



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: NK-8-2U  
UNIQUE ID NUMBER: 1KK002  
COMBUSTOR:  
ENGINE TYPE: MTF

BYPASS RATIO: 1.2  
PRESSURE RATIO ( $\pi_{00}$ ): 10.8  
RATED THRUST ( $F_{00}$ ) (kN): 103.0

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	180.3	305.0		
AS % OF ORIGINAL LIMIT	920.1	258.5		
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )				
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )				
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )				
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )				

### DATA STATUS

- PRE-REGULATION  
- CERTIFICATION  
x REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
- DEDICATED ENGINES TO PRODUCTION STANDARD  
x OTHER (SEE REMARKS)

### EMISSIONS STATUS

- 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 (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	1.750	2.00	5.00		
CLIMB OUT	85	2.2	1.330	2.00	6.00		
APPROACH	30	4.0	0.550	2.60	13.00		
IDLE	7	26.0	0.220	32.00	64.00		
LTO TOTAL FUEL (kg) or EMISSIONS (g)			724	11824	25102		-
NUMBER OF ENGINES				1	1		
NUMBER OF TESTS				2	2		
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				117.1	248.5		
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							

### ACCESSORY LOADS

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

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	102.7
TEMPERATURE (K)	293
ABS HUMIDITY (kg/kg)	0.00905

### FUEL

SPEC	TS-1
H/C	2
AROM (%)	18

MANUFACTURER: KKBM  
TEST ORGANIZATION: State Inst for Civ Aviation  
TEST LOCATION: Sheremetjevo, Moscow  
TEST DATES: 14/06/1990

### REMARKS

1. Data obtained on aircraft (Tu-154A)
2. In-service engine(s), tested after overhaul

Compliance with Fuel Venting requirements:

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