



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GENx-1B74/75/P2 BYPASS RATIO: 8.65  
UNIQUE ID NUMBER: 13GE160 PRESSURE RATIO ( $\pi_{00}$ ): 46.4  
ENGINE TYPE: TF RATED OUTPUT ( $F_{00}$ ) (kN): 341.2

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{00}$ (g/kN) or SN	0.7	18.2	53.4	0.8
AS % OF ORIGINAL LIMIT	3.4 %	15.4 %	40.2 %	4.4 %
AS % OF CAEP/2 LIMIT (NOx)			50.2 %	
AS % OF CAEP/4 LIMIT (NOx)			53.5 %	
AS % OF CAEP/6 LIMIT (NOx)			58.2 %	
AS % OF CAEP/8 LIMIT (NOx)			64.4 %	

### 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	2.704	0.02	0.05	42.71	0
CLIMB OUT	85	2.2	2.196	0.02	0.11	24.9	0
APPROACH	30	4.0	0.693	0.04	1.61	11.56	0.72
IDLE	7	26.0	0.221	0.38	13.8	4.99	0.12
LTO TOTAL FUEL (kg) or EMISSIONS (g)			914	145	5054	15707	-
NUMBER OF ENGINES			1	1	1	1	1
NUMBER OF TESTS			3	3	3	3	3
AVERAGE $D_p/F_{00}$ (g/kN) or AVERAGE SN (MAX)			0.43	14.8	46.03	0.58	
SIGMA ( $D_p/F_{00}$ in g/kN, or SN)			0.02	0.02	0.301	0.34	
RANGE ( $D_p/F_{00}$ in g/kN, or SN)			0.40-0.45	14.78-14.82	45.74-46.34	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)