

**Aviation Safety Investigation Report
199703643**

**HEDARO
Skyfox Gazelle**

25 October 1997

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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: 199703643 **Occurrence Type:** Accident
Location: Bindoon
State: WA **Inv Category:** 4
Date: Saturday 25 October 1997
Time: 1300 hours **Time Zone** WST
Highest Injury Level: None

Aircraft Manufacturer: HEDARO
Aircraft Model: CA25N
Aircraft Registration: VH-FFT **Serial Number:** CA25N011
Type of Operation: Miscellaneous Test
Damage to Aircraft: Substantial
Departure Point: Bindoon WA
Departure Time: 1300 WST
Destination: Bindoon WA

Crew Details:

<u>Role</u>	<u>Class of Licence</u>	<u>Hours on</u>	
		<u>Type</u>	<u>Hours Total</u>
Pilot-In-Command	ATPL	125.0	2000

Approved for Release: Saturday, August 8, 1998

The Skyfox Gazelle had undergone maintenance to rectify a flooding carburettor. The left side carburettor bowl had been removed and one of the floats found to be low. The carburettor was then removed and both carburettor floats replaced. The carburettor was re-installed, but when the fuel pump was turned on to prime the fuel system, the carburettor again flooded. The maintenance organisation reported that the needle and seat were then adjusted until the flooding ceased. No evidence of flooding was found when the engine was ground run to full power, without the electric pump operating.

Before commencing a subsequent test flight the pilot conducted another satisfactory full power check. However, shortly after takeoff at about 200 ft, the engine lost power. The pilot commenced forced landing procedures, but the engine regained full power at about 100 ft. The pilot re-commenced climbing and returned to the airfield. But once again the engine lost power so the pilot force landed the aircraft on the airfield. The resulting heavy landing bent the landing gear and damaged a wing tip. During a subsequent ground run the engine was able to attain full power.



The left side carburettor was again removed and sent to the engine manufacturer's agent for disassembly and inspection. The inspection revealed that although the carburettor float level was slightly incorrect, it was not considered sufficient to cause the engine to lose power. However, the carburettor air duct was found to be holed and both the needle and float mechanisms were excessively worn. Those components were replaced, and the carburettor re-installed. The fuel system was then pressurised using the electric fuel pump. The left side carburettor was found to be operating correctly, but the right side carburettor now flooded. The right side carburettor air duct was subsequently found to be holed, and the needle and seat were excessively worn.

It is considered that the combination of holed air ducts and worn carburettor needles and seats probably resulted in an excessively rich fuel mixture, with an associated loss of engine power.

The maintenance organisation has supplied a report to CASA.

