

ACCIDENT

Aircraft Type and Registration:	Magni M24C gyroplane, G-ORDW	
No & Type of Engines:	1 Rotax 914-UL	
Year of Manufacture:	2011	
Date & Time (UTC):	2 March 2012 at 1500 hrs	
Location:	Cark Airfield, Cumbria	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - None	Passengers - 1 (Minor)
Nature of Damage:	Rotor blades, propeller, cabin and tail	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	62 years	
Commander's Flying Experience:	238 hours (of which 91 were on type) Last 90 days - 13 hours Last 28 days - 3 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

The pilot attempted to execute a go-around from just above the runway. The gyroplane rolled to the right on application of right rudder and full power, and the right main wheel contacted the ground. The aircraft rolled over, coming to rest on the runway on its right side. The pilot and his passenger escaped serious injury.

unobstructed grassland, with 12 m strips of compacted earth along each side the runway, suitable for gyroplane operations. The pilot had flown about 30 hrs P1 on the type before the accident flight, including about 15 hrs in G-ORDW. The flight was to be his first in the aircraft with a passenger.

History of the flight

The pilot had purchased the gyroplane new in 2011 and had been flying it since November 2011, having converted to gyroplanes from fixed wing types. He based G-ORDW at Cark Airfield on the north shore of Morecambe Bay. The airfield has a hard runway, orientated 06/24 and 500 m in length by 15 m width. To either side of the runway was 100 m of open and

The pilot gave his passenger a thorough safety briefing, including operation of the doors and four-point safety harness. The weather was suitable, with scattered cloud at about 2,500 ft and a surface wind from about 200° at 5 to 8 kt. The aircraft departed from Runway 24 and completed an uneventful flight of about an hour before the pilot returned to the airfield for landing. The weather was as before, and as the wind was blowing at

approximately 40° to the runway centreline, the pilot planned to land directly into wind, across the runway and compacted ground strips.

The first approach was normal, except that the pilot realised it would result in landing slightly long so he flew a go-around. On the second approach, the expected touchdown was at the correct place, at the beginning of the hard runway and the pilot reduced engine power to idle for landing. He immediately became aware that the aircraft was drifting to the right. As the aircraft crossed the runway edge and just a few feet above it, the pilot applied left rudder to correct the drift, and the aircraft yawed left, placing it almost sideways on to its direction of travel.

The pilot immediately applied right rudder and full power with the intention of going around, but as well as yawing right, the aircraft also rolled right and the right main wheel struck the runway surface, causing the aircraft to roll over onto its right side. The rotor blades and propeller struck the grass, while the nose and nosewheel made contact with the runway. The aircraft then rotated under the influence of the turning rotor head and came to rest on the runway, pointing 90° to the left of runway heading.

After confirming that his passenger was not seriously injured, the pilot secured the aircraft by operating the fuel cut-off control and isolating electrical power.

Personnel on the airfield quickly arrived to assist, and an ambulance was called (although this was later stood down when it became clear there were no serious injuries). The pilot was uninjured, while his passenger suffered a small cut to her shin and bruising consistent with the forcible restraint provided by her harness.

Pilot's analysis

In a very detailed and candid report, the pilot offered an analysis of the event. He was comfortable that the decision to land at an angle to the runway centreline was sound, given the suitability of the surface and the gyroplane's ability to stop very quickly after touchdown. While the wind was well within his ability and experience to deal with, he thought that it had either changed in direction between approaches, or that his second approach had not been directly into wind, causing the right drift over the runway.

Application of left rudder to correct the drift had been incorrect, and the pilot was aware that he should have applied left cyclic control instead. The decision to go-around had been taken just a little too late. On application of go-around power, the aircraft would yaw left and roll to the right, requiring right rudder and left cyclic to correct. The pilot recalled already having right rudder applied to correct the drift, but thought that he had not applied left cyclic to correct the expected right roll.