



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1921G
UNIQUE ID NUMBER: 20PW135
ENGINE TYPE: TF

BYPASS RATIO: 11.4
PRESSURE RATIO (π_{oo}): 35.8
RATED OUTPUT (F_{oo}) (kN): 100.3

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	0.3	28.8	37.0	3.3
AS % OF ORIGINAL LIMIT	2.0 %	24.0 %	33.0 %	14.0 %
AS % OF CAEP/2 LIMIT (NOx)			41.0 %	
AS % OF CAEP/4 LIMIT (NOx)			47.0 %	
AS % OF CAEP/6 LIMIT (NOx)			52.0 %	
AS % OF CAEP/8 LIMIT (NOx)			60.0 %	

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
TAKE-OFF	100	0.7	0.710	0	0	22.2	2.6
CLIMB OUT	85	2.2	0.590	0	0	18.1	1.6
APPROACH	30	4.0	0.210	0.1	2.7	10	0.8
IDLE	7	26.0	0.070	0.1	19.8	5.5	0.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			270	21	2356	3199	-
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)				0.2	23.5	31.9	2.6
SIGMA (D_p/F_{oo} in g/kN, or SN)				-	-	-	-
RANGE (D_p/F_{oo} in g/kN, or SN)				0.2 - 0.3	23.3 - 23.8	31.6 - 32.1	2.3 - 3.1

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-11601
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)