



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1519G BYPASS RATIO: 11.6
UNIQUE ID NUMBER: 20PW133 PRESSURE RATIO (π_{oo}): 32.3
ENGINE TYPE: TF RATED OUTPUT (F_{oo}) (kN): 88.0

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	0.4	33.5	35.0	2.2
AS % OF ORIGINAL LIMIT	2.0 %	28.0 %	33.0 %	9.0 %
AS % OF CAEP/2 LIMIT (NOx)			42.0 %	
AS % OF CAEP/4 LIMIT (NOx)			49.0 %	
AS % OF CAEP/6 LIMIT (NOx)			55.0 %	
AS % OF CAEP/8 LIMIT (NOx)			64.0 %	

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_{oo})	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	0.620	0	0	19.6	1.7
CLIMB OUT	85	2.2	0.520	0	0	16.6	1.2
APPROACH	30	4.0	0.190	0.1	3.3	9.8	0.8
IDLE	7	26.0	0.070	0.2	21.4	5.3	0.4
LTO TOTAL FUEL (kg) or EMISSIONS (g)			246	23	2399	2656	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				0.3	27.3	30.2	1.7
SIGMA (D_p/F_{oo} in g/kN, or SN)				-	-	-	-
RANGE (D_p/F_{oo} in g/kN, or SN)				0.2 - 0.4	27.0 - 27.8	30.0 - 30.4	1.4 - 1.9

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.97 - 103.29
TEMPERATURE (K)	272.0 - 278.1
ABS HUMIDITY (kg/kg)	0.00122 - 0.00221

FUEL

SPEC	Jet-A
H/C	1.94
AROM (%)	17.8% - 18.4%

MANUFACTURER: Pratt & Whitney
TEST ORGANIZATION: Pratt & Whitney
TEST LOCATION: Mirabel Aerospace Centre - Quebec
TEST DATES: FROM 25 Mar 18 TO 26 Mar 18

REMARKS

1. Data from Certification Report PWA-11600
2. Block C combustor
3. Certification in accordance with Part III, Chapter 2, of Amendment 8 of ICAO Annex 16 Vol. II.
4. NOx levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

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

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