



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: GENx-1B70
UNIQUE ID NUMBER: 11GE138
ENGINE TYPE: TF

BYPASS RATIO: 8.8
PRESSURE RATIO (π_{oo}): 43.5
RATED OUTPUT (F_{oo}) (kN): 321.6

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	1.1	26.2	41.3	7.3
AS % OF ORIGINAL LIMIT	5.4 %	22.2 %	32.5 %	42.5 %
AS % OF CAEP/2 LIMIT (NOx)			40.6 %	
AS % OF CAEP/4 LIMIT (NOx)			43.9 %	
AS % OF CAEP/6 LIMIT (NOx)			48.0 %	
AS % OF CAEP/8 LIMIT (NOx)			53.6 %	

DATA STATUS

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

TEST ENGINE STATUS

x 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)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	2.494	0.02	0.17	34.06	0
CLIMB OUT	85	2.2	2.037	0.02	0.24	18.48	0
APPROACH	30	4.0	0.650	0.06	2.49	9.63	5.54
IDLE	7	26.0	0.208	0.63	19.68	4.37	0.05
LTO TOTAL FUEL (kg) or EMISSIONS (g)			854	221	6853	11457	-
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)				0.69	21.31	35.63	5.6
SIGMA (D_p/F_{oo} in g/kN, or SN)				0.04	0.4	0.28	1.2
RANGE (D_p/F_{oo} in g/kN, or SN)				0.66 to 0.72	20.92 to 21.74	35.31 to 35.85	4.72 to 6.96

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.4 to 98.6
TEMPERATURE (K)	280.5 to 299.0
ABS HUMIDITY (kg/kg)	0.00345 to 0.00716

FUEL

SPEC	JET A
H/C	1.89
AROM (%)	15.3

MANUFACTURER: GE Aviation
TEST ORGANIZATION: GE Aviation
TEST LOCATION: PTO, Ohio, USA
TEST DATES: FROM 29 Sep 09 TO 03 Oct 09

REMARKS

1. Ref. GE REPORT R2008AE357
2. Engine S/N 956-108/2
3. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
4. NOx levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

If REVISED, this data supersedes databank UID
Compliance with fuel venting requirements:

x ('x' if complies, PR if pre-regulation)