7	46.3	2.5
AS % OF ORIGINAL LIMIT	40.7	64.2	44.9	11.6
AS % OF CAEP/2 LIMIT (NO_X)			56.1	
AS % OF CAEP/4 LIMIT (NO_X)			66.0	
AS % OF CAEP/6 LIMIT (NO_X)			74.5	
AS % OF CAEP/8 LIMIT (NO_X)			86.8	

DATA STATUS

-     PRE-REGULATION
- x   CERTIFICATION
-     REVISED (SEE REMARKS)

TEST ENGINE STATUS

-     NEWLY MANUFACTURED ENGINES
- x   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_{oo})	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO_X	
TAKE-OFF	100	0.7	1.390	0.10	0.70	29.40	0.5
CLIMB OUT	85	2.2	1.110	0.10	1.60	17.50	0.3
APPROACH	30	4.0	0.390	3.30	21.40	7.60	0.5
IDLE	7	26.0	0.130	2.70	35.50	4.20	2.2
LTO TOTAL FUEL (kg) or EMISSIONS (g)			501	877	9478	5844	-
NUMBER OF ENGINES				2	2	2	2
NUMBER OF TESTS				4	4	4	4
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				6.1	66.5	42.1	2.2
SIGMA (D_p/F_{oo} in g/kN, or SN)							
RANGE (D_p/F_{oo} in g/kN, or SN)				5.6-6.7	62.6-70.3	41.4-42.9	2-2.3

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.5-99.7
TEMPERATURE (K)	284.6-292.4
ABS HUMIDITY (kg/kg)	0.0081-0.0115

FUEL

SPEC	Jet A
H/C	1.93
AROM (%)	17.33

MANUFACTURER: CFM International
TEST ORGANIZATION: GEAE Peebles + Techspace Aero (CFMI)
TEST LOCATION: Peebles, Ohio + Liers, Belgium
TEST DATES: 01/08/1996-01/09/1996

REMARKS

    1. DAC-II Combustor P/N 1968M99G04

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)

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