



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-85B  
UNIQUE ID NUMBER: 2GE053  
COMBUSTOR: DAC I  
ENGINE TYPE: TF

BYPASS RATIO: 8.4  
PRESSURE RATIO ( $\pi_{00}$ ): 38.1  
RATED THRUST ( $F_{00}$ ) (kN): 395.3

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	5.3	63.3	68.9	10.8
AS % OF ORIGINAL LIMIT	26.9	53.7	59.3	66.4
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			74.2	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			82.8	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			91.7	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			103.9	

### DATA STATUS

- PRE-REGULATION  
- CERTIFICATION  
x 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)  
x OUT OF PRODUCTION (DATE: - )  
- OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	3.190	0.08	0.08	52.01	0.0
CLIMB OUT	85	2.2	2.600	0.07	0.12	40.27	0.0
APPROACH	30	4.0	0.850	1.52	25.35	10.30	0.0
IDLE	7	26.0	0.300	3.05	37.83	6.01	9.6
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1149	1772	22928	25703	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				4.5	58.5	65.1	9.8
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				4.27-4.79	55.8-60.2	63.8-67.5	9.2-9.8

### ACCESSORY LOADS

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

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.4-98.6
TEMPERATURE (K)	274-299
ABS HUMIDITY (kg/kg)	0.001-0.00726

### FUEL

SPEC	Jet A
H/C	1.91-1.92
AROM (%)	15.9-18.6

MANUFACTURER: General Electric Company  
TEST ORGANIZATION: GE90 Eval Engineering  
TEST LOCATION: Site IVD and 6, PTO, Peebles  
TEST DATES: 24/02/1995-28/07/1995

### REMARKS

1. Ref GE Report TM95-45.
2. Engine S/N 900-108, 900-111 & 900-114.
3. Post certification/ as delivered to service.
4. Smoke <3 below meas. capability.
5. DAC I combustor

Compliance with Fuel Venting requirements:

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