



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1521G  
UNIQUE ID NUMBER: 16PW112  
COMBUSTOR: TALON X  
ENGINE TYPE: TF

BYPASS RATIO: 11.4  
PRESSURE RATIO ( $\pi_{00}$ ): 35.1  
RATED THRUST ( $F_{00}$ ) (kN): 97.7

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	0.4	19.0	35.1	4.0
AS % OF ORIGINAL LIMIT	2.0	16.1	31.8	16.8
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			39.8	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			45.5	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			50.8	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			58.2	

### 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)  
x 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	0.690	0.10	0.10	23.20	3.0
CLIMB OUT	85	2.2	0.580	0.10	0.10	18.50	2.6
APPROACH	30	4.0	0.210	0.10	2.10	10.90	2.5
IDLE	7	26.0	0.070	0.10	14.60	5.60	2.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			265	27	1711	3250	-
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)				0.3	17.6	33.1	3.6
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.2-0.5	17.1-18.1	32-33.9	1.7-4.9

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW)  
STAGE BLEED 0 (% CORE FLOW)

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.2-101.4
TEMPERATURE (K)	259.5-282
ABS HUMIDITY (kg/kg)	0.00081-0.00317

### FUEL

SPEC	Jet A
H/C	1.9
AROM (%)	16.4-18.1

MANUFACTURER: Pratt & Whitney  
TEST ORGANIZATION: Pratt & Whitney Canada  
TEST LOCATION: Mirabel Aerospace Centre - Quebec  
TEST DATES: 15/01/2016-10/05/2016

### NO<sub>x</sub> REGULATION PARAGRAPH

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

### REMARKS

1. Data from Certification Report PWA-10061
2. Certification in accordance with Part III, Chapter 2, of Amendment 8 of ICAO Annex 16 Vol. II.
3. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements:

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