



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-76B  
UNIQUE ID NUMBER: 3GE062  
ENGINE TYPE: TF

BYPASS RATIO: 8.6  
PRESSURE RATIO ( $\pi_{00}$ ): 35.1  
RATED OUTPUT ( $F_{00}$ ) (kN): 360.62

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{00}$ (g/kN) or SN	0.9	21.1	57.8	0.6
AS % OF ORIGINAL LIMIT	4.6 %	17.9 %	52.5 %	3.6 %
AS % OF CAEP/2 LIMIT (NOx)			65.6 %	
AS % OF CAEP/4 LIMIT (NOx)			74.9 %	
AS % OF CAEP/6 LIMIT (NOx)			83.6 %	
AS % OF CAEP/8 LIMIT (NOx)			95.8 %	

### 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)  
x OUT OF PRODUCTION (DATE: - )  
- 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	2.824	0.04	0.15	40.11	2
CLIMB OUT	85	2.2	2.311	0.04	0.17	31.59	1.8
APPROACH	30	4.0	0.781	0.07	1.32	15.55	1.8
IDLE	7	26.0	0.280	0.57	15.41	5.43	1.8
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1048	279	7048	19680	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				5	5	5	5
AVERAGE $D_p/F_{00}$ (g/kN) or AVERAGE SN (MAX)				0.77	19.55	54.58	0
SIGMA ( $D_p/F_{00}$ in g/kN, or SN)				-	-	-	-
RANGE ( $D_p/F_{00}$ in g/kN, or SN)				0.45-1.08	17.1-21.6	50.5-57.3	0.0-1.93

### ACCESSORY LOADS

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

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.52-98.62
TEMPERATURE (K)	283-301
ABS HUMIDITY (kg/kg)	.0036-.0151

### FUEL

SPEC	Jet A
H/C	1.91-1.94
AROM (%)	18.1-19.3

MANUFACTURER: GE  
TEST ORGANIZATION: GE90 Eval Engineering  
TEST LOCATION: Site IIID, PTO, Peebles, Ohio, USA  
TEST DATES: FROM 24 Apr 97 TO 19 Jun 97

### REMARKS

1. GE Report R96AEB292.
2. Engine S/S 900-173, 900-166 & 900-167
3. DAC II combustor

If REVISED, this data supersedes databank UID  
Compliance with fuel venting requirements:

0 ('x' if complies, PR if pre-regulation)