

No: 11/83

Ref: EW/C836/01

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| Aircraft type and registration:      | Tristar – 385–1 G–BEAL (Multi-jet public transport aircraft) |
| Year of manufacture:                 | 1976   |
| Date and time (GMT):                 | 27 June 1983 at 0658 hrs                                     |
| Location:                            | Belgium (Flight level 240)                                   |
| Type of flight:                      | Scheduled passenger  |
| Persons on board:                    | Crew – 14                      Passengers – 240              |
| Injuries:                            | Crew – nil                      Passengers – nil             |
| Nature of damage:                    | Damage to tyre and starboard undercarriage door              |
| Commander's Licence:                 | Airline Transport Pilot's Licence                            |
| Commander's Age                      | 40 years   |
| Commander's total flying experience: | 6623 hours (of which 531 hours were on type)                 |

The aircraft had taken off from Gatwick at 0631 hrs GMT on a scheduled flight to Athens. All aspects of the operation had been entirely routine until 0658 hrs when the aircraft was climbing through FL240 over Belgium at a speed of just over 300 knots. There was a loud bang accompanied by the illumination of the 'RH GEAR OR DOOR' warning on the engineers panel and 'GEAR/DOOR' and 'IN TRANSIT' lights on the pilots warning panel. All engine instruments were giving normal indications as also were the instruments of the hydraulic and cabin pressurisation systems. The climb was discontinued and speed reduced to 250 knots. After consulting the Flying Manual the crew concluded that a tyre had burst and an external check of the aircraft was made as far as was possible from the windows but no sign of damage was evident. The commander decided that they should return to Gatwick.

While in the holding pattern the undercarriage was selected up (as is normal prior to selecting down) and the warning lights extinguished. When down was selected 3 greens and 2 reds were obtained. Gatwick were informed of the situation and the Fire Service pre-positioned vehicles alongside the runway. A coupled approach was made down to approximately 300 feet when the commander took over for the manual landing on runway 26. As soon as the starboard wheels touched the runway there was a severe vibration which continued down to about 80 knots when it ceased

abruptly. Witnesses reported smoke from the undercarriage and a lump of tyre was seen to fly off soon after touchdown. The aircraft was slowed gently using reverse thrust on No 2 engine (No 3 reverser was defective) and a combination of mainly port brake and nose wheel steering to minimise the stress on the damaged wheel. The aircraft cleared the runway and the undercarriage was inspected by the Fire Service and a ground engineer after which it was cleared to taxi back to the nearest stand.

Investigation revealed that the starboard front outer tyre had burst and blown off the forward portion of the undercarriage door (which was not recovered) and damaged much of the remainder. The tyre had been fitted new only 48 landings previously and was in excellent condition apart from the damage caused by the burst and the subsequent landing. Investigation revealed that a foreign object had penetrated the tread and the majority of the plys. Detailed examination of the failure is in hand by the manufacturers.