# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION:  D-30KU          BYPASS RATIO:            2.35
UNIQUE ID NUMBER:       1AA003          PRESSURE RATIO ($\pi_{oo}$):   17.4
ENGINE TYPE:            MTF             RATED OUTPUT ($F_{oo}$) (kN):   112.7

### REGULATORY DATA

| CHARACTERISTIC VALUE: | HC | CO | NOx | SMOKE NUMBER |
|---|---|---|---|---|
| $D_p/F_{oo}$ (g/kN) or SN | 37.4 | 191.7 | 43.8 | 29.5 |
| AS % OF ORIGINAL LIMIT | 191.0 % | 162.5 % | 58.6 % | 128.7 % |
| AS % OF CAEP/2 LIMIT (NOx) | | | 73.2 % | |
| AS % OF CAEP/4 LIMIT (NOx) | | | 93.5 % | |
| AS % OF CAEP/6 LIMIT (NOx) | | | 106.3 % | |
| AS % OF CAEP/8 LIMIT (NOx) | | | 135.3 % | |

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 (%$F_{oo}$) | TIME minutes | FUEL FLOW kg/s | EMISSIONS INDICES (g/kg) HC | CO | NOx | SMOKE NUMBER |
|---|---|---|---|---|---|---|---|
| TAKE-OFF | 100 | 0.7 | 1.520 | 0.3 | 2.8 | 16.3 | - |
| CLIMB OUT | 85 | 2.2 | 1.300 | 0.4 | 3.7 | 12.6 | - |
| APPROACH | 30 | 4.0 | 0.500 | 1.2 | 11.8 | 5.1 | - |
| IDLE | 7 | 26.0 | 0.215 | 10.5 | 54 | 2.7 | - |
| LTO TOTAL FUEL (kg) or EMISSIONS (g) | | | 691 | 3753 | 20341 | 4720 | - |
| NUMBER OF ENGINES | | | | 5 | 5 | 5 | 1 |
| NUMBER OF TESTS | | | | 5 | 5 | 5 | 1 |
| AVERAGE $D_p/F_{oo}$ (g/kN) or AVERAGE SN (MAX) | | | | 33.3 | 180.5 | 41.9 | 22.9 |
| SIGMA ($D_p/F_{oo}$ in g/kN, or SN) | | | | 6.55 | 33.4 | 3.15 | - |
| RANGE ($D_p/F_{oo}$ in g/kN, or SN) | | | | - | - | - | - |

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

| BAROMETER (kPa) | 102.6-102.7 |
|---|---|
| TEMPERATURE (K) | 292 - 294 |
| ABS HUMIDITY (kg/kg) | 0.00788 |

FUEL

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

MANUFACTURER:        AO 'Aviadgatel'
TEST ORGANIZATION:   State Inst for Civ Aviation
TEST LOCATION:       Sheremetjevo, Moscow
TEST DATES:          FROM  19 Jul 89        TO     -

REMARKS

1. Data obtained on aircraft (Il-62M)
2. In-service engine(s), tested after overhaul

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