



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW4x58
UNIQUE ID NUMBER: 1PW056
ENGINE TYPE: TF

BYPASS RATIO: 4.8
PRESSURE RATIO (π_{oo}): 29.49
RATED OUTPUT (F_{oo}) (kN): 258

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	8.8	46.6	59.8	11.7
AS % OF ORIGINAL LIMIT	44.8 %	39.5 %	60.4 %	64.2 %
AS % OF CAEP/2 LIMIT (NOx)			75.5 %	
AS % OF CAEP/4 LIMIT (NOx)			90.4 %	
AS % OF CAEP/6 LIMIT (NOx)			102.7 %	
AS % OF CAEP/8 LIMIT (NOx)			121.1 %	

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

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	2.482	0.08	0.44	32.51	9.1
CLIMB OUT	85	2.2	1.993	0.09	0.53	25.22	6.3
APPROACH	30	4.0	0.665	0.15	1.82	12.25	0.6
IDLE	7	26.0	0.213	4.29	28.08	3.99	0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			859	1481	9806	13305	-
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)				5.7	38	51.6	9.1
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)	102
TEMPERATURE (K)	270
ABS HUMIDITY (kg/kg)	0.0015

FUEL

SPEC	Jet A
H/C	1.91
AROM (%)	21

MANUFACTURER: Pratt & Whitney
TEST ORGANIZATION: Pratt & Whitney
TEST LOCATION: Middletown, CT
TEST DATES: FROM 15 Jan 93 TO 19 Jan 93

REMARKS

Data from X693-20 with Phase 3 reduced pressure loss combustor

If REVISED, this data supersedes databank UID
Compliance with fuel venting requirements:

0 ('x' if complies, PR if pre-regulation)