



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: TFE731-2-2B BYPASS RATIO: 2.6  
UNIQUE ID NUMBER: 1AS001 PRESSURE RATIO ( $\pi_{00}$ ): 13.9  
COMBUSTOR:  
ENGINE TYPE: TF RATED THRUST ( $F_{00}$ ) (kN): 15.6

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	62.3	183.2	42.9	
AS % OF ORIGINAL LIMIT	317.6	155.3	63.3	
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			79.1	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			75.9	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			76.2	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			78.2	

### DATA STATUS

x PRE-REGULATION  
- CERTIFICATION  
x REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
- DEDICATED ENGINES TO PRODUCTION STANDARD  
- OTHER (SEE REMARKS)

### EMISSIONS STATUS

- DATA CORRECTED TO REFERENCE  
(ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
x OUT OF PRODUCTION (DATE: - )  
- OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	0.205	0.11	1.39	15.25	
CLIMB OUT	85	2.2	0.173	0.13	2.03	13.08	
APPROACH	30	4.0	0.067	4.26	22.38	5.90	
IDLE	7	26.0	0.024	20.04	58.60	2.82	
LTO TOTAL FUEL (kg) or EMISSIONS (g)			85	823	2612	630	-
NUMBER OF ENGINES				3	3	3	
NUMBER OF TESTS				3	3	3	
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				53.4	169.4	40.5	
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				50-58	161-177	39-43	

### ACCESSORY LOADS

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

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	96.7-98.1
TEMPERATURE (K)	285-288
ABS HUMIDITY (kg/kg)	0.0066-0.0087

### FUEL

SPEC	ASTM D1655-73T
H/C	
AROM (%)	17

MANUFACTURER: Allied Signal  
TEST ORGANIZATION: Allied Signal  
TEST LOCATION: Phoenix  
TEST DATES: 01/12/1975-01/04/1976

### REMARKS

1. Not required to meet GASEOUS regulations

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)