



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW306A BYPASS RATIO: 4.5
 UNIQUE ID NUMBER: 7PW077 PRESSURE RATIO (π_{00}): 20
 ENGINE TYPE: MTF RATED OUTPUT (F_{00}) (kN): 26.87

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{00} (g/kN) or SN	12.4	107.5	58.9	4.3
AS % OF ORIGINAL LIMIT	63.3 %	91.1 %	73.6 %	12.7 %
AS % OF CAEP/2 LIMIT (NOx)			92.0 %	
AS % OF CAEP/4 LIMIT (NOx)			92.1 %	
AS % OF CAEP/6 LIMIT (NOx)			92.1 %	
AS % OF CAEP/8 LIMIT (NOx)			97.0 %	

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	TIME	FUEL FLOW	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
	(%F ₀₀)	minutes	kg/s	HC	CO	NOx	
TAKE-OFF	100	0.7	0.317	0	2.27	20.08	2.6
CLIMB OUT	85	2.2	0.264	0	2.51	19.26	0.8
APPROACH	30	4.0	0.097	0	7.11	11.87	0
IDLE	7	26.0	0.042	4.36	36.35	4.26	0.2
LTO TOTAL FUEL (kg) or EMISSIONS (g)			137	287	2677	1497	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				10.6	99.4	55.6	3.9
SIGMA (D _p /F ₀₀ in g/kN, or SN)				-	-	-	-
RANGE (D _p /F ₀₀ in g/kN, or SN)				6.3 - 13.7	87.0 - 120.3	52.7 - 58.0	3.0 - 5.1

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.39 - 99.49
TEMPERATURE (K)	284 - 300
ABS HUMIDITY (kg/kg)	0.0054 - 0.0144

FUEL

SPEC	Jet A-1
H/C	1.85 - 1.87
AROM (%)	20.0 - 22.5

MANUFACTURER: Pratt & Whitney Canada Inc.
 TEST ORGANIZATION: PW306 Development Engineering
 TEST LOCATION: Mississauga, Ontario, Canada
 TEST DATES: FROM 08 May 00 TO 20 Jul 00

REMARKS

1. P&WC EC C2264A
2. Engines E9541/02, E9402/37, E9403/74
3. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
4. 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: 0 ('x' if complies, PR if pre-regulation)