



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: HTF7000 (AS907-1-1A) BYPASS RATIO: 4.2  
UNIQUE ID NUMBER: 11HN003 PRESSURE RATIO ( $\pi_{00}$ ): 21.95  
ENGINE TYPE: MTF RATED OUTPUT ( $F_{00}$ ) (kN): 30.62

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{00}$ (g/kN) or SN	3.8	94.6	48.1	15.0
AS % OF ORIGINAL LIMIT	19.5 %	80.2 %	64.0 %	45.7 %
AS % OF CAEP/2 LIMIT (NOx)			71.6 %	
AS % OF CAEP/4 LIMIT (NOx)			72.5 %	
AS % OF CAEP/6 LIMIT (NOx)			73.0 %	
AS % OF CAEP/8 LIMIT (NOx)			77.3 %	

### 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)  
- 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
TAKE-OFF	100	0.7	0.347	0.05	0.56	17.9	13.6
CLIMB OUT	85	2.2	0.288	0.06	0.63	16.17	10.6
APPROACH	30	4.0	0.104	0.12	6.28	8.81	0.7
IDLE	7	26.0	0.048	1.26	33.24	3.91	1.7
LTO TOTAL FUEL (kg) or EMISSIONS (g)			152	-	-	-	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				10	10	10	10
AVERAGE $D_p/F_{00}$ (g/kN) or AVERAGE SN (MAX)				3.27	87.47	45.39	13.6
SIGMA ( $D_p/F_{00}$ in g/kN, or SN)				0.64	3.7	2.26	1.5
RANGE ( $D_p/F_{00}$ in g/kN, or SN)				2.36-4.34	81.73-92.46	39.54-47.24	9.2-13.6

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
STAGE BLEED 0 % CORE FLOW AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	96.44-97.59
TEMPERATURE (K)	296-313
ABS HUMIDITY (kg/kg)	0.0013-0.0125

### FUEL

SPEC	Jet-A
H/C	13.5-13.7
AROM (%)	16.9-20.5

MANUFACTURER: Honeywell  
TEST ORGANIZATION: Honeywell  
TEST LOCATION: Phoenix, AZ  
TEST DATES: FROM 07 Apr 10 TO 29 Jul 10

### REMARKS

1. Reference: Summary Report Data in Honeywell Report 21-14477A
2. Exhaust Smoke and Gaseous Emissions tests of the AS907-1-1A and AS907-2-1G Turbofan Engines
3. Reported using humidity  $h=0.00634$  in accordance with ICAO Annex 16, Vol. II, 3rd Ed., section 7.1.3.
4. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
5. 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)