ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: NK-86MA
UNIQUE ID NUMBER: 1KK005
ENGINE TYPE: MTF

BYPASS RATIO: 1.13
PRESSURE RATIO (π_{oo}): 13.2
RATED OUTPUT (F_{oo}) (kN): 130.47

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	15.2	100.5	37.3	10.5
AS % OF ORIGINAL LIMIT	77.4 %	85.1 %	56.2 %	47.8 %
AS % OF CAEP/2 LIMIT (NOx)			70.2 %	
AS % OF CAEP/4 LIMIT (NOx)			93.0 %	
AS % OF CAEP/6 LIMIT (NOx)			105.7 %	
AS % OF CAEP/8 LIMIT (NOx)			140.9 %	

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
- \- OUT OF SERVICE

MEASURED DATA

MODE	POWER SETTING ($\%F_{oo}$)	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg) HC	CO	NOx	SMOKE NUMBER
TAKE-OFF	100	0.7	2.050	0.16	1.55	13	-
CLIMB OUT	85	2.2	1.700	0.13	1.9	9.4	-
APPROACH	30	4.0	0.600	0.3	5.9	3.9	-
IDLE	7	26.0	0.235	4.6	29.8	2.3	-
LTO TOTAL FUEL (kg) or EMISSIONS (g)			821	1773	12334	4633	-
NUMBER OF ENGINES				5	5	4	7
NUMBER OF TESTS				7	7	4	10
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				13.5	94.6	35.5	9.9
SIGMA (D_p/F_{oo} in g/kN, or SN)				3.7	22.5	2.3	2.9
RANGE (D_p/F_{oo} in g/kN, or SN)				8.7-17.1	61.3-113	32-40.1	42522

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.2-102.4
TEMPERATURE (K)	260 - 298
ABS HUMIDITY (kg/kg)	.00079-.0200

FUEL

SPEC	TS-1
H/C	2
AROM (%)	18.6

MANUFACTURER: KKBM
TEST ORGANIZATION: KKBM
TEST LOCATION: Samara City
TEST DATES: FROM 18 Jul 87 TO 20 Jan 90

REMARKS

1. NK-86A with modified combustor.
2. For IL-86 aircraft.

If REVISED, this data supersedes databank UID
Compliance with fuel venting requirements: 0 ('x' if complies, PR if pre-regulation)