



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW4077D
UNIQUE ID NUMBER: 10PW097
COMBUSTOR: Floatwall
ENGINE TYPE: TF

BYPASS RATIO: 6.6
PRESSURE RATIO (π_{00}): 33.3
RATED THRUST (F_{00}) (kN): 355.7

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	5.1	39.5	67.4	5.7
AS % OF ORIGINAL LIMIT	25.8	33.5	63.2	34.4
AS % OF CAEP/2 LIMIT (NO _x)			79.0	
AS % OF CAEP/4 LIMIT (NO _x)			91.6	
AS % OF CAEP/6 LIMIT (NO _x)			102.8	
AS % OF CAEP/8 LIMIT (NO _x)			118.8	

DATA STATUS

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

TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES
- 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)
x OUT OF PRODUCTION (DATE: -)
- OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO _x	SMOKE NUMBER
TAKE-OFF	100	0.7	3.172	0.02	0.29	44.68	4.9
CLIMB OUT	85	2.2	2.562	0.02	0.34	34.05	2.6
APPROACH	30	4.0	0.892	0.04	0.86	11.63	0.7
IDLE	7	26.0	0.310	2.82	24.80	3.81	0.3
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1169	1382	12331	21800	-
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)				3.9	34.7	61.3	4.9
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)
STAGE BLEED 0 (% CORE FLOW)

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.1-102.5
TEMPERATURE (K)	275.5-302.5
ABS HUMIDITY (kg/kg)	0.0033-0.0112

FUEL

SPEC	Jet A
H/C	1.85-1.92
AROM (%)	17

MANUFACTURER: Pratt & Whitney
TEST ORGANIZATION: Pratt & Whitney
TEST LOCATION: Middletown, CT
TEST DATES: 13/04/2010-13/04/2010

NO_x REGULATION PARAGRAPH

x	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

REMARKS

1. Data updated to reflect additional engine test as well as updated engine performance.
2. Additional engine tested to show CAEP/4 compliance.
3. Certification in accordance with Part III, Chapter 2, of Amendment 4 of ICAO Annex 16 Vol. II.
4. NO_x levels in accordance with Part III, Chapter 2, 2.3.2 c) (CAEP/4)

Compliance with Fuel Venting requirements:

x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)