



## ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW307D BYPASS RATIO: 4.2  
UNIQUE ID NUMBER: 15PW109 PRESSURE RATIO ( $\pi_{00}$ ): 21.4  
COMBUSTOR: TALON II  
ENGINE TYPE: MTF RATED THRUST ( $F_{00}$ ) (kN): 29.9

## REGULATORY DATA

\*\* DATA SUPERSEDED \*\*

SEE FOLLOWING UID FOR REVISED DATA:

01P15PW144

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
$D_p/F_{00}$ (g/kN) or SN	2.1	72.3	49.3	2.2
AS % OF ORIGINAL LIMIT	10.7	61.3	59.4	6.7
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			74.3	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			75.0	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			75.4	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			79.8	

## DATA STATUS

- PRE-REGULATION  
x CERTIFICATION  
- REVISED (SEE REMARKS)

## TEST ENGINE STATUS

x 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 (% $F_{00}$ )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	0.355	0.00	0.00	20.61	0.8
CLIMB OUT	85	2.2	0.277	0.00	0.02	15.44	0.9
APPROACH	30	4.0	0.112	0.00	2.57	7.85	0.0
IDLE	7	26.0	0.046	0.75	26.75	4.32	2.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			150	54	1997	1393	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				4	4	4	4
AVERAGE $D_p/F_{00}$ (g/kN) or AVERAGE SN (MAX)				1.8	66.8	46.6	2.0
SIGMA ( $D_p/F_{00}$ in g/kN, or SN)				0.5	3.4	3.5	0.5
RANGE ( $D_p/F_{00}$ in g/kN, or SN)				1.2-2.4	62.7-70.2	43.4-51	1.4-2.5

## ACCESSORY LOADS

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

AT - POWER SETTINGS  
AT - POWER SETTINGS

## ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.1-99.3
TEMPERATURE (K)	294-299
ABS HUMIDITY (kg/kg)	0.0096-0.0122

## FUEL

SPEC	Jet A-1
H/C	1.86-1.88
AROM (%)	21.6-21.2

MANUFACTURER: Pratt & Whitney Canada  
TEST ORGANIZATION: PW307 Development Engineering  
TEST LOCATION: Mississauga, Ontario, Canada  
TEST DATES: 24/06/2014-03/09/2014

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 P&WC ER-8343-II
2. PW307D Build Spec. 1318
3. Engines tested: CH0005B25 (production standard development engine), CM0005B02, and CM0009B01
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 e) (CAEP/8)

Compliance with Fuel Venting requirements:

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