ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-5B1/P   BYPASS RATIO: 5.7
UNIQUE ID NUMBER: 3CM023   PRESSURE RATIO (π_{oo}):   30.5
COMBUSTOR:
ENGINE TYPE: TF   RATED THRUST (F_{oo}) (kN):   133.5

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO$_X$	SMOKE NUMBER
D$_p$/F$_{oo}$ (g/kN) or SN	8.2	34.4	61.9	7.0
AS % OF ORIGINAL LIMIT	41.8	29.2	61.3	32.0
AS % OF CAEP/2 LIMIT (NO$_X$)			76.7	
AS % OF CAEP/4 LIMIT (NO$_X$)			91.1	
AS % OF CAEP/6 LIMIT (NO$_X$)			103.3	
AS % OF CAEP/8 LIMIT (NO$_X$)			121.2	

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$_{oo}$)	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg) HC	CO	NO$_X$	SMOKE NUMBER
TAKE-OFF	100	0.7	1.295	0.10	0.90	33.00	4.9
CLIMB OUT	85	2.2	1.058	0.20	0.90	26.20	5.2
APPROACH	30	4.0	0.345	0.50	2.00	10.70	0.2
IDLE	7	26.0	0.110	3.70	19.80	4.50	0.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			448	710	3738	7112	-
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)				5.3	28.1	53.4	5.4
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)   AT   -   POWER SETTINGS
         STAGE BLEED   0   (% CORE FLOW)   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)