



# ICAO ENGINE EXHAUST EMISSIONS DATA BANK

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: Trent 875  
UNIQUE ID NUMBER: 2RR024  
ENGINE TYPE: TF

BYPASS RATIO: 6.08  
PRESSURE RATIO ( $\pi_{00}$ ): 35.42  
RATED OUTPUT ( $F_{00}$ ) (kN): 351.85

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NOx	SMOKE NUMBER
$D_p/F_{00}$ (g/kN) or SN	3.4	30.6	57.8	6.9
AS % OF ORIGINAL LIMIT	17.3 %	25.9 %	52.2 %	41.0 %
AS % OF CAEP/2 LIMIT (NOx)			65.2 %	
AS % OF CAEP/4 LIMIT (NOx)			74.3 %	
AS % OF CAEP/6 LIMIT (NOx)			82.8 %	
AS % OF CAEP/8 LIMIT (NOx)			94.8 %	

### 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)  
x OUT OF PRODUCTION (DATE: 01-Jul-05 )  
- OUT OF SERVICE

### MEASURED DATA

MODE	POWER SETTING (% $F_{00}$ )	TIME minutes	FUEL FLOW kg/s	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NOx	
TAKE-OFF	100	0.7	3.100	0	0.19	33.32	4.86
CLIMB OUT	85	2.2	2.570	0	0.16	26.55	5.26
APPROACH	30	4.0	0.880	0	0.86	10.43	2.2
IDLE	7	26.0	0.280	1.78	19.66	4.64	0.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1117	778	8848	17575	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE $D_p/F_{00}$ (g/kN) or AVERAGE SN (MAX)				2.2	24.93	49.88	5.34
SIGMA ( $D_p/F_{00}$ in g/kN, or SN)				-	-	-	-
RANGE ( $D_p/F_{00}$ in g/kN, or SN)				1.85-2.52	23.17-26.31	48.7-50.8	4.7-6.0

### ACCESSORY LOADS

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

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	100.2
TEMPERATURE (K)	287
AHS HUMIDITY (kg/kg)	.00527 - .00886

### FUEL

SPEC	AVTUR
H/C	1.95
AROM (%)	16

MANUFACTURER: Rolls Royce plc  
TEST ORGANIZATION: Rolls Royce plc  
TEST LOCATION: SINFIN, Derby  
TEST DATES: FROM Sep 94 TO -

### REMARKS

1. Data from certification report DNS 14445

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

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