



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

**** DATA SUPERSEDED ** SEE SHEET: 4PW072**

ENGINE IDENTIFICATION: PW2037 BYPASS RATIO: 6.04
UNIQUE ID NUMBER: 1PW039 PRESSURE RATIO (π_{oo}): 26.9
ENGINE TYPE: TF RATED OUTPUT (F_{oo}) (kN): 167.25

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	4.9	39.3	55.8	14.7
AS % OF ORIGINAL LIMIT	24.8 %	33.3 %	59.4 %	71.4 %
AS % OF CAEP/2 LIMIT (NOx)			74.3 %	
AS % OF CAEP/4 LIMIT (NOx)			89.9 %	
AS % OF CAEP/6 LIMIT (NOx)			102.1 %	
AS % OF CAEP/8 LIMIT (NOx)			122.0 %	

DATA STATUS

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

TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES
- 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

MEASURED DATA

MODE	POWER SETTING (% F_{oo})	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	1.538	0.05	0.4	31.1	-
CLIMB OUT	85	2.2	1.266	0.06	0.41	24.8	-
APPROACH	30	4.0	0.399	0.21	2.3	10.3	-
IDLE	7	26.0	0.141	2.26	23.1	4.4	-
LTO TOTAL FUEL (kg) or EMISSIONS (g)			547	530	5396	8107	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				3.16	32	48.1	11.4
SIGMA (D_p/F_{oo} in g/kN, or SN)				-	-	-	-
RANGE (D_p/F_{oo} in g/kN, or SN)				-	-	-	-

ACCESSORY LOADS

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

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	100.94
TEMPERATURE (K)	298
ABS HUMIDITY (kg/kg)	-

FUEL

SPEC	Jet A
H/C	-
AROM (%)	-

MANUFACTURER: Pratt & Whitney
TEST ORGANIZATION: P&WA
TEST LOCATION: X-8 Stand, PWA, East Hartford, CT
TEST DATES: FROM 08 Aug 83 TO 10 Aug 83

REMARKS

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If REVISED, this data supersedes databank UID
Compliance with fuel venting requirements: 0 ('x' if complies, PR if pre-regulation)