ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION:	CF34-10E7	BYPASS RATIO:	5.09
UNIQUE ID NUMBER:	11GE146	PRESSURE RATIO (π_{oo}):	27.2
ENGINE TYPE:	TF	RATED OUTPUT (F_{oo}) (kN):	83.7

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	10.5	88.9	44.5	16.4
AS % OF ORIGINAL LIMIT	53.4 %	75.3 %	47.1 %	66.0 %
AS % OF CAEP/2 LIMIT (NOx)			58.9 %	
AS % OF CAEP/4 LIMIT (NOx)			69.9 %	
AS % OF CAEP/6 LIMIT (NOx)			78.0 %	
AS % OF CAEP/8 LIMIT (NOx)			92.0 %	

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)

- \- OUT OF PRODUCTION
- \- OUT OF SERVICE

MEASURED DATA

MODE	POWER SETTING ($\%F_{oo}$)	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg) HC	CO	NOx	SMOKE NUMBER
TAKE-OFF	100	0.7	0.870	0.05	0.89	19.68	12.74
CLIMB OUT	85	2.2	0.717	0.09	0.77	16.22	6.91
APPROACH	30	4.0	0.239	0.1	4.02	7.94	0.1
IDLE	7	26.0	0.088	4.02	41.73	3.69	0.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			326	568	6067	3214	-
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)				6.79	72.5	38.4	12.7
SIGMA (D_p/F_{oo} in g/kN, or SN)				0.68	2.5	0.24	1.51
RANGE (D_p/F_{oo} in g/kN, or SN)				6.3-7.6	70.0-75.0	38.2-38.7	11.6-14.4

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.2-97.9
TEMPERATURE (K)	292-298
ABS HUMIDITY (kg/kg)	0.0053 - 0.0078

FUEL

SPEC	Jet A1
H/C	1.92
AROM (%)	15.9% - 17.5%

MANUFACTURER: GE Transportation
TEST ORGANIZATION: Peebles Test Operation
TEST LOCATION: Site 3C
TEST DATES: FROM 05 Jun 09 TO 06 Jun 09

REMARKS

1. GE Report R2008AE622Block 2 Engines
2. Engine 994-743/1
3. Engines with 2251M21 combustor or equivalent
4. Alternate fuel injector manufacturer
5. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
6. NOx levels in accordance with Part III, Chapter 2, 2.3.2 e)

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