

**Aviation Safety Investigation Report
198702444**

Fairey AS-6 "Firefly"

5 December 1987

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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.

Occurrence Number: 198702444

Occurrence Type: Accident

Location: 1 km North of Camden NSW

Date: 5 December 1987

Time: 1154

Highest Injury Level: Serious

Injuries:

	Fatal	Serious	Minor	None
Crew	0	1	0	0
Ground	0	0	0	-
Passenger	0	1	0	0
Total	0	2	0	0

Aircraft Details: Fairey AS-6 "Firefly"

Registration: VH-HMW

Serial Number: WD-828

Operation Type: Private (Test Flight)

Damage Level: Substantial

Departure Point: Camden NSW

Departure Time: 1151

Destination: Camden NSW

Approved for Release: 27 May 1988

Circumstances:

The aircraft had been out of service for several months, undergoing engine maintenance. This was the first flight following the completion of that maintenance. After takeoff the aircraft was observed to climb normally to about 1500 feet. It was then observed to begin trailing black smoke and shortly afterwards turned towards the airfield and began to lose height rapidly, until descending out of view behind trees. The aircraft touched down heavily, tail first, in a paddock, bounced and following the second touch down slewed sideways through a fence and down an embankment. An inspection of the engine revealed that both the right and left camshaft inclined drive upper bevel shaft gears had been overheated as a result of a lack of lubrication. The distortion of the left drive was sufficient to disconnect it from its camshaft drive bevel gear resulting in the subsequent loss of power. The engine was fitted with an external oil priming system to lubricate the camshaft drives during and immediately after starting. This system was connected on each side into the appropriate valve train oil supply by "T" fittings and flexible hose assemblies. During reassembly, associated with the latest engine maintenance, the "T" fittings were omitted and the fittings in the front case drillways were blanked with plugs, effectively cutting off the engine oil supply to the camshaft drives. It was evident that the maintenance personnel involved were unaware of the camshaft lubrication system.

Significant Factors:

It was considered that the following factors were relevant in the development of the accident

1. Improper and inadequate maintenance, resulting from lack of knowledge by maintenance personnel.
2. Engine failure caused by a lack of lubrication to the camshaft drives.

3. At the point of engine failure, the aircraft was in a position and configuration such that a return to the aerodrome was not possible.
4. The pilot was forced to carry out a landing on unsuitable terrain.