



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PS-90A1
UNIQUE ID NUMBER: 13AA007
COMBUSTOR: 194-03-800
ENGINE TYPE: MTF

BYPASS RATIO: 4.4
PRESSURE RATIO (π_{00}): 33.8
RATED THRUST (F_{00}) (kN): 169.7

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	1.6	23.6	61.0	18.8
AS % OF ORIGINAL LIMIT	8.3	20.0	56.7	91.7
AS % OF CAEP/2 LIMIT (NO _x)			70.9	
AS % OF CAEP/4 LIMIT (NO _x)			81.8	
AS % OF CAEP/6 LIMIT (NO _x)			91.7	
AS % OF CAEP/8 LIMIT (NO _x)			105.7	

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 _x	SMOKE NUMBER
TAKE-OFF	100	0.7	1.654	0.10	0.38	35.69	14.1
CLIMB OUT	85	2.2	1.354	0.10	0.40	26.68	16.0
APPROACH	30	4.0	0.533	0.16	1.07	9.88	13.2
IDLE	7	26.0	0.174	0.72	12.91	4.92	0.6
LTO TOTAL FUEL (kg) or EMISSIONS (g)			648	241	3739	9847	-
NUMBER OF ENGINES				4	4	4	4
NUMBER OF TESTS				4	4	4	4
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				1.4	22.0	58.0	16.0
SIGMA (D _p /F ₀₀ in g/kN, or SN)							
RANGE (D _p /F ₀₀ in g/kN, or SN)				1.4-1.46	21.1-23.17	55.71-60.94	15.31-17.12

ACCESSORY LOADS

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

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.8-100.8
TEMPERATURE (K)	284-297.5
ABS HUMIDITY (kg/kg)	0.00595-0.01015

FUEL

SPEC	TS-1
H/C	1.95
AROM (%)	14.9

MANUFACTURER: Aviadvigatel
TEST ORGANIZATION: OJSC Aviadvigatel
TEST LOCATION: Perm City
TEST DATES: 05/07/2007-22/09/2007

NO_x REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
x	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

REMARKS

1. NO_x levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

Compliance with Fuel Venting requirements:

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