



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: GENx-1B70/P1
UNIQUE ID NUMBER: 12GE152
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	0.9	25.3	43.1	9.8
AS % OF ORIGINAL LIMIT	4.7 %	21.4 %	33.9 %	57.0 %
AS % OF CAEP/2 LIMIT (NOx)			42.4 %	
AS % OF CAEP/4 LIMIT (NOx)			45.8 %	
AS % OF CAEP/6 LIMIT (NOx)			50.1 %	
AS % OF CAEP/8 LIMIT (NOx)			55.9 %	

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	2.505	0.02	0.17	34.61	0
CLIMB OUT	85	2.2	2.051	0.02	0.235	19.3	0
APPROACH	30	4.0	0.664	0.055	2.42	9.73	5.8
IDLE	7	26.0	0.219	0.52	18.05	4.5	0.1
LTO TOTAL FUEL (kg) or EMISSIONS (g)			876	192	6623	11953	-
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)				0.6	20.59	37.17	7.6
SIGMA (D_p/F_{oo} in g/kN, or SN)				0.03	0.39	0.29	2.05
RANGE (D_p/F_{oo} in g/kN, or SN)				0.58-0.63	20.22-21.00	36.84-37.40	5.26-8.96

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
AHS 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 R2010AE595
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)