
ACCIDENT

Aircraft Type and Registration:	Agusta A109E, G-GCMM
No & Type of Engines:	2 Pratt & Whitney Canada PW206C turboshaft engines
Year of Manufacture:	2002
Date & Time (UTC):	19 July 2011 at 1105 hrs
Location:	Fiveways Trading Estate, Corsham, Wiltshire
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - 1
Injuries:	Crew - None Passengers - None
Nature of Damage:	Tail rotor blade and gearbox damaged
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	64 years
Commander's Flying Experience:	12,925 hours (of which 580 were on type) Last 90 days - 145 hours Last 28 days - 62 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and further enquiries by the AAIB

Synopsis

Just prior to touchdown the tail rotor struck a hedge and a concrete post, damaging the tail rotor and its gearbox. There were no injuries. On arrival at an industrial depot the normal landing position had been obstructed by two articulated lorries.

History of the flight

The pilot was planning to take a passenger from his office near Stoke-on-Trent first to Gloucester, then to an industrial depot in Corsham, Wiltshire at which the pilot had landed several times, then back to Stoke-on-Trent. Before leaving Gloucester the passenger rang the depot, from inside a car, giving 30 minutes notice of his arrival. The helicopter took off from Gloucester at about 1025 hrs.

Upon arrival at the depot the normal landing position was obstructed by two articulated lorries, so the pilot orbited the site looking for another suitable landing area. As he did so, the passenger pointed out the depot manager, who seemed to be indicating to land at the entrance to the depot, and asked if the pilot could do so. The pilot made an airborne inspection of the intended landing site for obstructions and determined that, although it looked "tight", it was large enough. He then set up an approach into wind. As the helicopter settled in a high hover it encountered turbulence from a warehouse which made control of the helicopter difficult, particularly in heading and height.

After establishing the helicopter in a hover 5 ft over the landing area the pilot started to lower it. As he did so he felt a “slight shudder” at the rear of the aircraft with no perceptible rotor rpm change, followed by some tail rotor vibration through the rudder pedals. Although the landing was then completed without apparent incident the helicopter’s tail rotor and skid had struck a hedge, consisting of branches 3-4 cm in diameter, and a concrete post.

Subsequently, the helicopter’s tail rotor blades, gearbox and pitch change mechanism were replaced.

Pilot’s comments

The pilot commented that he was aware of a private airfield about 1 nm south of the industrial depot, but that when he had suggested this to the passenger on previous occasions the passenger had insisted that he landed at the depot. He had also considered landing in fields adjacent to the depot but had been unable to find out who owned them. He did not think they provided access to the depot.

Depot manager’s comments

The depot manager commented that he only became aware of the passenger’s arrival about 10 minutes before the accident, believing he would arrive by road. Upon hearing the helicopter making its approach he went out to the landing site and made hand signals that he hoped would indicate to the pilot not to land but to go to the airfield approximately 1 nm south of the depot.

He added that if he had been given 30 minutes notice, as is usual, he would

have had the lorries moved or, if unable to do so, he was able to pick up the passenger from the nearby airfield.

Passenger’s comments

The passenger commented that the confusion over whether he was arriving by car or helicopter arose because he made the call giving his ETA from a car while he was in Gloucester. He added that in hindsight the helicopter should have landed at the airfield 1 nm away or in Malmesbury, Wiltshire, 9 nm north, where it is based.

Video evidence

A video of the accident was filmed by an occupant of one of the adjacent buildings who was standing about 35 m from the helicopter and shows details of the event consistent with the pilot’s recollection. Another person can be seen observing approximately 15-20 m from the helicopter. Figure 1 shows a still from the video at the moment the tail rotor struck the concrete post.



Figure 1

G-GCMM at the moment its tail rotor struck the concrete post

Discussion

The pilot described the landing site as “tight”; it may also have been unsuitable for the prevailing wind conditions. In less turbulent conditions the helicopter might have landed safely. Although the pilot believed the landing site was suitable, he was landing in an

area surrounded by buildings occupied by businesses, unconnected with the passenger, whose staff may not have been familiar with helicopter operations outside their premises and could have been endangered by a more serious outcome.