



THE REPUBLIC OF CROATIA

**Air, Maritime and Railway Traffic Accident Investigation Agency**

**Air Traffic Accident Investigation Department**

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# **FINAL REPORT**

**ON ACCIDENT OF THE AIRCRAFT PIPER PA-28,  
REGISTRATION D-EERD**

**16 JUNE 2017,  
NEAR MALI LOŠINJ AIRPORT**



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## OCCURRENCE INFORMATION

Type of the occurrence:	Accident
Date:	16 June 2017
Local time:	12:30
Place:	Mali Lošinj Airport/Ćunski-Kandija
Type of the aircraft:	Aeroplane
Manufacturer / model:	Piper Aircraft/PA-28-181
Registration:	D-EERD
Owner:	Flugunion Seitenstetten-Biberbach
Operator:	Flugunion Seitenstetten-Biberbach
Number of persons aboard:	Three
Injuries:	Three severely injured persons
Damage to the aircraft:	Completely destroyed

## INVESTIGATION

The Air, Maritime and Railway Traffic Accident Investigation Agency (AIA) received information on the accident the same day from Croatia Control and Ministry of the Interior.

## SUMMARY

On 16 June 2017 around 12:30 pm, the Piper PA-28 aircraft crashed after an unsuccessful approach to Mali Lošinj Airport. There were three persons on the aircraft, a pilot and two passengers.

In this accident, three people suffered severe injuries. The aircraft was completely destroyed.

The direct cause of this accident was the aircraft stall, after a missed approach of the aircraft. It was established in the investigation that the accident occurred due to improper maintaining of the aircraft's speed and position after a missed approach and commencement of the go-around procedure.

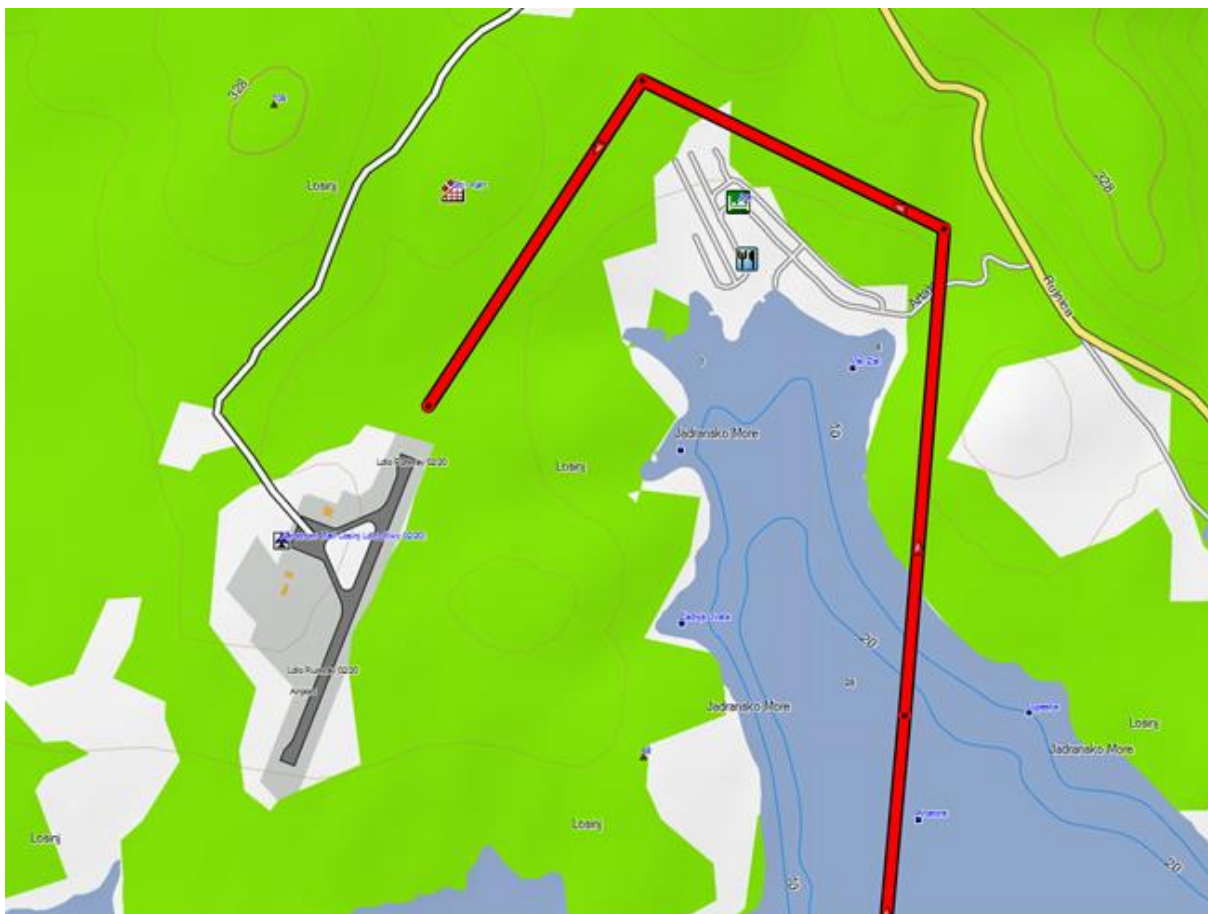
AIA issued no safety recommendation.

## 1. FACTS AND INFORMATION

### 1.1. FLIGHT INFORMATION

#### Flight

On the day of the accident, the pilot and two passengers took off from Tivat Airport, Montenegro, towards Mali Lošinj Airport. The flight was reported under VFR conditions. The flight proceeded according to the plan along the Dalmatian coast without difficulty. Upon arrival at Mali Lošinj Airport pattern from south direction and upon contacting the airport tower control, the aircraft began approach to the runway direction 20. The aircraft entered downwind leg, then the cross wind leg and the base leg to the runway, direction 20 (Picture 1).



**Picture 1** The approach path of the aircraft towards Mali Lošinj Airport (GPS device)

During the landing, just before the wheel touched the runway, the aircraft was shifted to the left, after which the pilot starts with a go around procedure.

The pilot added full power to the engine and immediately turned left. The aircraft began climbing in a straight flight line at a small climbing angle, after which it started the second left turn and then fell to the left tailspin. At that time, the aircraft did not have enough altitude to pull out from the tailspin and crashed in a hilly terrain covered with forest and low vegetation.

Based on an eyewitness statement, also a pilot with a valid pilot license, who observed the accident from the airport, a reconstruction of the aircraft flight path after the pilot's decision to go around was made (Picture 2).



Picture 2 Reconstructed path of the aircraft marked in red, as it's described by the eyewitness

## 1.2. INJURIES

Injuries	Crew	Passengers	Others
fatal	0	0	0
serious	1	2	0
minor/none	0	0	0

## 1.3. DAMAGE TO THE AIRCRAFT

The aircraft suffered significant structural damage (Picture 3), listed below:

- the aircraft fuselage was deformed throughout its length,
- the engine mount broke in several joints,
- both propeller blades were bent,
- the instrument panel was deformed in several places.

There were several structural damages on the right wing:

- detaching of skin from the wing ribs at the very top of the wing,
- separating of the right aileron from the wing,
- bent wing spar,
- breakage of the skin at several places along the entire length of the wing.

There were several structural damages on the left wing:

- skin was bent in several places along the entire length of the wing,
- skin was detached from the wing ribs in several places.

After the crash of the aircraft there was no fire.



**Picture 3** Aircraft D-EERD at the crash site

#### **1.4. OTHER DAMAGE**

Due to the crash, several surrounding trees have been damaged. Due to the braking of the skin and the detaching of the fuel pipes, an unknown quantity of fuel has leaked into the ground.

#### **1.5. PERSONAL INFORMATION**

##### **1.5.1. Pilot**

Male person, an Austrian citizen born in 1959. In the subject accident, the pilot controlled the aircraft from the front left seat and suffered severe bodily injuries. He holds a pilot license issued by "Austro Control" with the following authorisations: MEP, SEP, TMG, Night. He has a long experience in flying aircraft of 37 years. He has 2557 flight hours recorded in the Flight log. He also possesses authorisation to fly as instructor and pilot examiner. It can be concluded from the said that the pilot is experienced in flying the aircraft.



### **1.5.2. Passenger 1**

Male person, an Austrian citizen born in 1973. The person was sitting in the front right seat and suffered severe bodily injuries.

### **1.5.3. Passenger 2**

Male person, an Austrian citizen born in 1973. The person was sitting in the back left seat and suffered severe bodily injuries.

## **1.6. AIRCRAFT INFORMATION**

### **Piper PA 28-181 / Piper Aircraft, general**

Type of the aircraft:     Aeroplane  
Manufacturer / model:   Piper Aircraft/PA28-181, Archer II  
MTOW:                     1156 kg

Piper PA-28 aircraft is a low-wing single engine aircraft of metal construction. The fuselage of the aircraft is not pressurized. The landing gear is non-retractable, type tricycle. The aircraft fuselage has one door on the right for entry of the crew and passengers on the aircraft. This model of the aircraft has four seats. The purpose of this aircraft is multiple. Therefore, this aircraft can be used by private users to transport passengers and luggage, then by school pilot training centres as well as for other sports purposes.

### **Piper PA 28-181 / Piper Aircraft, registration D-EERD**

Registration:             D-EERD  
Aircraft serial number:  28-7790240  
Engine serial number:   L-22543-36A  
Owner:                    Flugunion Seitenstetten-Biberach  
Operator:                Flugunion Seitenstetten-Biberach  
Year of manufacture:    1976

The aircraft is registered in the German Civil Aviation Register in 1977. The total aircraft flight hours entered in the Aircraft logbook until the accident was 2850.34 hours, while the total number of cycles was 2934.

The power plant consists of one engine Lycoming O-360-A4M with 180 hp (134 kW) with a built-in constant speed propeller with two blades.

## **1.7. METEOROLOGICAL INFORMATION**

At the time of the accident on 16 June 2017 at 12:37 LT, the meteorological information measured at Mali Lošinj Airport indicated a stable weather with no precipitation, with good visibility and poor northwest wind.





Meteorological conditions were favourable for flying the subject aircraft and were not a direct cause of this accident. At the time of landing the wind was blowing from direction 270, at a speed of 5-7 knots.

#### 1.8. COMMUNICATION

The pilot communicated with the air traffic control at Mali Lošinj Airport via radio communication.

#### 1.9. AIRPORT INFORMATION

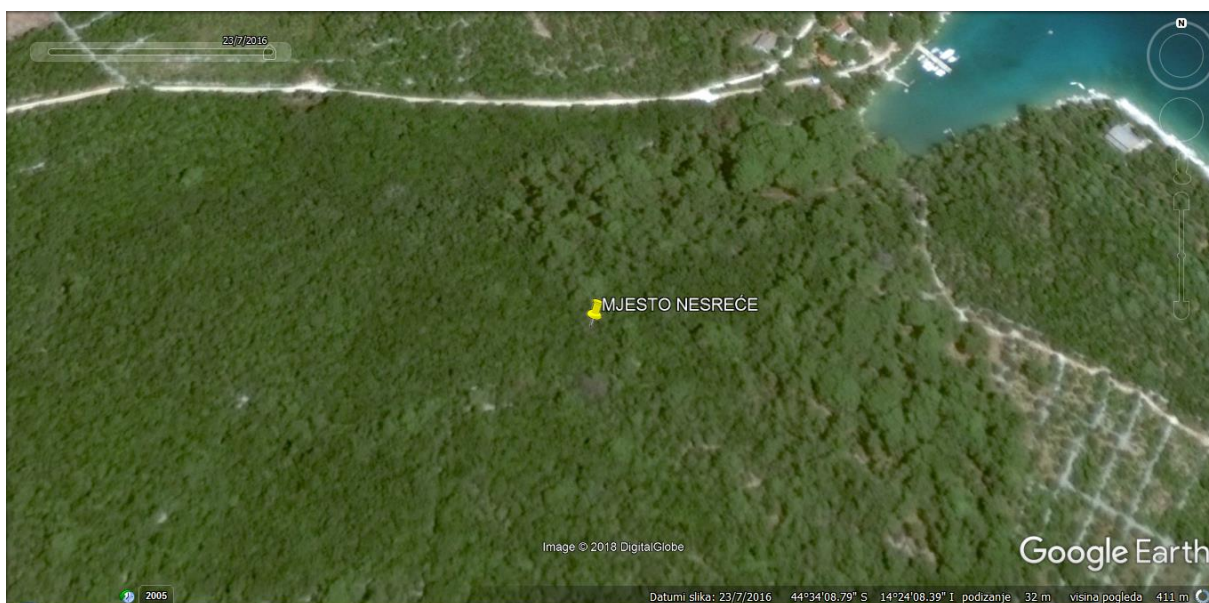
Mali Lošinj Airport is registered for public domestic and international traffic. It is located on the Island of Lošinj. It has a runway of 900 m in length, 30 m of width, direction 20-02. It is equipped with a navigation device for non-precision instrumental approach of aircraft. The airport has only one runway, two taxiways and apron for parking of the aircraft. There are also two hangars for parking and maintenance of aircraft.

The airport operator is the company AIRPORT MALI LOŠINJ Ltd., which also carries out the commercial transport of passengers with their three aircraft. During the summer tourist season, a large number of small aircraft operations for private and commercial purposes are conducted at the airport.

Considering the runway orientation, during the summer season when mistrals appears, mostly the side wind is blowing on runway.

#### 1.10. INFORMATION ON IMPACT AND AIRCRAFT REMAINS

Due to the insufficient altitude for pulling the aircraft from the tailspin, the aircraft crashed on a steep, woody, low vegetation terrain (Picture 4). The distance of the aircraft crash site to the runway 20 threshold is approximately 500 meters.



Picture 4 Aircraft D-EERD crash site



Damage to the aircraft and the surrounding trees indicate that the aircraft passed through the tree tops and eventually crashed to the ground (Picture 5).



**Picture 5** Overview of broken branches and parts of aircraft on the top of surrounding trees (marked with a red circle in the picture)

After the site inspection, the owner of the aircraft organized the removal of the aircraft from the accident site. Due to the inaccessibility of the terrain, the removal of the remains of the aircraft was carried out by a private air cargo helicopter company. The remains of the aircraft have been moved to Mali Lošinj Airport and were taken over by the owner.

#### **1.11. MEDICAL INFORMATION**

In the subject accident, the pilot who was in the front left seat suffered multiple severe bodily injuries. The passenger who was in the front right seat suffered severe bodily injuries. The passenger who was in the back left seat suffered severe bodily injuries.

All aircraft seats are equipped with lap seat belts. Pilot and passengers were using fastened seat belts during the flight and the accident.



### **Person in the front left seat - pilot**

After the accident, the pilot was hospitalized in Clinical Hospital Center Rijeka in critical condition. He was put in an induced coma as he suffered severe bodily injuries, that is, he had poly trauma of multiple internal organs.

### **Person in the front right seat – passenger 1**

The passenger who was in the front right seat suffered severe bodily injuries in the form of fractures of the left humerus and the fracture of the C6 cervical vertebrae. He was admitted to a hospital out of danger.

### **Person in the back left seat – passenger 2**

The passenger who was in the back left seat suffered severe bodily injuries in the form of a fracture of the left arm, a broken left hand forefinger, and a cuts over the left eye.

## **1.12. RESCUE AND SURVIVAL ASPECTS**

After the aircraft crashed at 10:37 UTC, the air traffic controller informed the fire department and the police and provided them with accurate information on the location of the crash. After 20 minutes of unsuccessful search due to inaccessibility of the terrain, Cessna 172 aircraft owned by Mali Lošinj Airport took off in order to locate the aircraft as precisely as possible. At 11:06 UTC, the aircraft was located and the fire and police departments were sent to the exact location of the accident. The pilot and the passengers were transferred by helicopter to Clinical Hospital Center Rijeka.

## **1.13. TESTING AND INVESTIGATION**

Although the information received during the inspection did not indicate a technical problem with the aircraft, an aircraft inspection was carried out at the accident site.

### **Analysis of the technical condition of the aircraft**

Upon the impact of the aircraft to the ground the aircraft was significantly damaged, and it was impossible to determine the airworthiness of the aircraft with the full certainty. However, during the technical inspection of the aircraft, to the extent possible due to the damages, no apparent mechanical failure that would potentially disable the operation of one of the aircraft systems could be found. All found damages with their characteristics indicate that they were caused by impact to the ground or some obstacle, such as surrounding trees.

### **Technical documentation**

By examination of the technical documentation it was established that at the time of the accident the aircraft had a valid airworthiness certificate and other compulsory documents (aircraft noise certificate, radio license, aircraft registration certificate, insurance policy) at the time of the accident. Furthermore, a certificate of release of a 50-hour aircraft inspection, dated 23 May 2017 on the total of 2824.56 hours and 2825 landings was found.



#### 1.14. ADDITIONAL INFORMATION

##### **Aircraft logbook**

No significant errors were found in the aircraft logbook save for the fact that in the D-EERD aircraft logbook the duration of the flights made on 14 June 2017 was not recorded.

##### **Statements of eyewitnesses and accident participants**

###### **Statement of eyewitness 1 (air traffic controller) – who was located at the Mali Lošinj Airport control tower, via “Aviation Safety Report”**

The eyewitness stated that after the instruction to land on runway 20, at wind direction 270 and wind speeds of 05-07 knots, the D-EERD aircraft was given landing clearance. After an unsuccessful landing without touchdown, the aircraft requested go-around. After the controller approved the go-around, the aircraft turned to the left and achieved speed, however suddenly the aircraft rotated around the horizontal axis and crashed. After the crash, the controller notified the fire and police unit and coordinated the search for the aircraft.

###### **Statement of eyewitness 2 (pilot) – who was located at the Mali Lošinj Airport and watched the subject aircraft**

The eyewitness stated that the aircraft was in the final approach to the runway 20. After the unsuccessful approach, instead of climbing in the direction of the runway, the aircraft immediately made the left turn in cross wind. The flight angle of the aircraft was small and the speed of the aircraft seemed small. After some time, the aircraft started to make the left turn in downwind and dropped into the tailspin after 40-50 degrees of rotation. The eyewitness stated that at that time the aircraft altitude was not more than 100 meters from the ground. The eyewitness is a pilot at the company AIRPORT MALI LOŠINJ Ltd. which is the operator of the airport and operator of the aircraft for the passenger transportation.

###### **Statement of eyewitness 3 (pilot) – who was located at the family house in Kandija street, near accident site**

The eyewitness stated that through the window of the family house he suddenly saw the aircraft in an unusual position and heard a loud engine sound (engine running at high speed). Then the aircraft disappeared from his sight and he heard the sound of an aircraft crashing to the ground. The eyewitness has been flying commercial passenger aircraft for 27 years.

###### **Statement of the pilot who was located in the front left seat of the aircraft and operated the aircraft**

The pilot of the subject aircraft stated that he has no recollection of details of the flight.

###### **Statement of the passenger who was in the front right seat of the aircraft**

After clearance for landing on runway 20, just before touchdown on the runway, the aircraft moved to the left. The pilot made the decision to go around and to make a new approach. During climbing when the aircraft was above the trees, right wing fell down, possibly due to the gust of wind. After that, the aircraft's speed dropped significantly, and the aircraft stalled and crashed. The passenger has a PPL license from 2011 and has 112 flight hours.



### **Statement of the passenger who was in the back left seat of the aircraft**

Before the touchdown to the runway, the aircraft moved to the left. The pilot stated that he would go around and he made the left turn, started climbing, and added the full power to the engine. The aircraft began falling above the forest.

## **2. ANALYSIS**

Statements of passengers on the aircraft as well as accident eyewitnesses do not indicate a technical malfunction of the aircraft as a cause of the accident. Also, the inspection of the aircraft at the accident site does not indicate any technical malfunction that could lead to the accident. The technical documentation of the aircraft is in order.

After the unsuccessful approach, the pilot of the aircraft, after making a decision to repeat the approach procedure, immediately made the left turn in climbing. After the first left turn, the aircraft started climbing at a low angle. After a few seconds the aircraft started the second left turn, however, it did not have sufficient speed and aircraft stalled and crashed into the woods.

At the time of the accident, the meteorological situation in the area of Mali Lošinj Airport was favourable for flying. At the time of landing, a side wind was blowing from direction 270 at a speed of 05-07 knots, which is common for the aforementioned period of the year. There were no meteorological events that could endanger the flight.

## **3. CONCLUSION**

### **3.1. FINDINGS**

- At the time of the accident the meteorological conditions were satisfactory for flying the subject aircraft,
- The pilot duly communicated with the air traffic control at Mali Lošinj Airport,
- The engine performed smoothly throughout the flight, and at full power during the go around,
- The investigation did not find any technical malfunction on the aircraft,
- The technical documentation of the aircraft is in order,
- The pilot holds a valid pilot license,
- The aircraft met all legally prescribed conditions,
- The missed approach was not performed correctly,
- Incorrect assessment of the position and parameters of the aircraft in regard to the situation in which the aircraft was.



### **3.2. CAUSES**

#### **Direct cause**

The direct cause of this accident was aircraft stall after missed approach of the aircraft to the runway, direction 20. Stall occurred due to the insufficient aircraft speed.

### **4. SAFETY RECOMMENDATION**

In this case, AIA has no safety recommendation.

Investigator in charge  
Dejan Ćurik