



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GENx-1B67/P1  
UNIQUE ID NUMBER: 12GE151  
ENGINE TYPE: TF

BYPASS RATIO: 8.9  
PRESSURE RATIO ( $\pi_{00}$ ): 41.9  
RATED OUTPUT ( $F_{00}$ ) (kN): 308.7

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{00}$ (g/kN) or SN	1.0	27.1	38.5	9.8
AS % OF ORIGINAL LIMIT	5.3 %	23.0 %	31.1 %	56.4 %
AS % OF CAEP/2 LIMIT (NOx)			38.8 %	
AS % OF CAEP/4 LIMIT (NOx)			42.4 %	
AS % OF CAEP/6 LIMIT (NOx)			46.5 %	
AS % OF CAEP/8 LIMIT (NOx)			52.0 %	

### 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 (% $F_{00}$ )	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	2.380	0.02	0.18	29.34	0
CLIMB OUT	85	2.2	1.954	0.02	0.29	17.04	0
APPROACH	30	4.0	0.639	0.06	2.68	9.39	5
IDLE	7	26.0	0.214	0.58	18.94	4.43	0.1
LTO TOTAL FUEL (kg) or EMISSIONS (g)			845	208	6821	10244	-
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)				0.67	22.09	33.19	7.6
SIGMA ( $D_p/F_{00}$ in g/kN, or SN)				0.04	0.43	0.2	2.05
RANGE ( $D_p/F_{00}$ in g/kN, or SN)				0.65-0.72	21.69-22.54	32.96-3.33	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)