

ACCIDENT

Aircraft Type and Registration:	Reims Cessna F152, G-WACT	
No & Type of Engines:	1 Lycoming O-235-L2C piston engine	
Category:	1.3	
Year of Manufacture:	1982	
Date & Time (UTC):	2 October 2005 at 1644 hrs	
Location:	Near Newcastle, Tyne and Wear	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Wings extensively damaged	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	55 years	
Commander's Flying Experience:	319 hours (of which 34 were on type) Last 90 days - 6 hours Last 28 days - 6 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and enquiries by the AAIB	

History of the flight

The pilot had been airborne from Eshott Airfield on a local flight for some two hours and was routing back towards the airfield at 3,000 ft amsl, when he experienced a loss of engine power. After establishing a glide, he confirmed that the engine had stopped and declared a 'MAYDAY' to Newcastle Approach. He was offered a glide approach and landing at Newcastle Airport but declined because of the surrounding area of population. Selecting a suitable field for a forced landing, he informed ATC of his intentions. However, as he descended he noted a number of people in a sports field over which he would have to fly, and altered his target landing area to

a nearby golf course. He made a successful touchdown but the grass was wet and the aircraft braking was poor resulting in the right wing impacting a tree. This swung the aircraft to the right but it continued on its original track and the left wingtip struck a fence.

Additional information

During the aircraft recovery, it was noted that there was very little fuel in the aircraft's fuel tanks. The pilot subsequently confirmed that he had flown for a total of about 4 hours since the aircraft had been fully refuelled. His previous experience of a similar type was that this

would give approximately 4½ hours endurance. Since the accident he had been advised that G-WACT had an endurance of no more than 4 hours.

The pilot also confirmed that, shortly before the engine stopped, the left fuel gauge was reading zero and the right gauge was reading approximately 1/8 full.

Analysis

The engine stopped through lack of fuel and the pilot then made a forced landing with no injuries to himself or anyone else. Nevertheless, it was unwise to continue flight with the indications of fuel quantity shown on the gauges. Furthermore, even with an expectation that the aircraft had an endurance of 4½ hours, the pilot was close to the time limit for continued safe flight. Fuel planning and fuel monitoring is one of the essentials of good airmanship and the following practical advice on the subject is provided in LASORS 2005 Safety Sense 1 *General Aviation*:

- a. Always plan to land by the time the tank(s) are down to the greater of ¼ tank or 45 minutes cruise flight, but don't rely solely on gauge(s) which may be unreliable. Remember, a headwind may be stronger than forecast and frequent use of carb heat will also reduce range.*
- b. Understand the operation and limitations of the fuel system, gauges, pumps, mixture control, unusable fuel etc and remember to lean the mixture if it is permitted.*
- c. Don't assume you can achieve the Handbook/Manual fuel consumption. As a rule of thumb, due to service and wear, expect to use 20% more fuel than the 'book' figures.'*