



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF34-10E5
UNIQUE ID NUMBER: 11GE142
COMBUSTOR: 2253M21-PFN
ENGINE TYPE: TF

BYPASS RATIO: 5.1
PRESSURE RATIO (π_{00}): 25.5
RATED THRUST (F_{00}) (kN): 77.4

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	13.3	102.2	41.3	12.1
AS % OF ORIGINAL LIMIT	68.1	86.6	45.4	47.7
AS % OF CAEP/2 LIMIT (NO _x)			56.7	
AS % OF CAEP/4 LIMIT (NO _x)			66.4	
AS % OF CAEP/6 LIMIT (NO _x)			73.0	
AS % OF CAEP/8 LIMIT (NO _x)			85.1	

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 ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO _x	SMOKE NUMBER
TAKE-OFF	100	0.7	0.792	0.07	0.81	17.78	9.4
CLIMB OUT	85	2.2	0.653	0.10	0.75	14.97	5.1
APPROACH	30	4.0	0.223	0.13	4.84	7.59	0.1
IDLE	7	26.0	0.085	4.94	46.10	3.55	0.6
LTO TOTAL FUEL (kg) or EMISSIONS (g)			306	670	6439	2757	-
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)				8.7	83.2	35.6	9.4
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.8	2.8	0.3	1.3
RANGE (D _p /F ₀₀ in g/kN, or SN)				8.1-9.6	80.4-86.1	35.4-35.9	8.6-10.9

ACCESSORY LOADS

POWER EXTRACTION 0 (kW)
STAGE BLEED 0 (% CORE FLOW)

AT All POWER SETTINGS
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 A-1
H/C	1.92
AROM (%)	15.9-17.5

MANUFACTURER: General Electric Company
TEST ORGANIZATION: Peebles Test Operation
TEST LOCATION: Site 3C
TEST DATES: 05/06/2009-06/06/2009

NO_x REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

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. NO_x levels in accordance with Part III, Chapter 2, 2.3.2 e)

Compliance with Fuel Venting requirements:

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