

COMISIÓN DE INVESTIGACIÓN DE ACCIDENTES E INCIDENTES DE AVIACIÓN CIVIL

# Report ULM A-001/2018

Accident involving a Quicksilver GT-500 ultralight aircraft, registration EC-CJ7, at the aerodrome of El Berriel in San Bartolomé de Tirajana (Las Palmas – Canary Islands – Spain) on 12 January 2018

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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 of the accident object of the investigation, and its probable causes and consequences.

In accordance with the provisions in Article 5.4.1 of Annex 13 of the International Civil Aviation Convention; and with articles 5.5 of Regulation (UE) n° 996/2010, of the European Parliament and the Council, of 20 October 2010; Article 15 of Law 21/2003 on Air Safety and articles 1., 4. and 21.2 of Regulation 389/1998, this investigation is exclusively of a technical nature, and its objective is the prevention of future civil aviation accidents and incidents by issuing, if necessary, safety recommendations to prevent from their reoccurrence. The investigation is not pointed to establish blame or liability whatsoever, and it's not prejudging the possible decision taken by the judicial authorities. Therefore, and according to above norms and regulations, the investigation was carried out using procedures not necessarily subject to the guarantees and rights usually used for the evidences in a judicial process.

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

This report was originally issued in Spanish. This English translation is provided for information purposes only.

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## **Abbreviations**

00:00 Hours and minutes (length of time)

00:00:00 Hours, minutes and seconds (period in time)

c.g. Center of gravity

cm. Centimeters

dd/mm/yyyy Day, month and year (date)

DGAC Spain's Civil Aviation General Directorate

FAA Federal Aviation Administration of the United States

ft Feet

GCAPP Approach control in Gran Canaria

GCLB ICAO code of the El Berriel aerodrome

kg Kilograms
km Kilometers
kt Knots
m. Meters

MAF Multi-axis fixed-wing

MPH Miles per hour

RPM. Revolutions per minute

SAR Search and rescue service

TULM Ultralight pilot license

ULM Motorized ultralight

UTC Coordinated universal time

VFR Visual flight rules

# Synopsis

Owner and operator: Private

Aircraft: Quicksilver GT-500 ultralight, registration EC-CJ7

Date and time of accident: 12 January 2018 at 10:50<sup>1</sup>

Site of accident: Aerodrome of El Berriel in San Bartolomé de Tirajana

(Las Palmas – Canary Islands – Spain)

Persons on board: 1 crew and 1 passenger, with minor injuries

Type of flight: General Aviation – Private / Visual Flight Rules

Phase of flight: Takeoff – Initial climb

Date of approval: 30 September 2020

## Summary of accident

The Quicksilver GT-500 aircraft, registration EC-CJ7, took off at 10:30 UTC from runway 07 at the aerodrome of El Berriel (GCLB), in San Bartolomé de Tirajana (Las Palmas – Canary Islands – Spain) to go on a local, 30-minute flight with the pilot and one passenger on board.

After doing one circuit of the aerodrome traffic pattern with a touch-and-go, during the initial climb phase, the pilot realized that the aircraft was rolling and yawing right. He tried to correct it with left pedal, but the aircraft did not respond.

He tried to return to the runway by turning to the right even more using the roll control, but he was unable to land on it.

Due to the low altitude of the aircraft and the problems controlling it, the pilot decided to land in the sea near a beach in the vicinity of the runway 07 threshold. At the time, the sea was calm and the beach empty. He configured the aircraft to make an emergency landing, stopping the engine, disconnecting the battery and setting flaps one<sup>2</sup>, and he reported his situation to the aerodrome.

At approximately 10:50 UTC, the aircraft landed in the sea some 25 meters away from the coastline. The two occupants sustained minor injuries and exited the aircraft under their own means. The aircraft was seriously damaged.

<sup>&</sup>lt;sup>1</sup> All times in this report are in UTC, which is the same as local time.

<sup>&</sup>lt;sup>2</sup> Flaps one corresponds to a 10° downward deflection.

The investigation has determined that the probable cause of the accident was the inadvertent blockage of the aircraft's yaw control system by the passenger.

In addition, the location of the aircraft's yaw control system components in the rear compartment are thought to have contributed to the accident.

Three safety recommendations are issued as a result of the investigation into this accident.

#### 1. FACTUAL INFORMATION

## 1.1. History of the flight

The Quicksilver GT-500 aircraft, registration EC-CJ7, took off at 10:30 UTC from runway 07 at the aerodrome of El Berriel (GCLB), in San Bartolomé de Tirajana (Las Palmas – Canary Islands – Spain) to go on a local, 30-minute flight with the pilot and one passenger on board.

After doing one circuit of the aerodrome traffic pattern with a touch-and-go, during the initial climb phase, the pilot realized that the aircraft was rolling and yawing right. He tried to correct it with left pedal, but the aircraft did not respond.

He tried to return to the runway by turning to the right even more using the roll control, but he was unable to land on it.

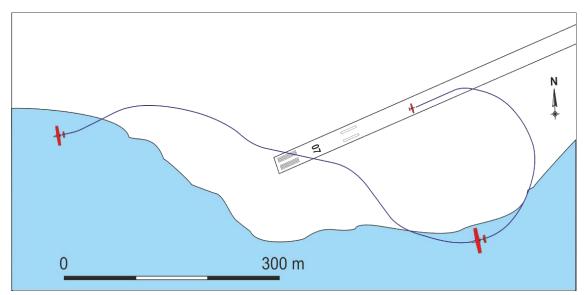


Figure 1. Aircraft's flight path.

Due to the low altitude of the aircraft and the problems controlling it, the pilot decided to land in the sea near a beach in the vicinity of the runway 07 threshold. At the time, the sea was calm and the beach empty. He configured the aircraft to make an emergency landing, stopping the engine, disconnecting the battery and setting flaps one, and he reported his situation to the aerodrome.

At approximately 10:50 UTC, the aircraft landed in the sea some 25 meters away from the coastline. The two occupants sustained minor injuries and exited the aircraft under their own means. The aircraft was seriously damaged.

## 1.2. Injuries to persons

Injuries	Crew	Passengers	Total in the aircraft	Other
Fatal				
Serious				
Minor	1	1	2	N/A
None				N/A
TOTAL	1	1	2	

## 1.3. Damage to aircraft

The aircraft sustained serious damage as a result of the accident.

## 1.4. Other damage

None.

#### 1.5. Personnel information

The pilot, a 39-year-old Spanish national, had an ultralight pilot license (TULM) issued by Spain's National Aviation Safety Agency (AESA) on 22 June 2010, and a multi-axis, fixed-wing (MAF) rating that was valid until 30 June 2018.

He also had a class-2 medical certificate that was issued on 6 August 2014 and valid until 30 July 2019.

According to the information provided by the pilot, he had a total of 48:04 flight hours, of which 11:15 had been on the type.

#### 1.6. Aircraft information

The QUICKSILVER GT-500 ultralight is a tandem, two-seat, high-wing, strut-braced airplane with an aluminum tubular structure and cloth surfaces. It has a landing gear with a nose wheel. It is equipped with a two-cylinder, two-stroke, manual pull-start engine that can provide a maximum power of 65 HP at 6500 RPM, and a fixed-pitch, two-blade pusher propeller made of wood. The accident aircraft was outfitted with dual controls.

It has a wingspan of 9.14 meters and is 6.21 meters long and 1.98 meters tall.

It was developed by QUICKSILVER ENTERPRISES Inc. in the United States, and manufactured in Spain by AZA AIRCRAFT S.A. (QUICKSILVER FLY S.L. after 13 August 1999). It has a type certificate of airworthiness, No. 86-I, issued initially by Spain's Civil Aviation General Directorate (DGAC) on 22 September 1992, and revised (Rev. 1) on 13

October 1999, and No. TA1CH, issued initially by the Federal Aviation Administration (FAA) of the United States on 26 July 1994 and revised (Rev. 2) on 9 June 2014.

#### 1.6.1. Airframe

Manufacturer: AZA AIRCRAFT S.A.

Model: QUICKSILVER GT-500

Serial number: 0305
Year of manufacture: 1995
Registration: EC- CJ7
Operator: Private

#### 1.6.2. Certificate of airworthiness

Class: Special Restricted

Category: Private
Technical performance: Normal

Aircraft suitable for visual flight only

Issue date: 11 October 1996

Validity: Valid as long as the specifications contained in Type

Airworthiness Certificate No. 86-I of Spain's DGAC are

preserved.

#### 1.6.3. Maintenance record

Total flight hours: 538:06

Last overhaul: 6 May 2017

Hours at last overhaul: 505:18

Last 25-hour check: 11 December 2017

Hours at last 25-hour check: 530:24

#### 1.6.4. Engine

Manufacturer: ROTAX
Model: R-582
Serial number: 4341037

Same flight hours and maintenance tasks as the airframe.

## 1.6.5. Weight and balance

Maximum takeoff weight: 385 kg

Basic empty weight: 190 kg

Estimated takeoff weight on accident flight: 353 kg

Center of gravity (c.g.)<sup>3</sup> limits:

Front: 173 cmAft: 189 cm

Estimated position of c.g. on accident flight: 180 cm

## 1.7. Meteorological information

The weather conditions were not limiting for visual flight.

## 1.8. Aids to navigation

Not applicable in this case.

#### 1.9. Communications

The pilot was in radio contact with the approach frequency of the Gran Canaria control center (GCAPP/124.3 MHz). There were also telephone conversations between the control center and the operations office at the aerodrome of El Berriel.

After taking off at 09:53, the aircraft's pilot radioed the control center and reported he was doing touch-and-go landings at the aerodrome of El Berriel and that he would be in the area for 30 minutes. He was given instructions to call after the final landing and was assigned transponder code 7040. After 30 minutes, at 10:32, he was called on the radio several times but he did not answer. Since it was not possible to communicate with him on the radio, the supervisor was asked to call the El Berriel aerodrome to confirm he had landed safely.

The supervisor called the El Berriel aerodrome at 10:33, could not get through on the first try, and called again at 10:50. This time someone did pick up and confirmed that the traffic was on the ground, so he entered 10:51 for the safe landing time on the flight progress strip.

At 12:05, a call was received at the control center from the operations manager at El Berriel, who reported that the traffic was not safely on the ground, that it had had a

The position of the center of gravity is taken from the perpendicular plane of the airplane's longitudinal axis, which runs through the center of the nosewheel (datum) and is positive in the aft direction.

runway excursion and gone into the sea after landing, that its two occupants were well and that the airplane was inoperative. The supervisor reported this to the Control Room Supervisor.

Later, at 12:27, the Control Room Supervisor called the operations office at El Berriel to collect the information needed to give to search and rescue services and to report the event.

#### 1.10. Aerodrome information

El Berriel (GCLB) is a restricted aerodrome located 8 km southwest of the city of Maspalomas, on the island of Gran Canaria. Its reference point is at an elevation of 8m/25 ft and it has one asphalt runway in a 07/25 orientation that is 800 m long and 20 m wide.

The traffic pattern at the aerodrome is south of the airfield at an altitude of 500 ft, over the surface of the terrain or of the sea.

## 1.11. Flight recorders

The aircraft did not have flight recorders, nor were they required for the aircraft type.

## 1.12. Wreckage and impact information

After flying one circuit of the traffic pattern with a touch-and-go, during the initial climb phase the pilot noticed that the aircraft was yawing and rolling to the right. He tried to correct this with left pedal, but the aircraft did not respond.

He tried to return to the runway by turning right even more with the roll control, but he was unable to land on it due to the high speed, around 80 MPH (the aircraft flight manual provides the following approach speeds: 51 MPH without flaps and 46 MPH with flaps (30° downward deflection) under normal conditions). He increased the engine RPMs in an effort to gain some altitude, and the aircraft veered to the right, which he corrected with the roll control and by reducing the engine RPMs.

Due to the low altitude and to the problems controlling the aircraft, the pilot decided to land on the water near a beach that was close to the runway 07 threshold. The beach was empty at the time and the water was calm. He configured the aircraft for an emergency landing, stopped the engine, disconnected the battery and set the flaps to one. He also reported his situation to the aerodrome. The aircraft landed in the water, some 25 meters away from the coastline, and the two occupants exited the aircraft under their own power.

The aircraft was later taken out of the water, its wings were removed and it was taken to the El Berriel aerodrome, where steps were taken to preserve the airframe and engine.





Figure 2. Photographs of the aircraft, in the water and on the beach.

## 1.13. Medical and pathological information

The aircraft's two occupants sustained minor injuries.

After the accident, the pilot reported bruises and scrapes on his arms and forearms. He was taken to a medical center, diagnosed with neck pain and sent home.

The passenger reported an injury to the inside of his right ankle, scrapes on his arms and a contusion on his forehead. He too was taken to a medical center, diagnosed with neck pain and sent home.

#### 1.14. Fire

None.

## 1.15. Survival aspects

The harnesses installed on both aircraft seats worked correctly and as designed, making it possible for the two occupants to exit the aircraft under their own means and reach the shore without any problems.

Shortly after the water landing, Red Cross personnel who were stationed on an adjacent beach reached the crash site by sea on an inflatable boat. A patrol from the local police of San Bartolomé de Tirajana and two basic life support ambulances also arrived at the scene via land.

The aircraft's two occupants were treated at the site and then taken to a medical center, from which they were released a few hours later.

#### 1.16. Tests and research

#### 1.16.1. Statement from the aircraft's occupants

#### 1.16.1.1. Statement from the Pilot

He was preparing to go on a local flight consisting of flying circuits of the aerodrome traffic pattern at the El Berriel aerodrome, and filed a flight plan to this end, which was authorized.

He did the pre-flight check of the airplane, gave instructions to the passenger and once the latter was seated with the seatbelt fastened, he taxied from the apron to the holding point for runway 07, which was the runway in use. The wind speed was 9 knots.

Once the engine reached the proper operating temperature, he entered the runway, took off and flew an initial lap of the aerodrome traffic circuit, during which he radioed Gran Canaria approach control to report his intentions and request a transponder code. He was assigned 7040.

After flying the circuit and doing a touch-and-go, during the initial climb phase he noticed that the aircraft was rolling and yawing to the right. He tried to correct it with left pedal, but the aircraft did not respond.

He tried to return to the runway by turning right even more with the roll control, but he was unable to land on it due to the excessive speed, around 80 MPH. He increased the engine RPMs in an effort to gain some altitude, and the aircraft veered to the right, which he corrected with the roll control and by reducing the engine RPMs.

Due to the low altitude and to the problems controlling the aircraft, he decided to land on the water near a beach that was close to the runway 07 threshold. The beach was empty at the time and the water was calm. He configured the aircraft for an emergency landing, stopped the engine, disconnected the battery and set the flaps to one. He also reported his situation to the aerodrome. The aircraft landed in the water, some 25 meters away from the coastline, and the two occupants exited the aircraft under their own power.

## 1.16.1.2. Statement from the Passenger

He was flying with the pilot in the aircraft that he owned.

The pilot gave him instructions in terms of the procedure in the event of an accident and aspects to keep in mind on board the airplane, including resting his feet on the pedals, keeping his hands and feet inside the airplane, fastening his seatbelt, not inflating the life jacket while inside the airplane, not removing his helmet and keeping

the shield down, not unfastening his seatbelt until the airplane came to a stop or, in the event of an accident, after the impact.

Once in the rear seat with the seat belt fastened, on his own initiative and as he had done on previous flights, he lowered his feet and rested them on the two bars on either side of the control shaft, located on the floor of the fuselage. And to be in a more comfortable seating position, he placed his knees outward. (See 1.18.1 – Aircraft's yaw control system.)

As on previous occasions, the flight was proceeding normally. During a touch-and-go in preparation to fly another circuit, the airplane started veering right, then the pilot made a sharp turn to the right before turning around to land in the opposite direction.

The pilot was unable to land and the pilot reported during the climb that he could not control it, that it was veering to the right.

The pilot looked back two times and then said they were going into the water. Once in the ocean, the passenger exited the airplane under his own means, and it sank down to the wings.

## 1.16.2. Inspection of the aircraft wreckage

After the aircraft was taken out of the water, and before its wings were removed for transport, it was noted that the oil and gasoline valves were open and the two magneto levers and the battery switch were in the off position. The aircraft's flight controls also worked correctly, with no interference of any kind.

As for the potential damage sustained by the aircraft, the following was observed in the airframe:

- There was no damage to the fuselage structure, the engine mount or landing gear.
- There was damage to the leading edge and outer edge of the right wing. It looked bent, but the cloth covering the surface was not pierced.
- The left wing and the struts on both wings were undamaged.
- The actuating rods for the elevator controls were bent (right side) and broken (left side).
- The metal bulkhead located underneath the rear seat was bent and some rivets were missing. Another bulkhead located behind the rear seat was also bent.
- The main fairing, made of fiberglass, was completely broken. The points where it attached to the rest of the aircraft were in their proper positions.

The fuel tank was more than half full and the line from the tank to the engine was in good condition.

The propeller had no marks or damage of any type.

As for the engine, the magnetic plug had no particles in it, the spark plugs were in good condition and the float chambers in the carburetors were full of gasoline.

## 1.17. Organizational and management information

Not applicable.

#### 1.18. Additional information

# 1.18.1. Aircraft's yaw control system

The yaw control system in the aircraft consists of two pairs of pedals and two bellcrank that are attached to each other and to the rudder using cables. The pedals at each seat are joined to the respective bellcrank via rods such that the entire assembly moves as one (see diagram in Figure 3).

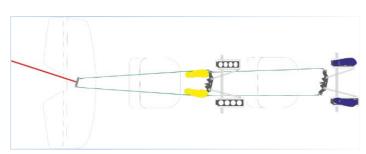


Figure 3. Schematic of the aircraft yaw control system.

In addition, the forward bellcrank is attached to the landing gear fork to provide steering control when taxiing on the ground.

The two bellcrank are located at the bottom of the fuselage, between the pedals and seats, behind the respective stick to control pitch and roll.

At each position, the bottom of the pedals rotates about a horizontal bar that is attached to the aircraft structure and perpendicular to the plane of symmetry of the aircraft, such that yaw control is achieved by using the top of the foot to push the top of the pedal on the side to which the aircraft is to be turned.

#### 1.18.2. Structural and control components in the rear seat

The photograph in Figure 4, taken during the overhaul of the aircraft, shows the floor of the rear compartment, between the two seats, and the corresponding structural and control components.

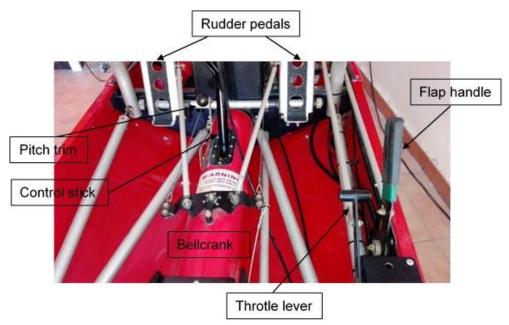


Figure 4 Floor of the rear compartment, between the two seats of the aircraft.

The sequence of photographs in Figure 5 shows a person seated in the rear seat of the aircraft. In the left image, the feet are resting on the pedals. In the central image, they are resting on the structural bars located directly in front of the seat. To avoid interfering with the bellcrank of the yaw control, the knees have to be kept apart and the feet pressed down on the bars. In the right image, the heels are next to the central tube of the fuselage structure and are interfering with the bellcrank, potentially impeding its motion.



Figure 5. Possible foot positions in the rear compartment

## 1.18.3. Pilot Operating Handbook.

In his statement (section 1.16.1.2), the passenger indicated that, before starting the flight, the pilot gave him instructions regarding the actions in case of an accident and the aspects to take into account on board the plane, including resting his feet on the pedals.

It should be noted that in the Pilot Operating Handbook (GT-500 Owner Manual Doc. 907-01), no reference has been found to possible instructions to be given to the occupants of the rear seat of the aircraft, in general, or about the possibility of interference of the passenger's feet with the yaw control in the event that they are not kept on the pedals during flight, in particular. Nor has been found any reference to these aspects in other documents of the organization responsible for the design of the aircraft.

## 1.19. Useful or effective investigation techniques

Not used.

#### 2. ANALYSIS

The pilot of the aircraft was preparing to go on a local flight lasting 30 minutes, accompanied by a passenger, and planned to fly around the traffic pattern of the aerodrome. To this end, he filed a flight plan, which was approved, completed the preflight and before-takeoff procedures and, once in the air, radioed the Gran Canaria control center.

As part of the flight preparations, he gave instructions to the passenger involving the actions to take in the event of an accident and aspects to keep in mind while on the airplane, including the instruction to keep his feet on the pedals.

At this point, it should be noted that no reference has been found to possible instructions to be given to the occupants of the rear seat of the aircraft, in the Pilot Operating Handbook or in other documents of the organization responsible for the design of the aircraft, therefore, it is considered that the initiative to give these specific instructions to the passenger came from the pilot himself.

After flying around the aerodrome traffic pattern once and doing a touch-and-go, during the initial climb phase the pilot noticed that the aircraft was yawing and rolling right. He tried to correct it by applying left pedal, but the aircraft did not respond. He tried to return to the runway by turning the roll control even more to the right, but he was unable to land on it.

Since he was unable to control the aircraft, the pilot decided to do a water landing at a beach near the runway 07 threshold. The beach was empty at the time and the water was calm. He configured the aircraft for the water landing and touched down on the water some 25 meters away from the shore. Although the aircraft sustained significant damage, the two occupants only received minor injuries and exited the aircraft under their own means. Given the circumstances, the pilot made the right decision, executed the emergency maneuver correctly and obtained a reasonable outcome.

After the accident, once the aircraft was out of the water, no signs of pre-existing faults or problems were found with either the airframe or the engine. The flight controls on the aircraft were also verified to work correctly, with no interference of any kind.

Having ruled out a potential mechanical problem with the aircraft, the only possibility is that the accident was caused by the action of one of its occupants. The pilot encountered an aircraft that was behaving abnormally and that he could not correct, so it is appropriate to consider a possible action by the passenger.

On the one hand, as described in 1.18.2, the layout of the system used to control the yaw of the aircraft and the location of its components, with a bellcrank situated on the floor of the fuselage, between the pedals and the seat, mean that if the passenger's

feet are improperly positioned, they could interfere with the bellcrank, preventing it, and therefore the yaw control, from moving.

On the other, the passenger stated that on his own initiative, and probably without being aware of the potential consequences of his action, lowered his feet and rested them on the two bars located on either side of the control shaft, on the floor of the fuselage, and to be more comfortable in his seat, he rotated his knees outward, as he had done on previous flights.

The passenger also sustained an injury to the inside of his right ankle, which is consistent with this ankle interfering with the bellcrank and the yaw control cables on that side.

This indicates that the most probable scenario is that the passenger's feet inadvertently interfered with the yaw control, resulting in an abnormal flight attitude. The passenger focused on the control problem, not thinking of the possible cause and unaware that he was the source of the problem, and kept the control blocked until the aircraft landed on the water.

Finally, the fact that the layout of the yaw control system on the aircraft and the location of its components make it possible for the passenger's feet to interfere with some of its components and potentially block their movement make it necessary to issue three safety recommendations, one to the owner of the aircraft type certificate, other to the authority responsible for the oversight of the owner of the aircraft type certificate and another to the authority responsible for issuing the certificate of airworthiness for this aircraft type in Spain, in an effort to avoid a repeat of the situations like the one described in this report.

#### 3. CONCLUSIONS

## 3.1. Findings

- a) The pilot of the aircraft was properly qualified, experienced and physically fit, and he had a valid license and medical certificate.
- b) The aircraft had been maintained according to the maintenance program approved by its manufacturer, and it had valid certificates of airworthiness and registration.
- c) The aircraft's weight and balance were within the allowed limits.
- d) The occupants, the pilot and a passenger, were on a local flight planned to last 30 minutes, doing laps of the aerodrome traffic circuit.
- e) After doing one circuit of the aerodrome traffic pattern and a touch-and-go, during the initial climb phase, the pilot felt the aircraft roll and yaw to the right, which he was unable to correct.
- f) Given the impossibility of controlling the aircraft, the pilot decided to land on the water near a beach and touched down some 25 meters away from the shore.
- g) After the accident, no signs of any pre-existing failures or problems were found with the airframe or engine. The aircraft's controls worked properly, with no interference of any kind.
- h) The layout of the yaw control system on the aircraft and the location of its components make it possible for the passenger's feet to interfere with some of its components and potentially block their movement.
- i) The pilot instructed the passenger to keep his feet on the pedals, which the passenger, of his own accord, did not do.
- j) The passenger sustained an injury to the inside of his right ankle, which is consistent with this ankle interfering with the components of the system used to control the aircraft's yaw.

#### 3.2. Causes

The probable cause of the accident was the inadvertent blockage of the aircraft's yaw control system by the passenger.

In addition, the location of the aircraft's yaw control system components in the rear compartment are thought to have contributed to the accident.

#### 4. SAFETY RECOMMENDATIONS.

The investigation into the accident of a QUICKSILVER GT-500 ultralight aircraft, registration EC-CJ7, at the aerodrome of El Berriel in San Bartolomé de Tirajana (Las Palmas – Canary Islands – Spain) on 12 January 2018, reference ULM A-001/2018, has underscored how on QUICKSILVER GT-500 aircraft, the layout of the yaw control system and the location of its components make it possible for the passenger's feet to interfere with some of its components and potentially block their movement.

In an effort to avoid a repeat of the situation like the one described in this report, the following Safety Recommendations are issued:

#### **REC 23/20**

It is recommended that **Quicksilver Enterprises Inc.**, as the owner of Type Certificate of Airworthiness No. 86-I, issued by Spain's Civil Aviation General Directorate, and No. TA1CH, issued by the Federal Aviation Administration (FAA) of the United States, take the appropriate measures, from the point of view of the aircraft's design, to avoid the possibility of having the yaw control system blocked due to the passenger's feet interfering with some of its components in aircraft of this type.

#### **REC 24/20**

It is recommended that the Federal Aviation Administration (FAA) of the United States, as the authority responsible for the oversight of Quicksilver Enterprises Inc., take the necessary actions to ensure that Quicksilver Enterprises Inc. take the appropriate measures, from the point of view of the aircraft's design, to avoid the possibility of having the yaw control system blocked due to the passenger's feet interfering with some of its components in aircraft of this type.

## REC 25/20

It is recommended that the National Aviation Safety Agency (AESA), as the authority responsible for issuing the Certificate of Airworthiness for the QUICKSILVER GT-500 aircraft registered in Spain, review the process for issuing certificates of airworthiness for this type of aircraft in order to avoid the possibility of having the yaw control system blocked due to the passenger's feet interfering with some of its components in aircraft of this type.