

DATA SUMMARY

LOCATION

Date and time	Saturday, 27 May 2006; 19:00 local time
Site	Santa Cilia Aerodrome. Jaca (Huesca)

AIRCRAFT

	Aircraft No. 1	Aircraft No. 2
Registration	D-KIDL	EC-JPE
Type and model	Glasser Dirks DG 500 M	Twin Astir III Grob
Operator	Private	Private

Engines

	Aircraft No. 1	Aircraft No. 2
Type and model	ROTAX 535 C	N/A
Number	1	N/A

Crew

Pilot in command

	Aircraft No. 1	Aircraft No. 2
Age	39 years	48 years
Licence	Glider pilot	Glider pilot
Total flight hours	Not available	70 h
Flight hours on the type	Not available	70 h

INJURIES

	Fatal	Serious	Minor/None
Crew			2
Passengers			2
Third persons			

DAMAGES

	Aircraft No. 1	Aircraft No. 2
Aircraft	Major	Minor
Third parties	N/A	N/A

FLIGHT DATA

Operation	General Aviation – Non-Commercial – Private
Phase of flight	Landing roll

REPORT

Date of approval	29 November 2006
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1. FACTUAL INFORMATION

1.1. Event description

On May 27 at around 19:00 UTC, two aircraft landed at the Sta. Cilia Aerodrome. One, a Twin Astir glider, registration EC-JPE, landed on the grassy area next to the gravel runway; the other, a Glasser Dirks motorglider, registration D-KIDL, landed on asphalt runway 27R. On its landing roll, the German glider crossed in front of the Spanish glider, which struck and severed the tail section of D-KIDL with its left wing. There was also damage to the latter's VHF antenna and its associated cabling.

Each aircraft was carrying the pilot and a passenger. There were no injuries.

Weather conditions were good: it was daylight, with good visibility and without clouds or wind gusts.

1.2. Pilot and eyewitness statements

1.2.1. *Glider D-KIDL pilot*

The pilot stated that they were coming from Monflorite Aerodrome in Huesca, and that while over the mountains to the north of the Santa Cilia Aerodrome, they had observed aircraft traffic and seen gliders landing on the asphalt runway. Later, when they were 300 or 400 m above ground level and one kilometre west of runway 09, on noticing no interfering traffic, the pilot initiated the right downwind leg for runway 27, announcing in English, «D-KIDL downwind 27», and later, «DL final 27».

He further stated that he did not notify anyone of his intention to land on the asphalt runway, and that he did not realize there were 3 runways, though he did see at least four gliders parked on the grass runway. He landed on the asphalt and exited the runway to the left approximately two-thirds of the way down the runway, once the speed had decreased. He did not notify anyone he had left the runway. Seconds later he felt a very strong jolt, which he thought had resulted from rolling over a stone or another obstacle. Only later did he realize he had been hit by another glider.

He specified it was his first time landing in Santa Cilia, and that when he made the notifications in English, he heard voices but since they were in Spanish, he did not understand them and therefore could not tell if they were directed at him or not.

He had a navigational chart on which the asphalt runway was highlighted, which he supposed meant it was the one used for landings. Moreover, since he saw other gliders parked in the adjoining grass field, he thought he had to land on the asphalt and stop on the grass.

He emphasized that at no time did he or his passenger see any other glider in the traffic pattern that may have interfered with theirs.

1.2.2. *Glider EC-JPE pilot*

In his statement, the pilot indicated that before reporting downwind, he observed the aerodrome traffic, seeing other gliders in the vicinity but none in the landing pattern. According to his statement, he reported «downwind runway 27, grass, fixed landing gear», which the runway supervisor acknowledged before informing him of the estimated wind direction and intensity. He continued his approach, still with no other aircraft in sight, verifying there were no other gliders on the dirt runway on which he was going to land. He also noted there were gliders parked on the gravel runway. He turned at the end of the base leg, verifying once again that the grass runway was still clear, but was surprised to see a previously unidentified glider landing on the asphalt runway. He adjusted his landing so as to touch down on the usual spot and landed beyond the grass runway's taxi point. A few seconds after landing, he saw how the other glider ahead of him on the asphalt runway suddenly turned to the left, in his direction. Since the gliders parked on the gravel to his left prevented him from going that way, he opted to turn right. Given the small manoeuvring margin available, he could not avoid hitting the other glider's tail section with the leading edge of his left wing.

1.2.3. *Runway supervisor*

The runway supervisor was at the head of the asphalt runway, 27R, when he was notified by radio around 19:00 on a frequency of 123.5 MHz by glider EC-JPE that it was «downwind 27, grass, fixed landing gear». He acknowledged receipt and verified the correct start to the manoeuvre. Around a minute later, he regained visual contact with glider EC-JPE, now on final approach, and also noted the presence of an unidentified glider, which turned out to be D-KIDL, also on final approach but on asphalt runway 27R and about 150 m ahead of the other glider.

Both gliders proceeded to land, D-KIDL touching down first on the asphalt runway, followed 5 or 10 seconds later by EC-JPE on the grass. About two-thirds of the way down the runway, D-KIDL abruptly changed its course to the left, leaving the asphalt runway at high speed and entering the grass area in front of EC-JPE's path, which could only manoeuvre slightly to the right to avoid the impact, since two other gliders were parked on the gravel runway to its left.

The runway supervisor added that at no time did D-KIDL make radio contact either with him or with the two other aircraft flying in the vicinity of the aerodrome. He stated he had knowledge of English since he had used it before in his professional capacity as a military air traffic controller.



Figure 1. Damage to aircraft D-KIDL



Figura 2. Damage to aircraft EC-JPE

According to the traffic supervisor, the asphalt runway is preferentially used by powered aircraft, including towed gliders. As for landings, powered aircraft preferentially use the secondary gravel runway, although the grass strip between the gravel and asphalt runways is generally used as a third runway since, due to the characteristics of the terrain, it is easier on the aircraft both for landing and taxiing.

1.3. Aerodrome information

The Santa Cilia Aerodrome in Jaca is owned by the Aragon council's Board of Tourism. It is an uncontrolled aerodrome used for sail gliding, power gliding, ultralights, parachuting, acrobatics and radio-controlled flying.

There is information in the AIP Spain concerning the aerodrome's physical characteristics and runway dimensions. Aeronautical charts on the aerodrome, published by specialized companies¹, are also available.

The aerodrome has two runways:

- An 850m × 30m marked asphalt runway, designation 09/27.
- A 680m × 26m unmarked gravel runway, designation 09/27.

A 55m-wide separation strip consisting of grass-covered hard ground between the two runways is normally used by gliders to land.

The aerodrome also has a paved and marked taxiway and a parking apron with anchored tie-down points (see Figure 3).

¹ It has been confirmed that at least the company Jeppesen Sanderson, Inc. markets information on Santa Cilia Aerodrome.

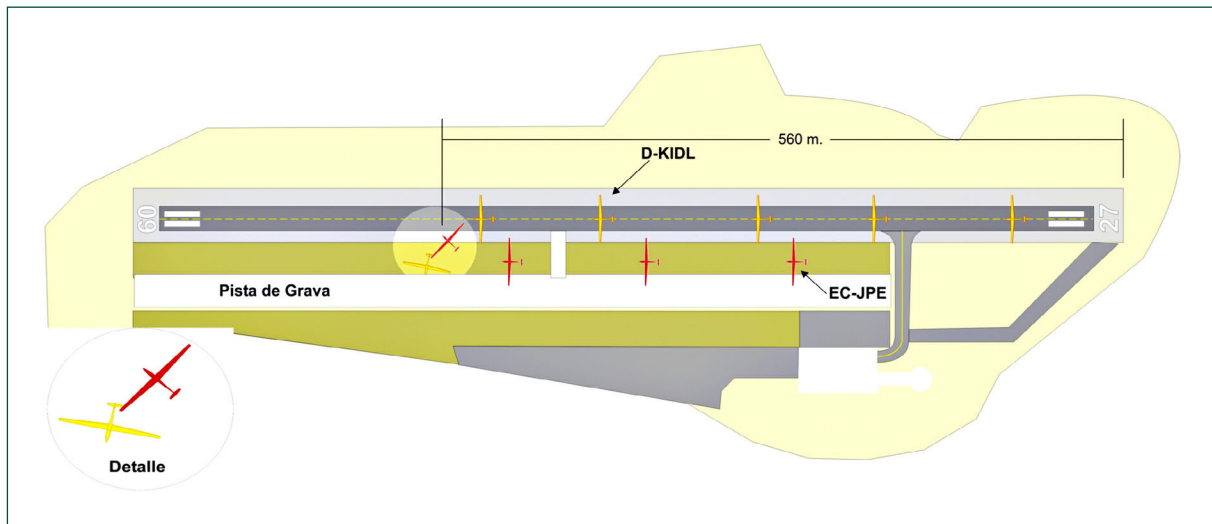


Figure 3. Aerodrome layout and schematic of the incident

So as to ensure its safe usage by different types of aircraft, the Aragon Aviation Sports Federation publishes Aerodrome Usage Regulations which establish a 5-mile radius around the aerodrome where the radio shall be in use and tuned to the aerodrome frequency, with reporting points in Jaca, Berdun, Bailo and Mount Carnet. It further states that all aircraft will be equipped with systems capable of establishing two-way communication and will observe all position reporting requirements, always in Spanish. It defines the functions of the traffic supervisor or his delegate who, either from the ground or, failing that, from aboard an airplane, will coordinate and report on conditions at the aerodrome and on incoming and outgoing traffic. The aerodrome's assigned radio frequency is 123.5 MHz.

According to the procedures, the following position reports are mandatory for non-powered aircraft:

— Incoming aircraft:

- Report intentions and position.
- Report entering downwind.

The asphalt runway is shared with powered aircraft. To this end, the Federation's regulations for the aerodrome specify that the head of the paved runway shall not be blocked by gliders, so as to allow airplanes to take off and land.

2. ANALYSIS AND CONCLUSIONS

From the German pilot's statement, it can be concluded that his radio was receiving properly and that it was set to the aerodrome's frequency. It could not be verified lat-

er whether or not it was transmitting correctly since the accident damaged both the antenna and the cabling. There is no reason to believe that the radio malfunctioned, however. Under these conditions, it could not be established whether or not the pilot relayed his intentions, something which, according to him, he did in English. The runway supervisor claimed not to have heard any transmission and also mentioned two other pilots flying in the vicinity that did not hear it either. Given the importance of this matter to the accident's analysis, as well as the witnesses' contradictory statements, it was not possible to reach any conclusions. In any case, if those communications had been made, the difficulties related to the use of different languages would have been a potential source of conflict.

Apart from the communication factor, therefore, the separation between the aircraft would only be guaranteed by the pilots' and, from the ground, the runway supervisor's visual vigilance. Under these conditions, the data shows that the presence and location of the aircraft was not completely noticed by either the runway supervisor or by the EC-JPE pilot until both were on short final. It seems that at no time was the pilot of D-KIDL aware of the existence of a conflict, since he maintained his position ahead of the other glider in the landing sequence. The fact that both aircraft landed almost simultaneously on parallel runways should not have posed any significant risk in and of itself. It was only when the D-KIDL pilot deviated from his path to leave the runway that the event took place. The German pilot indicated that it was his first time in Santa Cilia and that he had not familiarized himself with the procedures ahead of time. This was a contributing factor to the accident.