



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: Trent 772  
UNIQUE ID NUMBER: 2RR023  
COMBUSTOR:  
ENGINE TYPE: MTF

BYPASS RATIO: 5.0  
PRESSURE RATIO ( $\pi_{00}$ ): 35.8  
RATED THRUST ( $F_{00}$ ) (kN): 315.9

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	3.5	16.4	78.9	1.6
AS % OF ORIGINAL LIMIT	18.0	13.9	70.7	9.4
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			88.4	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			100.4	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			111.9	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			127.9	

### 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)

x OUT OF PRODUCTION (DATE: - )  
x OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	3.150	0.33	0.18	43.60	
CLIMB OUT	85	2.2	2.580	0.35	0.15	32.66	
APPROACH	30	4.0	0.840	0.81	0.78	10.68	
IDLE	7	26.0	0.270	0.97	9.36	5.74	
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1096	735	4175	21462	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				2.3	13.3	68.1	1.3
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)				1.23-3.18	12.29-14	67.7-68.4	1.1-1.5

### ACCESSORY LOADS

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

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	100.6
TEMPERATURE (K)	293
ABS HUMIDITY (kg/kg)	0.0073-0.0084

### FUEL

SPEC	AVTUR
H/C	1.94
AROM (%)	16

MANUFACTURER: Rolls-Royce plc  
TEST ORGANIZATION: Rolls-Royce plc  
TEST LOCATION: SINFIN-Derby  
TEST DATES: 01/07/1994

### REMARKS

1. Data from certification report DNS 12859.
2. For SN by mode data use 3RR030 data

Compliance with Fuel Venting requirements:

- ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)