



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-7B24/2
UNIQUE ID NUMBER: 4CM041
ENGINE TYPE: TF

BYPASS RATIO: 5.2
PRESSURE RATIO (π_{oo}): 25.95
RATED OUTPUT (F_{oo}) (kN): 107.65

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	17.1	101.7	34.8	0.7
AS % OF ORIGINAL LIMIT	87.2 %	86.2 %	37.9 %	3.1 %
AS % OF CAEP/2 LIMIT (NOx)			47.3 %	
AS % OF CAEP/4 LIMIT (NOx)			57.5 %	
AS % OF CAEP/6 LIMIT (NOx)			65.4 %	
AS % OF CAEP/8 LIMIT (NOx)			78.4 %	

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
TAKE-OFF	100	0.7	1.089	0.05	1.38	16.63	0.7
CLIMB OUT	85	2.2	0.902	0.07	4.3	13.23	0.7
APPROACH	30	4.0	0.313	6.01	30.32	6.72	0.7
IDLE	7	26.0	0.109	6.55	42.72	4.08	0.7
LTO TOTAL FUEL (kg) or EMISSIONS (g)			410	1576	10117	3534	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				14.66	94.03	32.86	0.65
SIGMA (D_p/F_{oo} in g/kN, or SN)				-	-	-	-
RANGE (D_p/F_{oo} in g/kN, or SN)				13.4-15.9	88.4-100.0	32.7-33.2	0.2-1.5

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.9-98.0
TEMPERATURE (K)	292.8-296.7
ABS HUMIDITY (kg/kg)	.00814-.0131

FUEL

SPEC	Jet A
H/C	1.93-1.94
AROM (%)	18.0-19.2

MANUFACTURER: GE
TEST ORGANIZATION: CFM56-7B Eval Engineering
TEST LOCATION: Peebles Test Operation (PTO) Peebles, OH
TEST DATES: FROM 30 Aug 97 TO 12 Sep 97

REMARKS

- FAA Certification Report CR-997/2, 14 Nov 97
- Engine S/N 874-136/01, 874-141/01, 874-146/01

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

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