



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW4060
UNIQUE ID NUMBER: 12PW101
ENGINE TYPE: TF

BYPASS RATIO: 4.7
PRESSURE RATIO (π_{00}): 29.7
RATED OUTPUT (F_{00}) (kN): 266.9

REGULATORY DATA

| CHARACTERISTIC VALUE: | HC | CO | NOx | SMOKE NUMBER |
|----------------------------|--------|--------|---------|--------------|
| D_p/F_{00} (g/kN) or SN | 18.4 | 63.3 | 54.9 | 9.3 |
| AS % OF ORIGINAL LIMIT | 93.9 % | 53.6 % | 55.3 % | 52.2 % |
| AS % OF CAEP/2 LIMIT (NOx) | | | 69.1 % | |
| AS % OF CAEP/4 LIMIT (NOx) | | | 82.6 % | |
| AS % OF CAEP/6 LIMIT (NOx) | | | 93.9 % | |
| AS % OF CAEP/8 LIMIT (NOx) | | | 110.6 % | |

DATA STATUS

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

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES
x 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_{00}) | TIME minutes | FUEL FLOW kg/s | EMISSIONS INDICES (g/kg) | | | SMOKE NUMBER |
|---|-----------------------------|--------------|----------------|--------------------------|-------|-------|--------------|
| | | | | HC | CO | NOx | |
| TAKE-OFF | 100 | 0.7 | 2.567 | 0.08 | 0.58 | 31.74 | 8 |
| CLIMB OUT | 85 | 2.2 | 2.036 | 0.06 | 0.49 | 25.03 | 5.6 |
| APPROACH | 30 | 4.0 | 0.696 | 0.1 | 2.04 | 11.91 | 0.4 |
| IDLE | 7 | 26.0 | 0.206 | 11.63 | 44.46 | 3.72 | 0.1 |
| LTO TOTAL FUEL (kg) or EMISSIONS (g) | | | 865 | 3776 | 14815 | 13333 | - |
| NUMBER OF ENGINES | | | | 2 | 2 | 2 | 2 |
| NUMBER OF TESTS | | | | 4 | 4 | 4 | 4 |
| AVERAGE D_p/F_{00} (g/kN) or AVERAGE SN (MAX) | | | | 14.15 | 55.51 | 49.96 | 8 |
| SIGMA (D_p/F_{00} in g/kN, or SN) | | | | - | - | - | - |
| RANGE (D_p/F_{00} 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) | 101.90-102.55 |
| TEMPERATURE (K) | 173.21-279.79 |
| ABS HUMIDITY (kg/kg) | 0.002189-0.003801 |

FUEL

| | |
|----------|-------|
| SPEC | Jet A |
| H/C | - |
| AROM (%) | 18.6 |

MANUFACTURER: Pratt & Whitney
TEST ORGANIZATION: Pratt & Whitney
TEST LOCATION: P7 Production Test Cell, Middletown, CT
TEST DATES: FROM 30 Nov 12 TO 12 Mar 13

REMARKS

1. Data from Report PWA-9720 with Phase 3 reduced pressure loss combustor
2. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
3. NOx levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

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

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