



## ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW307A BYPASS RATIO: 4.2  
UNIQUE ID NUMBER: 11PW100 PRESSURE RATIO ( $\pi_{00}$ ): 20.2  
COMBUSTOR: TALON II  
ENGINE TYPE: TF RATED THRUST ( $F_{00}$ ) (kN): 28.5

REGULATORY DATA \*\* DATA SUPERSEDED \*\* SEE FOLLOWING UID FOR REVISED DATA: 16PW114

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	9.2	109.1	38.9	1.8
AS % OF ORIGINAL LIMIT	46.9	92.5	48.4	5.4
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			60.5	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			60.8	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			60.9	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			64.4	

## DATA STATUS

- PRE-REGULATION  
x CERTIFICATION  
x 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 (DATE: - )  
- OUT OF SERVICE (DATE: - )

## MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	0.329	0.00	0.57	15.82	0.4
CLIMB OUT	85	2.2	0.274	0.00	0.72	13.67	0.3
APPROACH	30	4.0	0.102	0.00	3.37	6.78	0.0
IDLE	7	26.0	0.045	3.24	39.60	2.39	1.6
LTO TOTAL FUEL (kg) or EMISSIONS (g)			144	226	2878	1045	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				7.9	100.9	36.7	1.6
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.9	1.5	1.1	0.6
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				6.8-9.1	99.4-102.9	35.5-38.1	1.1-2.5

## ACCESSORY LOADS

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

## ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.2-100.2
TEMPERATURE (K)	292-297
ABS HUMIDITY (kg/kg)	0.0078-0.012

## FUEL

SPEC	Jet A-1
H/C	186-1.88
AROM (%)	19-21.9

MANUFACTURER: Pratt & Whitney Canada  
TEST ORGANIZATION: PW307 Development Engineering  
TEST LOCATION: Mississauga, Ontario, Canada  
TEST DATES: 07/08/2007-02/10/2007

NO<sub>x</sub> REGULATION PARAGRAPH

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

## REMARKS

1. P&W ER 5606 revision AEngines tested: E9819/09, CH0004/13, CH0004/14
2. Weight reduced fuel nozzles and CCOCEngines CH499 onwards incorporate this combustion system and design standard
3. Defined by P&W Engineering Change D5216
4. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
5. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

Compliance with Fuel Venting requirements:

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