

**Aviation Safety Investigation Report
199200196**

**de Havilland Aircraft
Tiger Moth**

01 November 1992

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NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

Occurrence Number: 199200196 **Occurrence Type:** Incident
Location: TYABB VIC
State: VIC **Inv Category:** 4
Date: Sunday 01 November 1992
Time: 1500 hours **Time Zone** EST
Highest Injury Level: None

Aircraft Manufacturer: de Havilland Aircraft
Aircraft Model: DH-82A
Aircraft Registration: VH-DFJ **Serial Number:** 861
Type of Operation:
Damage to Aircraft: Minor
Departure Point: TYABB, VIC
Departure Time:
Destination: POINT COOK, VIC

Crew Details:

<u>Role</u>	<u>Class of Licence</u>	<u>Hours on Type</u>	<u>Hours Total</u>
Pilot-In-Command	Private	250.0	800

Approved for Release: Friday, June 18, 1993

While conducting a pleasure flight the aircraft right rear landing wire failed. The pilot returned to TYABB and landed normally.

The landing wire examination found that the wire failed in fatigue initiating from two subsurface defects in approximately the middle of the wire length.

A sample taken some 40 mm from the fracture surface contained intermetallic stringers reducing the integrity of the material. Size of the stringers was consistent with the size of the subsurface defects. The analysis indentified the stringers to be an aluminium based intermetallic, possibly from the refractory material used in production of the material.

The material composition and microstructure was typical of a drawn and rolled 316 stainless steel. The manufacturer advised the wire was made of 316S16 steel.