

ACCIDENT

Aircraft Type and Registration:	Hapi Cygnet SF-2A, G-BRZD	
No & Type of Engines:	1 Volkswagen 2078 piston engine	
Year of Manufacture:	1995 (Serial no: PFA 182-11443)	
Date & Time (UTC):	1 August 2018 at 1400 hrs	
Location:	Nayland Airfield, Essex	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Substantial damage to wings, landing gear, fuselage and tailplane	
Commander's Licence:	Light Aircraft Pilot's Licence	
Commander's Age:	66 years	
Commander's Flying Experience:	Approximately 600 hours Last 90 days - 22 hours Last 28 days - 4 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

During final approach to Runway 32 at Nayland Airfield, the engine failed and a restart attempt proved unsuccessful. The aircraft was manoeuvred to avoid tall trees but collided with a hedge, causing substantial damage to the aircraft and the pilot sustained a minor leg injury. The cause of the engine failure was not determined.

History of the flight

The aircraft had been recently returned to flying condition following a lengthy period of storage. Following its return to service, it had been purchased by the pilot, who was also the LAA Inspector that conducted the LAA Permit to Fly renewal inspection. After completing two uneventful 10-minute local flights from Thame Airfield, the pilot flew the aircraft from Thame Airfield to Nayland Airfield where the aircraft was to have been based. The aircraft had been refuelled to full for the flight, which provided a fuel endurance of four hours.

The pilot reported that the one-hour flight to Nayland Airfield was uneventful and that the engine temperature and pressure indications were normal. The aircraft was fitted with a carburettor temperature gauge and the pilot stated that the gauge showed no risk of carburettor icing at any stage of the flight. The aircraft was positioned to the final approach for Runway 32 at Nayland, which is 530 m long with a steep upslope partway along its length and has tall trees approximately 100 m from the runway threshold. The

pilot stated that the short runway required a low approach over these trees to allow the aircraft to touch down on the upward-sloping section of the runway.

On short final, at approximately 140 ft above the ground, as the throttle was advanced the engine abruptly stopped. The pilot attempted to restart the engine by engaging the electric starter and the engine ran for a few seconds before stopping again as the throttle was advanced. By this time the aircraft had descended below the level of the trees on the approach and the pilot determined that he could not clear them, nor land in the available area before the trees. He turned right approximately 20°, flew beneath a set of power lines and aimed for a low hedge to cushion the impact. The aircraft came to rest in the hedge, Figure 1. The pilot, who was wearing a four-point harness, sustained a minor leg injury in the accident but was able to vacate the aircraft using the cockpit door. The aircraft sustained substantial damage to the wings, landing gear, fuselage and tailplane.



Figure 1

Accident site

Aircraft information and examination

The Hapi Cygnet SF-2A is a two-seat light aircraft with a tailwheel landing gear. It is powered by an air-cooled Volkswagen 2078 piston engine driving a fixed-pitch propeller. G-BRZD's engine was overhauled prior to the aircraft's return to service and a new Lectron carburettor had been installed.

The pilot examined the aircraft following the accident but was unable to determine the cause of the engine failure. He stated that in his opinion, the most likely cause of the failure was mis-adjustment of the carburettor, as the engine failure occurred as the throttle was advanced during the final approach.

Conclusion

The engine failure occurred whilst the aircraft was positioned on the final approach with no viable undershoot available. The decision to turn away from the tall trees directly on the final approach path probably reduced the severity of the resulting accident.