

ACCIDENT

Aircraft Type and Registration:	Star-Lite SL-1, G-SOLA	
No & Type of Engines:	1 Rotax 447 piston engine	
Year of Manufacture:	1988 (Serial no: PFA 175-11311)	
Date & Time (UTC):	17 July 2021 at 1030 hrs	
Location:	Near Pembrey Airport, Carmarthenshire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Bent nosewheel leg	
Commander's Licence:	National Private Pilot's Licence	
Commander's Age:	67 years	
Commander's Flying Experience:	150 hours (of which 66 were on type) Last 90 days - 1 hour Last 28 days - 1 hour	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

The aircraft suffered fuel exhaustion after a second go-around at the end of a local flight. The pilot had been distracted during pre-flight preparations and departed with less fuel onboard than he had intended.

History of the flight

The pilot was planning to carry out a flight test from Pembrey Airport to renew the aircraft's Permit to Fly. He had not flown for eight months, during which the aircraft had been stored with its fuel tank empty.

The pilot carried out pre-flight checks and had planned to refuel the aircraft from three fuel containers which he had brought with him in his car. He emptied one 5 litre container and one 10 litre container into the fuel tank before being distracted, leaving another full 10 litre container in the car. As a result, when the aircraft departed it contained approximately 15 litres of fuel, rather than the 25 litres intended.

The pilot reported he successfully completed the flight test in about 45 minutes. He then continued to practise some general handling in the local area for a similar length of time before returning to Pembrey. Weather conditions were good at the time with only a very light wind, which the pilot stated made speed control of the 'slippery' aircraft more difficult. He reported that he was unable to slow to the correct approach speed during the approach and

made the decision to go around. He then repositioned the aircraft for a second approach, during which the aircraft floated along the runway in ground effect. Judging the aircraft was too far along the runway to land safely, the pilot once again chose to go around.

On climbing away, at a height of about 500 ft, the engine stopped and the pilot carried out a forced landing in a nearby field. Having touched down successfully, the nosewheel hit a rut causing the nosewheel leg to bend backwards under the fuselage. The aircraft came to rest and the pilot, who was uninjured, was able to vacate the aircraft unaided.

Aircraft examination

On examination after the accident there was no fuel remaining in the fuel tank. Other than the nosewheel leg the aircraft was undamaged.

Other information

The pilot estimated the aircraft normally consumed about 10 litres of fuel per hour. He found the aircraft fuel gauge was not accurate, and relied instead on dipping the fuel tank to determine the fuel onboard before departure.

Analysis

The engine failure was caused by fuel starvation resulting from inadvertent departure with less than the intended amount of fuel onboard. The pilot had calculated the fuel required for his flight but had been distracted, breaking the routine of his before-flight preparation. This had been partly due to pre-occupation with conducting the flight test.

Because he considered that the fuel gauge was inaccurate, the pilot preferred to rely on dipping the tank to determine how much fuel was onboard. He had not done so on this occasion as he believed he had already loaded the required amount of fuel for the flight. Had he loaded the intended 25 litres the aircraft would have had approximately an additional hour of endurance, which would have been more than sufficient for the flight undertaken.

The pilot commented that his lack of recency and the light wind had contributed to the unsuccessful approaches. Other than in respect of the lack of fuel, of which he was unaware, his decision to go around on both occasions was sound. He was able to carry out a safe forced landing from a low height, damage resulting from the rough nature of the terrain.

Conclusion

The aircraft was damaged during an otherwise safe off-aerodrome forced landing after running out of fuel during a go-around. The aircraft ran out of fuel because the pilot was distracted while refuelling before the flight, with the result that its tank contained 40% less fuel than he intended. The event highlights the danger posed by distraction during routine tasks, especially when under additional pressure.