ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF34-10E5A1
UNIQUE ID NUMBER: 8GE117
COMBUSTOR: SAC
ENGINE TYPE: TF

BYPASS RATIO: 5.1
PRESSURE RATIO (π_{oo}):   27.3

RATED THRUST (F_{oo}) (kN):   83.7

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO_X	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	11.1	94.3	46.3	9.0
AS % OF ORIGINAL LIMIT	56.4	79.9	48.9	36.3
AS % OF CAEP/2 LIMIT (NO_X)			61.1	
AS % OF CAEP/4 LIMIT (NO_X)			72.5	
AS % OF CAEP/6 LIMIT (NO_X)			81.3	
AS % OF CAEP/8 LIMIT (NO_X)			95.5	

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: 2007   )
-     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	0.871	0.01	0.52	20.45	7.0
CLIMB OUT	85	2.2	0.720	0.05	0.39	16.88	2.9
APPROACH	30	4.0	0.244	0.06	3.37	8.14	0.5
IDLE	7	26.0	0.088	4.30	44.93	3.72	0.8
LTO TOTAL FUEL (kg) or EMISSIONS (g)			328	601	6430	3341	-
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)				7.2	76.8	39.9	7.0
SIGMA (D_p/F_{oo} in g/kN, or SN)				1.1	5.1	1.5	1.2
RANGE (D_p/F_{oo} in g/kN, or SN)				6.8-7.5	74.4-78.4	39.3-40.5	44355.0

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.4-98.6
TEMPERATURE (K)	294-295
ABS HUMIDITY (kg/kg)	0.00922-0.01192

FUEL

SPEC	Jet A-1
H/C	1.92-1.93
AROM (%)	18.1-19.3

MANUFACTURER: General Electric Company
TEST ORGANIZATION: Peebles Test Operation
TEST LOCATION: Site 4D
TEST DATES: 24/07/2004-25/07/2004

REMARKS

1. GE Reports R2004AE636 and R2006AE173
2. Block 1 Engines
3. Engine 994-110/1

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