



## ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GENx-1B58/P2      BYPASS RATIO: 9.24  
UNIQUE ID NUMBER: 13GE166      PRESSURE RATIO ( $\pi_{00}$ ): 37.5  
ENGINE TYPE: TF      RATED OUTPUT ( $F_{00}$ ) (kN): 271.3

## REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{00}$ (g/kN) or SN	1.1	26.0	31.7	0.8
AS % OF ORIGINAL LIMIT	5.7 %	22.0 %	27.6 %	4.2 %
AS % OF CAEP/2 LIMIT (NOx)			34.5 %	
AS % OF CAEP/4 LIMIT (NOx)			38.7 %	
AS % OF CAEP/6 LIMIT (NOx)			42.9 %	
AS % OF CAEP/8 LIMIT (NOx)			48.7 %	

## 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
TAKE-OFF	100	0.7	2.023	0.02	0.18	20.43	0
CLIMB OUT	85	2.2	1.668	0.02	0.93	13.27	0
APPROACH	30	4.0	0.558	0.05	2.52	9.67	0.14
IDLE	7	26.0	0.203	0.58	16.39	4.66	0.1
LTO TOTAL FUEL (kg) or EMISSIONS (g)			756	197	5750	7426	-
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)				0.73	21.18	27.37	0.58
SIGMA ( $D_p/F_{00}$ in g/kN, or SN)				0.06	0.048	0.13	0.34
RANGE ( $D_p/F_{00}$ in g/kN, or SN)				0.66-0.78	21.12-21.21	27.24-27.50	0.35-0.97

## ACCESSORY LOADS

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

## ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.1 to 98.5
TEMPERATURE (K)	295.1 to 298.8
ABS HUMIDITY (kg/kg)	.01189 to .01439

## FUEL

SPEC	JET A
H/C	1.89
AROM (%)	15.4

MANUFACTURER: GE Aviation  
TEST ORGANIZATION: GE Aviation  
TEST LOCATION: PTO, Ohio, USA  
TEST DATES: FROM 19 Jun 12 TO 21 Jun 12

## REMARKS

1. Ref. GE REPORT R2010AE907
2. Engine S/N 956-101/4
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)