



## ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1921G  
UNIQUE ID NUMBER: 20PW135  
COMBUSTOR: TALON X  
ENGINE TYPE: TF

BYPASS RATIO: 11.4  
PRESSURE RATIO ( $\pi_{00}$ ): 35.8  
RATED THRUST ( $F_{00}$ ) (kN): 100.3

## REGULATORY DATA

\*\* DATA SUPERSEDED \*\*

SEE FOLLOWING UID FOR REVISED DATA:

01P20PW188

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	0.3	28.8	37.0	3.3
AS % OF ORIGINAL LIMIT	2.0	24.0	33.0	14.0
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			41.0	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			47.0	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			52.0	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			60.0	

## 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 (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	0.710	0.00	0.00	22.20	2.6
CLIMB OUT	85	2.2	0.590	0.00	0.00	18.10	1.6
APPROACH	30	4.0	0.210	0.10	2.70	10.00	0.8
IDLE	7	26.0	0.070	0.10	19.80	5.50	0.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			270	21	2356	3199	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				0.2	23.5	31.9	2.6
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)				0.2-0.3	23.3-23.8	31.6-32.1	2.3-3.1

## ACCESSORY LOADS

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

AT - POWER SETTINGS  
AT - POWER SETTINGS

## ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	102-103.3
TEMPERATURE (K)	272-278.1
ABS HUMIDITY (kg/kg)	0.00122-0.00221

## FUEL

SPEC	Jet A
H/C	1.94
AROM (%)	17.8-18.4

MANUFACTURER: Pratt & Whitney  
TEST ORGANIZATION: Pratt & Whitney  
TEST LOCATION: Mirabel Aerospace Centre - Quebec  
TEST DATES: 25/03/2018-26/03/2018

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-11601
2. Block C combustor
3. Certification in accordance with Part III, Chapter 2, of Amendment 8 of ICAO Annex 16 Vol. II.
4. 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)