



ICAO ENGINE EXHAUST EMISSIONS DATA BANK

SUBSONIC ENGINES

ENGINE IDENTIFICATION: V2522-A5 SelectOne™ Upgrade BYPASS RATIO: 4.9
UNIQUE ID NUMBER: 10IA011 PRESSURE RATIO (π_{oo}): 25.7
ENGINE TYPE: MTF RATED OUTPUT (F_{oo}) (kN): 102.5

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	0.5	30.9	49.0	11.1
AS % OF ORIGINAL LIMIT	2.5 %	26.2 %	53.6 %	47.1 %
AS % OF CAEP/2 LIMIT (NOx)			67.0 %	
AS % OF CAEP/4 LIMIT (NOx)			81.5 %	
AS % OF CAEP/6 LIMIT (NOx)			92.6 %	
AS % OF CAEP/8 LIMIT (NOx)			111.2 %	

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_{oo})	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	0.971	0.03	0.43	21.34	7.3
CLIMB OUT	85	2.2	0.815	0.04	0.44	18.33	8.1
APPROACH	30	4.0	0.310	0.07	2.55	9.32	3.2
IDLE	7	26.0	0.130	0.14	12.49	5.09	1.7
LTO TOTAL FUEL (kg) or EMISSIONS (g)			425	39	2780	4563	-
NUMBER OF ENGINES				2	2	2	2
NUMBER OF TESTS				4	4	4	4
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				0.4	27.1	44.5	9.4
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)	100.35-102.88
TEMPERATURE (K)	268.2-277.7
ABS HUMIDITY (kg/kg)	0.00140-0.00359

FUEL

SPEC	JET A
H/C	1.91
AROM (%)	17

MANUFACTURER: IAE International Aero Engines
TEST ORGANIZATION: Pratt & Whitney
TEST LOCATION: East Hartford, CT
TEST DATES: FROM 11 Dec 08 TO 19 Jan 09

REMARKS

- Engine performance reflects new SelectOne™ package upgrades.
- Certification in accordance with Part III, Chapter 2, of Amendment 6 of ICAO Annex 16 Vol. II.
- NOx levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

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

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