



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1428G-JM  
UNIQUE ID NUMBER: 01P22PW172  
COMBUSTOR: TALON X, Block-C  
ENGINE TYPE: TF  
BYPASS RATIO: 12.1  
PRESSURE RATIO ( $\pi_{00}$ ): 33.3  
RATED THRUST ( $F_{00}$ ) (kN): 132.4

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	0.5	31.5	28.0	15.9
AS % OF ORIGINAL LIMIT	2.6	26.7	26.2	72.6
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			32.8	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			38.0	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			42.6	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			49.3	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

### 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 (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	0.870	0.06	0.22	20.31	14.5
CLIMB OUT	85	2.2	0.720	0.04	0.26	16.37	12.4
APPROACH	30	4.0	0.250	0.02	4.72	9.17	0.5
IDLE	7	26.0	0.090	0.36	26.64	4.96	1.1
LTO TOTAL FUEL (kg) or EMISSIONS (g)			332	58	4057	3545	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				9	9	9	9
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				0.4	29.1	26.0	14.5
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)							

### ACCESSORY LOADS

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

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	100.9-103
TEMPERATURE (K)	266.2-298.7
ABS HUMIDITY (kg/kg)	0.00036-0.01437

### FUEL

SPEC	Jet A
H/C	1.86
AROM (%)	15.1-16.6

MANUFACTURER: Pratt & Whitney  
TEST ORGANIZATION: Pratt & Whitney  
TEST LOCATION: X7 Test Stand, East Hartford, CT  
TEST DATES: 02/03/2017-19/09/2017

### 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-9850
2. 3 engines tested
3. TALON-X, Block-C\* combustor
4. Certification in accordance with ICAO Annex 16 Vol. II. 3rd Edition, Amendment 7, Part III, Chapter 2.

Compliance with Fuel Venting requirements:

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