



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-110B1  
UNIQUE ID NUMBER: 07P27GE239  
COMBUSTOR: DAC  
ENGINE TYPE: TF  
BYPASS RATIO: 7.2  
PRESSURE RATIO ( $\pi_{oo}$ ): 40.6  
RATED THRUST ( $F_{oo}$ ) (kN): 492.7

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>oo</sub> (g/kN) or SN	10.3	59.3	67.9	1.7
AS % OF ORIGINAL LIMIT	52.6	50.2	56.0	10.8
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			70.0	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			76.9	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			84.6	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			95.1	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

### DATA STATUS

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

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
- 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 (DATE: - )  
- OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>oo</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	4.221	0.03	0.05	44.93	0.7
CLIMB OUT	85	2.2	3.370	0.03	0.50	32.57	0.7
APPROACH	30	4.0	1.024	0.04	2.94	15.40	0.4
IDLE	7	26.0	0.332	6.32	44.12	5.02	0.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1386	3300	23793	28841	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>oo</sub> (g/kN) or AVERAGE SN (MAX)				6.7	48.3	58.5	1.3
SIGMA (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)				1.3	4.7	1.4	0.7
RANGE (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)				5.19-7.72	43.06-52.03	57.7-60.19	0.6-2.01

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW)  
STAGE BLEED 0 (% CORE FLOW)

AT All POWER SETTINGS  
AT All POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.5-97.9
TEMPERATURE (K)	278.6-293
ABS HUMIDITY (kg/kg)	0.0035-0.0038

### FUEL

SPEC	Jet A
H/C	1.94
AROM (%)	15.4

MANUFACTURER: General Electric Company  
TEST ORGANIZATION: GE Aviation  
TEST LOCATION: PTO, Ohio, USA  
TEST DATES: 18/10/2022-21/10/2022

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
x	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

### REMARKS

- Engine S/N 901-648/1
- Ref. GE Report R2021AE291/Rev. 1

Compliance with Fuel Venting requirements:

x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)