Federal Office of Civil Aviation, Environmental Affairs

ENGINE EXHAUST EMISSIONS MEASUREMENT PISTON ENGINES

NEWLY MANUFACTURED ENG.

DEDICATED TO PRODUCTION

OTHER (SEE REMARKS)

USED ENGINE

IN PRODUCTION
OUT OF PRODUCTION

OUT OF SERVICE

TEST ENGINE STATUS

CURRENT ENGINE STATUS

ENGINE IDENT Lyc O-320-E2A INJECTOR -

UNIQUE ID NUMBER PF08 INJECTION NOZZLE -

ENGINE TYPE 4 Cyl. 4 Stroke RATED POWER (Poo) (HP) 150

Air Cooled

PROPELLER TYPE MCC 1C172

DATA STATUS

x EMISSION INVENTORY
PRE-REGULATION
CERTIFICATION
REVISED

MEASUREMET STATUS

x IN FLIGHT FIXED PITCH PROP
GROUND BASED VARIABLE PITCH PROP

EMISSIONS STATUS

DATA CORRECTED TO REFERENCE TEMPERATURE

DATA CORRECTED TO REFERENCE (ANNEX 16 VOLUME II)

HORIBA OBS2200 IN FLIGHT MEASUREMENT SYSTEM

MEASURED DATA

	POWER	TIME	FUEL FLOW				PM
MODE	SETTING (%)	(minutes)	(kg/s)	EI HC (g/kg)	El CO (g/kg)	El NOx (g/kg)	() ()
TAKE-OFF	100	0.3	0.0100	12.6	816	6.7	
CLIMB OUT	85	2.5	0.0080	15.1	837	6.9	
CRUISE	65	60	-	-	-	-	
APPROACH	45	3	0.0048	13.7	696	19.4	
TAXI	12	12	0.0013	16.0	690	1.6	
CRUISE LEAN	65	60	0.0058	11.7	410	37.0	
LTO TOTAL FUEL (kg) or EMISSIONS (g)			3.18	47.1	2397	27.8	
CRUISE 1HOUR FUEL (kg) or EMISSIONS (g)			20.9	243	8557	772	
NUMBER OF TESTED ENGINES 1			1	1	1	1	
NUMBER OF TESTS *			*	*	*	*	

ATMOSPHERIC CONDITIONS

BAROMETER QFE (hPa) 946 to 834
TEMPERATURE (°C)) 13.8 to 5.2

DEW POINT (°C) DENSITY ALTITUDE (ft) -

MANUFACTURER:

TEST ORGANIZATION: FOCA
TEST LOCATION: Bern (LSZB)
TEST DATES: 22. Mrz 06

REMARKS: LTO flight profile with 1 second sample intervals

FUEL

SPEC AVGAS 100LL HC C7H13

REFERENCE:

33-05-003 Std_test060322153704_01a_ ECERT69_HBHFX_OBS2200_Analysis_

060322_rit

Experts: T. Rindlisbacher, M. Bode, H. Stix