

No: 7/90

Ref: EW/G90/04/04

Category: 1a

**Aircraft Type and Registration:** Handley Page Dart Herald 210, G-SCTT

**No & Type of Engines:** 2 Rolls-Royce Dart 532-9 turboprop engines

**Year of Manufacture:** 1964

**Date and Time (UTC):** 19 April 1990 at 0517 hrs

**Location:** Guernsey Airport, Channel Islands

**Type of Flight:** Public Transport

**Persons on Board:** Crew - 2 Passengers - None

**Injuries:** Crew - None Passengers - N/A

**Nature of Damage:** Damage to torque link, wheel assembly and hydraulic pipes

**Commander's Licence:** Airline Transport Pilot's Licence

**Commander's Age:** 47 years

**Commander's Total Flying Experience:** 7,500 hours (of which 3,570 were on type)

**Information Source:** Aircraft Accident Report Form submitted by the pilot, and subsequent investigation by AAIB

Severe vibration was experienced at about 50-60 kt during the landing roll. Subsequent inspection showed that the upper torque link on the right main landing gear leg had failed through stress corrosion and that the vibration had been caused by mainwheel shimmy.

A mandatory service bulletin had been issued on 6 November 1989 calling for an eddy current inspection of the torque link within 28 days and then at intervals of 625 flying hours or six months for precisely this defect. The main leg had been overhauled in September 1989 and then fitted to G-SCTT by an independent maintenance organisation, during a Check 1 inspection in April 1990. The bulletin inspection had not been carried out and the torque link failed 25 flying hours after the overhaul.

The following relevant responsibilities are among those placed on the organisations involved, they are included in the Air Navigation Order Article No 11 (ANO 11), Airworthiness Notice No 36 (AN 36) and British Civil Airworthiness Requirements A8-1 (BCAR A8-1):

a. The Design Authority Equipment manufacturing firms shall:

Have facilities to include notification, by document such as service bulletins, of mandatory modifications and inspections and shall provide the constructor of the aircraft with such information (BCAR A8-1).

In the opinion of the CAA, have an organisation such as to ensure that, in all matters affecting airworthiness, full and efficient coordination exists within departments and between related departments (BCAR A8-1).

b. The Overhaul Facility To issue a certificate of release certifying that the item had been inspected in accordance with the requirements of the CAA -, ie that the Service Bulletin had been carried out (ANO 11).

c. The Maintenance Organisation To issue a certificate of release certifying that the aircraft had been inspected in accordance with the requirements of the CAA, ie that the Service Bulletin had been carried out (ANO 11).

d. The Operator To ensure that he is aware of the published information concerning mandatory instructions and to act accordingly. He is advised to institute a procedure for assessment to ensure that an adequate and timely response will be made (AN 36).

The service bulletin had been written, approved and produced by the design authority, registered with the CAA and then forwarded to the aircraft support organisation for distribution. The aircraft support organisation issued it under their serial number 32-1600 SB. The CAA included the service bulletin in their Mandatory Modifications Summary under the name of the design authority.

The distribution of the service bulletin from the aircraft support organisation was to registered holders of the chapter 32 (Landing Gear) to the aircraft manual, and to others on request. In practice many maintenance organisations do not maintain a comprehensive library from all design authorities whose equipment they service and instead use the CAA Mandatory Modifications Summary to identify the relevant mandatory modifications and inspections.

The overhaul facility noted that the CAA Mandatory Aircraft Modifications and Inspection Summary listed the service bulletin under the design authority and defined the applicability as Dart Herald aircraft. Accordingly the overhaul facility asked the design authority's Product Support to supply a copy of the service bulletin and received a reply from the Service Publication department that it had not yet been received for printing. In fact it had already been published by the Dart Herald Support Organisation.

The maintenance organisation called up the service bulletin to be done on the aircraft, but cleared the entry by accepting the leg as being nil-life from overhaul by an approved company.

The operator had contracted the maintenance organisation to satisfy his obligations under AN 36 and accepted his certificate of release as proof that the requirements of the CAA had been met.

Following a meeting with the AAIB to discuss this occurrence, the CAA have stated their intention to give publicity to the documentation problems highlighted by it and the implications to other aircraft which are out of production.