



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-5B3/P  
UNIQUE ID NUMBER: 3CM025  
ENGINE TYPE: TF

BYPASS RATIO: 5.6  
PRESSURE RATIO ( $\pi_{oo}$ ): 32.78  
RATED OUTPUT ( $F_{oo}$ ) (kN): 142.35

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{oo}$ (g/kN) or SN	7.7	32.5	68.2	7.0
AS % OF ORIGINAL LIMIT	39.3 %	27.5 %	64.6 %	32.6 %
AS % OF CAEP/2 LIMIT (NOx)			80.8 %	
AS % OF CAEP/4 LIMIT (NOx)			94.0 %	
AS % OF CAEP/6 LIMIT (NOx)			105.7 %	
AS % OF CAEP/8 LIMIT (NOx)			122.5 %	

### 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 (% $F_{oo}$ )	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	1.430	0.1	0.8	37.3	4.7
CLIMB OUT	85	2.2	1.141	0.2	0.9	28.5	5.1
APPROACH	30	4.0	0.366	0.5	1.7	11.2	0.2
IDLE	7	26.0	0.115	3.5	19.2	4.7	0.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			478	708	3777	8360	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE $D_p/F_{oo}$ (g/kN) or AVERAGE SN (MAX)				5	26.48	58.81	5.4
SIGMA ( $D_p/F_{oo}$ in g/kN, or SN)				-	-	-	-
RANGE ( $D_p/F_{oo}$ in g/kN, or SN)				-	-	-	-

### ACCESSORY LOADS

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

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.2-99.6
TEMPERATURE (K)	281.5-283.6
ABS HUMIDITY (kg/kg)	.0065-.0075

### FUEL

SPEC	Jet A
H/C	1.92
AROM (%)	19

MANUFACTURER: GE  
TEST ORGANIZATION: CFM56-5B Eval Engineering  
TEST LOCATION: Techspace-Aero Facility, Liege, Belgium  
TEST DATES: FROM Nov 95 TO -

### REMARKS

1. FAA Certification Report CR-797/P, June 95.
2. Engine S/N 779-194/1

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

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