



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: D-30KP-2  
UNIQUE ID NUMBER: 1AA002  
ENGINE TYPE: MTF

BYPASS RATIO: 2.2  
PRESSURE RATIO ( $\pi_{00}$ ): 19.45  
RATED OUTPUT ( $F_{00}$ ) (kN): 117.6

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{00}$ (g/kN) or SN	47.2	208.6	49.5	25.1
AS % OF ORIGINAL LIMIT	241.0 %	176.8 %	62.7 %	110.9 %
AS % OF CAEP/2 LIMIT (NOx)			78.4 %	
AS % OF CAEP/4 LIMIT (NOx)			98.8 %	
AS % OF CAEP/6 LIMIT (NOx)			112.2 %	
AS % OF CAEP/8 LIMIT (NOx)			140.4 %	

### 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

### MEASURED DATA

MODE	POWER SETTING (% $F_{00}$ )	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	1.670	0.7	2.2	16.5	17.5
CLIMB OUT	85	2.2	1.420	0.8	2.8	13.5	19.5
APPROACH	30	4.0	0.490	2.7	15.4	6.3	16
IDLE	7	26.0	0.210	13.3	62.4	3.3	6.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			703	4874	22932	5510	-
NUMBER OF ENGINES				4	4	4	1
NUMBER OF TESTS				7	7	7	1
AVERAGE $D_p/F_{00}$ (g/kN) or AVERAGE SN (MAX)				41.4	195	47.1	19.5
SIGMA ( $D_p/F_{00}$ in g/kN, or SN)				8.6	11.1	6.6	-
RANGE ( $D_p/F_{00}$ 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)	102.7-103.1
TEMPERATURE (K)	284 - 289
ABS HUMIDITY (kg/kg)	0.00748

### FUEL

SPEC	TS-1
H/C	2
AROM (%)	19

MANUFACTURER: AO 'Aviadgatel'  
TEST ORGANIZATION: State Inst for Civ Aviation  
TEST LOCATION: Sheremetjevo, Moscow  
TEST DATES: FROM 28 Jun 90 TO -

### REMARKS

1. Data obtained on aircraft (Il-76TD)
2. In-service engine(s), tested before overhaul

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

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