

Registration: <b>F-GLKF</b>		Year of manufacture: <b>1992</b>		Category/Weight: <b>0-2.250 Kgs.</b>	
Aircraft manufacturer and model: <b>ROBIN DR-400 / 120</b>					
Number of engines/ Manufacturer and model: <b>1 / LYCOMING O-235-LA</b>					
Date: <b>03-APR-2002</b>		Local time: <b>16:25</b>		Province: <b>ALMERÍA</b>	
Location: <b>KM. 19,800 ROAD A347 OF ADRA TO LAUJAR DE ANDARAX, T.M. BERJA</b>					
<b>Injuries</b>	Fatal	Serious	Minor/none	Pilot in command: <b>Private Pilot's Licence</b>	
Flight crew			<b>1</b>	Age: <b>37</b>	Total flight hours: <b>125 HOURS</b>
Passengers			<b>2</b>	Operation type: <b>GENERAL AVIATION - PRIVATE</b>	
On ground				Phase of flight: <b>ON ROUTE</b>	
Aircraft damage: <b>MINOR</b>				Event type: <b>EMERGENCY LANDING</b>	

### Description of the Occurrence

The aircraft was part of a group of six, belonging to the "Union Aérienne Lille-Roubaix-Tourcoing" Flying Club, that were flying together. They left the French town of Lille on Saturday, 30<sup>th</sup> March, reaching Clermont-Ferrand on the first leg. The following day they flew to Le Lignon and, on Monday, 1<sup>st</sup> April, from there to the Aerodrome of Ampuriabrava in Spain. On Tuesday, 2<sup>nd</sup> April, they left Ampuriabrava for the Aerodrome of Castellón.

On 3<sup>rd</sup> April, the day of the occurrence, the six aircraft took off from the aerodrome of Castellón at around 12:30 hours, local time, heading for Almería Airport, with flight plans under VFR conditions. The estimated time of the leg was two hours and thirty minutes. The aircraft involved in the incident refuelled at the aerodrome of Castellón to fill its 110-litre tanks, providing it with four hours' flight autonomy.

Before starting the flight, they obtained information on current and forecast weather conditions, METAR and TAFOR, on the destination airport, as transcribed below, and on the alternatives.

#### METAR

LEAM 030900Z 25017KT 9999 SCT025 SCT055 15/12 Q1007

This means: observation made at 09:00 hours UTC on 3<sup>rd</sup> April, wind direction 250° and intensity 17 Kt, visibility over 10 Km, scattered clouds at 2,500 feet, scattered clouds at 5,500 feet, temperature 15° C, dew point 12° C and QNH 1007 Hpa.

TAFOR

LEAM 030800Z031019 26025KT 9999 SCT020 BKN030 TEMPO 1019  
26035G45KT

This means: TAFOR made at 8:00 hours UTC on 3<sup>rd</sup> April, valid between 10:00 and 19:00 hours on 3<sup>rd</sup> April, wind direction 260° and intensity 25 Kt, visibility over 10 Km, scattered clouds at 2,000 feet, heavy cloud at 3,000 feet, temporarily between 10:00 and 19:00 hours, wind direction 260° and intensity 35 Kt, with gusts of 45 Kt.

According to the Metar data of Almería Airport, between 12:00 and 12:30 hours UTC (between 30 and 60 minutes prior to the arrival of the aircraft at the airport), the wind changed direction by around 90°, i. e., it changes direction from 230°-240° to 330°-340°, whilst increasing its intensity.

When the first three aircraft, corresponding to versions with improved features, reached entry point E of the Almería Airport CTR, they established contact with the Airport control tower, which informed that that the duty runway was number 26 and that the wind was blowing at 350° (transversal to the runway), at an intensity of between 25 and 30 Kt, with gusts of 30 to 35 Kt.

Despite this, the front three aircraft landed at Almería Airport. Once they had landed, one of the pilots, at the time the Head Pilot of the Flying Club, made radio contact with the three approaching aircraft, recommending that they divert to Malaga or Granada Airport. The three pilots decided to head for Granada.

After passing over the town of Órgiva, in the province of Granada, the pilot of aircraft F-GLKF encountered strong turbulence and saw that the way out of the valley was closed off by a thick layer of clouds, making it impossible to continue the flight under VFR conditions. He made several attempts through different places to try to continue towards Granada, without finding any areas free of clouds for VFR flight, forcing him to turn round. Later, and due to his lack of fuel, he chose to descend in order to locate a site where he could land.

At 16:25 hours, local time, three hours and fifty-five minutes after having taken off, he located a road with a stretch running at 300°-310°. He flew low overhead to ensure no vehicles were travelling along it and eventually landed.

The aircraft suffered damage to its left wing when it hit a tree during the run after landing, none of the three occupants being injured.

### **Analysis**

The average consumption of this aircraft is around 25 litres/hour. Given that the flight lasted around three hours, fifty-five minutes, it can be estimated that around 98 litres of fuel were consumed.

Once the aircraft had landed, the fuel tanks were drained, to find they contained a quantity of approximately 10 litres that, added to the 98 litres consumed, leads to a total of 108 litres. Given that the tank capacity is 110 litres, the previous data shows that the aircraft had taken off with its tanks full.

When the aircraft reached entry point E of the Almería Airport CTR, at around 15:00 hours, local time, it found that the existing wind conditions, in terms of its direction, differed to those reflected in the TAFOR that the crew had obtained before taking off. At that time, the wind was blowing 350° perpendicular to the runway, oriented 08-26, and at an intensity of between 25 and 30 knots, with gusts of 30 to 35 knots. Under these conditions, landing the aircraft was completely unfeasible.

The pilot, following the recommendations of the Flying Club Head Pilot, decided not to land and to head for another airport. According to his statement, he chose to head for Granada airport because it was closer than Malaga, as well as because the runway is practically parallel to that of Almería. This last piece of information is not entirely correct, given that the Malaga runway is oriented 14-32, whereas that of Almería is 08-26. On the other hand, it is important to note that Valencia had been assigned on the flight plan as the alternative airport.

However, the pilot must have had doubts as to the suitability of the alternative airport chosen, as he asked Almería Control Tower for information on the military aerodrome of Armilla, the controller informing him that it was a military installation that only admitted civilian flights in the event of an emergency. However, in this communication the pilot did not request meteorological information on Granada Airport.

Regarding the flight to Granada Airport, the pilot indicated in his statement that, bearing in mind the orography of the land, he plotted the most direct route possible from his position (point E) to said airport. Therefore, he is most likely to have flown first along the valley of the river Andarax and then along the valley of the river Guadalfeo.

During this distance, he tried on numerous occasions to establish contact with Granada Control Tower, without any success. He then decided to contact the Malaga ATIS to obtain meteorological information on Granada, but was also unable to make contact, possibly due to the flight altitude and to the orography of his current position.

He later came across visibility conditions that made it impossible to continue flying towards Granada Airport under VFR conditions. At that time he had no fuel to reach any other airport or aerodrome, which led the pilot to make the decision to turn round and look for a suitable landing site.

The decision to land before coming into pressing fuel problems was reasonable, although it is possible that the choice of landing site was not the most appropriate, given that there were obstacles nearby that he crashed into.

To summarise, we can highlight the following as the most significant facts of this event:

- Although the group of pilots had planned an alternative airport (Valencia) in the event of problems arising during the first part of the route, no alternative had been foreseen in the event of the destination airport not being accessible for landing, as was the case. Therefore, when they came across this situation they had to select an alternative field there and then. In this sense, the Head Pilot of the Flying Club offered two possibilities to the three approaching aircraft: Malaga or Granada. The pilot of the affected aircraft rejected heading for Malaga Airport, based on erroneous information concerning the orientation of its runway. Likewise, he must have had some doubts as to the suitability of Granada Airport, given that he requested information on a third site, Armilla.
- The weather conditions at Almería Airport were slightly different to those forecast, with the crew having no prior knowledge of such.

- When the pilot came across weather conditions that made it impossible for him to continue flying towards Granada under VFR conditions, he decided to turn round and look for a landing site without waiting for pressing fuel problems, instead of trying to continue with the flight by entering the clouds.

**Conclusions**

In view of the above, it can be concluded that this incident was almost certainly caused by an unsuitable flight plan, especially in terms of the choice of alternative airports.