

**Aviation Safety Investigation Report
198900232**

Corby Starlet

4 March 1989

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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: 198900232

Occurrence Type: Accident

Location: Rottnest Island WA

Date: 4 March 1989

Time: 1025

Highest Injury Level: Nil

Injuries:

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

Aircraft Details: Corby Starlet

Registration: VH-CKM

Serial Number: N/A

Operation Type: Private

Damage Level: Substantial

Departure Point: Rottnest Island WA

Departure Time: 1015

Destination: Serpentine WA

Approved for Release: 4 May 1989

Circumstances:

The pilot was carrying out aerobatic manoeuvres at 1500 feet over the sea near Rottnest Island. As the aircraft approached the top of a stall turn, under zero gravity conditions, the engine stalled and the propeller stopped. The engine was not fitted with an electric starter motor and there was insufficient altitude available to complete a windmill start. The pilot carried out a successful forced landing in the sea. Subsequent inspection revealed that the engine driven fuel pump had either failed, or was unable to produce sufficient fuel flow to sustain engine r.p.m, due to a split in the rubber diaphragm in the pump. It is probable that loss of fuel pump pressure combined with the the zero gravity conditions at the top of the stall turn caused fuel starvation which resulted in engine failure.

Significant Factors:

The following factors were considered relevant to the development of the accident

1. An unserviceable engine driven fuel pump reduced pump output to a minimum.
2. The aerobatic manoeuvres resulted in a zero gravity condition which stopped the gravity fed fuel supply to the engine.
3. Fuel starvation caused engine failure.
4. The engine was not fitted with an electrical starting system.
5. There was insufficient altitude available to restart the engine using a windmill start.