

CIAIAC

Comisión de Investigación
de Accidentes e Incidentes
de Aviación Civil

TECHNICAL REPORT

A-049/2001

Accident of the
aircraft make Rolladen,
model LS 3A, registration
F-CESK, on August 29,
2001 in the Pasaje San
Salvador of Santa Cruz
de Serós (Huesca)



MINISTERIO
DE FOMENTO

Technical report

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Foreword

This report is a technical document that reflects the point of view of the Civil Aviation Accident and Incident Investigation Commission (CIAIAC) regarding the circumstances in which happened the event being investigated, with its causes and its consequences.

In accordance with the provisions of Law 21/2003 and Annex 13 to the Convention on International Civil Aviation, the investigation has exclusively a technical nature, without having been targeted at the declaration or assignment of blame or liability. The investigation has been carried out without having necessarily used legal evidence procedures and with no other basic aim than preventing future accidents.

Consequently, any use of this report for purposes other than that of preventing future accidents may lead to erroneous conclusions or interpretations.

This report has originally been issued in Spanish language. This English translation is provided for information purposes only.

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Abbreviations

00 °C	Degrees centigrade
COM	Communications
GPS	Global Positioning System
hh:mm	Hours, minutes
km	Kilometres
m	Metres
min	Minutes
MN	Nautical mile
VFR	
VHF	Very High Frequency

Synopsis

In the afternoon of the day of the accident, 29 August 2001, the glider of make Rolladen, model LS 3A, registration F-CESK, was towed and released into flight, at a time not exactly determined, from the aerodrome of Santa Cilia de Jaca in the province of Huesca, to execute a non-commercial pleasure flight, returning to the same aerodrome. The pilot was the sole occupant of the aircraft.

The available data on the flight are limited to a radio contact between the aircraft and the aerodrome and the statement of a witness indicating that he had seen the aircraft in flight.

Based mainly on the information provided by the wreckage, which was located at the summit of a small, gently-sloping hill, it is believed that the most probable cause of the accident was the stalling of the lower wing (right) in a turn to the right made with insufficient height clearance from the ground.

1. FACTUAL INFORMATION

1.1. History of the flight

In the afternoon of the day of the accident, 29 August 2001, the glider of make ROLLADEN, model LS 3 A, registration F-CESK, was towed and released into flight, at a not exactly determined time, from the aerodrome of Santa Cilia de Jaca in the province of Huesca, to execute a non-commercial pleasure flight, returning to the same aerodrome. The pilot was the sole occupant of the aircraft.

The only news of the flight is a radio contact with the aerodrome, at approximately 17:30 hours local time, which was not recorded, and the statement of a witness that he had seen the aircraft in flight at around 18.30 hours local time.

The wreckage of the aircraft was located in the Pasaje San Salvador, in the municipal district of Santa Cruz de Serós (Huesca) at the summit of a small, gently-sloping hill (see Figures in Appendix A).

1.2. Injuries to persons

Injuries	Fatal	Serious	Minor/none
Crew	1		
Passengers			
Others			

1.3. Damage to aircraft

The aircraft was completely destroyed as a consequence of the impact with the ground.

1.4. Other damage

No collateral damage was caused as a result of the accident.

1.5. Personnel information

Age/Sex: 62 years/Male

Nationality: German

Qualification:	Private Glider Pilot's Licence
Ratings:	Radiotelephone Operator's Certificate for general and restricted flight.
Date of issue:	01-07-1988
Date of renewal:	03-04-2000
Date of expiry:	01-05-2002
Total flying hours:	880:17 hours at 20-08-2001

1.6. Aircraft information

The LS 3A model is a towed glider of 15 m wingspan, 6.75 m total length and 1.35 m total height, with a T-tail and rigid or cable-operated mechanical controls. It has separate flaps and ailerons and air brakes in the wings, and a rudder and elevator in the tail. The gliding ratio is slightly under 1/40 and the aircraft must be counterweighted with water to ensure centring. This water must be jettisoned before landing.

1.6.1. Identification

Make:	Rolladen Schneider Flugzeugbau
Model:	LS 3A
Serial number:	3384
Date of manufacture:	3rd quarter of 1979
Registration:	F-CESK
MTOW:	472 kg
Owner:	Private
Operator:	Private

1.6.2. Certificate of airworthiness

Class:	Utility use (U)
Date of issue:	16-10-1979
Date of renewal:	19-05-1999
Date of expiry:	20-05-2002

1.6.3. *Maintenance log*

Total flight hours: 1,382:55 hours at 25-08-01
Last annual inspection: 07-04-2001
Hours since last annual inspection: 1,171:25 hours

1.7. Meteorological information

No specific information is available on the meteorological conditions in the zone, but it is assumed that in view of the time of year, the end of August, and the fact that the aerodrome was in service and other flights were being made, the conditions were suitable for VFR flying and the visibility was excellent.

In addition, a damaged camera belonging to the pilot was found among the wreckage of the glider, and the film was developed. The photographs, which are believed to have been taken by the pilot shortly before the accident, show that the weather conditions were excellent, with small, scattered cumulus clouds and excellent visibility.

1.8. Wreckage and impact information

The wreckage of the aircraft was found grouped together at the accident site, situated at the summit of a gently-sloping hill of moderate height (figures in Appendix A).

The angle of impact of the prow was not very pronounced, and it was slightly bent to the left. The nose was destroyed, with the skin ripped off and torn, as was the cockpit canopy. The pedals were bent and displaced, and the canopy frame and spars were also bent.

The wing was broken at the root by twisting force, basically maintaining its position with respect to the fuselage. The right semi-wing had broken and turned around its longitudinal axis (OY axis), in such a way that the trailing edge was in front.

The rear fuselage had split at the wing support frame, around which it had turned 90° anticlockwise, taking the tail with it in this movement.

In addition, it must be pointed out that no evidence was found of malfunctioning of the aircraft or its systems before the impact.

1.9. Medical and pathological information

The death of the pilot was caused by the destruction of vital organs as a consequence of encephalic traumatism and multiple injuries sustained in the course of the accident.

1.10. Survival aspects

In view of the characteristics of the accident and the state in which the wreckage was found, there was practically no possibility of survival for the pilot of the aircraft.

1.11. Additional information

The Aircraft Flight Manual states, in capital letters, the following warning: «LE VOL ACROBATIQUE, LES VRILLES ET GLISADES SONT FORMELLEMENT INTERDITES» («Aerobatic flight, spins and sideslips are strictly prohibited»).

The same manual states that, in the event of accidentally going into a spin, the pilot must follow the habitual procedure: move the control stick to neutral, fully press the opposite pedal to the spin direction, and when the spin stops, move the pedal to the centre and recover height at a moderate load factor.

2. ANALYSIS

From the foregoing it can be deduced that:

- No emergency or failure occurred on board, since no attempt at radio contact was recorded, although the pilot carried on board the corresponding radio, which, in addition, he had used previously without problems.
- From what has been stated in section 1.7 above, it is considered that the weather conditions were suitable for VFR flying and the visibility was excellent.
- Given the pilot's age and experience, the possibility is discarded that in the moments before or during the accident he was performing manoeuvres expressly prohibited in the aircraft's Flying Manual such as spins, sideslips or aerobatics (see section 1.11).
- The low angle of impact and the position of the wreckage (right outer wing turned 180° on its OY axis, rear fuselage broken and turned 90° on its OZ axis, taking the tail with it) indicates that the aircraft was almost parallel to the ground at the moment of impact and was veering to the right at considerable speed.

For all of the above, it is believed that the most probable cause of the accident was a stall of the right wing during a turn to that side, with little height clearance above the hillside, which the pilot attempted to correct, and just as he was on the point of achieving this, that is, with the aircraft almost horizontal, the nose and the right wingtip hit the ground, which would explain the nose being bent to the left and the breakage and inversion of the right semi-wing, and subsequently the breakage and twisting of the rear fuselage.

3. CONCLUSIONS

3.1. Findings

- The pilot and sole occupant of the aircraft was qualified for the flight he was making and held the corresponding current Private Glider Pilot's Licence.
- The aircraft had the corresponding current Certificate of Airworthiness.
- The flight was being carried out in suitable weather conditions for VFR flights.
- Judging by the position and distribution of the wreckage found, the aircraft hit the ground at a relatively low angle and inclined to the right, which caused the destruction of the prow and the breakage of the wing, with the right wingtip turning about its OY axis and coming to rest in the opposite direction to the flight of the aircraft, and the breakage of the rear fuselage practically in the centre, with the tail swinging anti-clockwise and coming to rest almost parallel with the wing.

3.2. Causes

In view of the situation of the wreckage and the fact that there were no witnesses to the events, it is considered that the most probable cause of the accident was the stalling of the lower wing (right) in a turn to the right made with insufficient clearance from the ground.

4. SAFETY RECOMMENDATIONS

None.

APPENDICES

APPENDIX A

Photographs



Photo 1. *View of the accident place*



Photo 2. *Left view of the wreckage*



Photo 3. *Rear view of the wreckage*



Photo 4. *Detail of the right wingtip*