



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

**\*\* DATA SUPERSEDED \*\* SEE SHEET: 10PW099**

ENGINE IDENTIFICATION: PW4090 BYPASS RATIO: 6.1  
UNIQUE ID NUMBER: 3PW066 PRESSURE RATIO ( $\pi_{00}$ ): 39.16  
ENGINE TYPE: TF RATED OUTPUT ( $F_{00}$ ) (kN): 395

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{00}$ (g/kN) or SN	3.9	27.5	92.8	9.2
AS % OF ORIGINAL LIMIT	19.9 %	23.3 %	78.4 %	56.6 %
AS % OF CAEP/2 LIMIT (NOx)			98.0 %	
AS % OF CAEP/4 LIMIT (NOx)			108.8 %	
AS % OF CAEP/6 LIMIT (NOx)			120.1 %	
AS % OF CAEP/8 LIMIT (NOx)			135.6 %	

### 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)  
- OUT OF PRODUCTION  
- OUT OF SERVICE

### MEASURED DATA

MODE	POWER SETTING (% $F_{00}$ )	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	3.898	0.03	0.19	61	7.1
CLIMB OUT	85	2.2	2.977	0.03	0.23	42.8	3.4
APPROACH	30	4.0	0.957	0.06	0.44	13.19	1
IDLE	7	26.0	0.268	2.3	20.63	4.29	0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1204	992	8848	31629	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE $D_p/F_{00}$ (g/kN) or AVERAGE SN (MAX)				2.52	22.38	80.08	7.12
SIGMA ( $D_p/F_{00}$ in g/kN, or SN)				-	-	-	-
RANGE ( $D_p/F_{00}$ 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)	101.06-101.56
TEMPERATURE (K)	292.8-302.6
ABS HUMIDITY (kg/kg)	.0097-.0112

### FUEL

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

MANUFACTURER: Pratt & Whitney  
TEST ORGANIZATION: Pratt & Whitney  
TEST LOCATION: East Hartford, Conn, USA  
TEST DATES: FROM 15 Jun 96 TO 16 Jun 96

### REMARKS

Data from Report PWA-6678

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