



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

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

BYPASS RATIO: 1.1
PRESSURE RATIO (π_{00}): 13.2
RATED THRUST (F_{00}) (kN): 130.5

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (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 (NO _x)			70.2	
AS % OF CAEP/4 LIMIT (NO _x)			93.0	
AS % OF CAEP/6 LIMIT (NO _x)			105.7	
AS % OF CAEP/8 LIMIT (NO _x)			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 (DATE: -)
- OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO _x	SMOKE NUMBER
TAKE-OFF	100	0.7	2.050	0.16	1.55	13.00	
CLIMB OUT	85	2.2	1.700	0.13	1.90	9.40	
APPROACH	30	4.0	0.600	0.30	5.90	3.90	
IDLE	7	26.0	0.235	4.60	29.80	2.30	
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 ₀₀ (g/kN) or AVERAGE SN (MAX)				13.5	94.6	35.5	9.9
SIGMA (D _p /F ₀₀ in g/kN, or SN)				3.7	22.5	2.3	2.9
RANGE (D _p /F ₀₀ in g/kN, or SN)				8.7-17.1	61.3-113	32-40.1	44363.0

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.2-102.4
TEMPERATURE (K)	260-298
ABS HUMIDITY (kg/kg)	0.00079-0.02

FUEL

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

MANUFACTURER: KKBM
TEST ORGANIZATION: KKBM
TEST LOCATION: Samara City
TEST DATES: 18/07/1987-20/01/1990

REMARKS

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

Compliance with Fuel Venting requirements:

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