



**Accident** to the SUPERGUÉPARD 912 UL  
identified **43YH**  
on 3 September 2022  
at Noron l'Abbaye (Calvados)

<b>Time</b>	Around 07:20 <sup>1</sup>
<b>Operator</b>	Private
<b>Type of flight</b>	Cross-country
<b>Persons on board</b>	Pilot and passenger
<b>Consequences and damage</b>	Persons on board fatally injured, microlight destroyed

This is a courtesy translation by the BEA of the Final Report on the Safety Investigation. As accurate as the translation may be, the original text in French is the work of reference.

**Flight in weather conditions incompatible with flight under VFR rules, collision with the ground**

**1 HISTORY OF THE FLIGHT**

*Note: the following information is principally based on statements, radio communication recordings, radar data, data from the SafeSky application (see para. 2.6) and observations at the accident site.*

The pilot, accompanied by a passenger who was also a pilot, took off at around 07:05 from Caen-Carpiquet airport (Calvados) bound for Blois-Le Breuil aerodrome (Loir-et-Cher) where the World Microlight Exhibition was taking place. He climbed towards an altitude of 1,500 ft and initially took a south-east route, then a south-south-west route. The microlight's altitude first decreased to approximately 1,100 ft at 07:18. The pilot turned to the right at around 07:18:20 and then initiated a U-turn to the left with a turning radius of between approximately 350 and 400 m, less than 3 km west of the town of Falaise<sup>2</sup> (Calvados). During this U-turn, the altitude decreased to approximately 950 ft before increasing to approximately 1,200 ft. At approximately 07:19, the left turn continued with a smaller turning radius of between approximately 200 and 250 m. The last recorded position (radar and SafeSky application) of the microlight was at an altitude of 1,200 ft and less than 200 m from the accident site. The microlight then made contact with trees in a wood at a steep angle and with a southerly heading.

<sup>1</sup> Except where otherwise indicated, the times in this report are in local time.

<sup>2</sup> Located 19 NM south-east of Caen-Carpiquet airport.

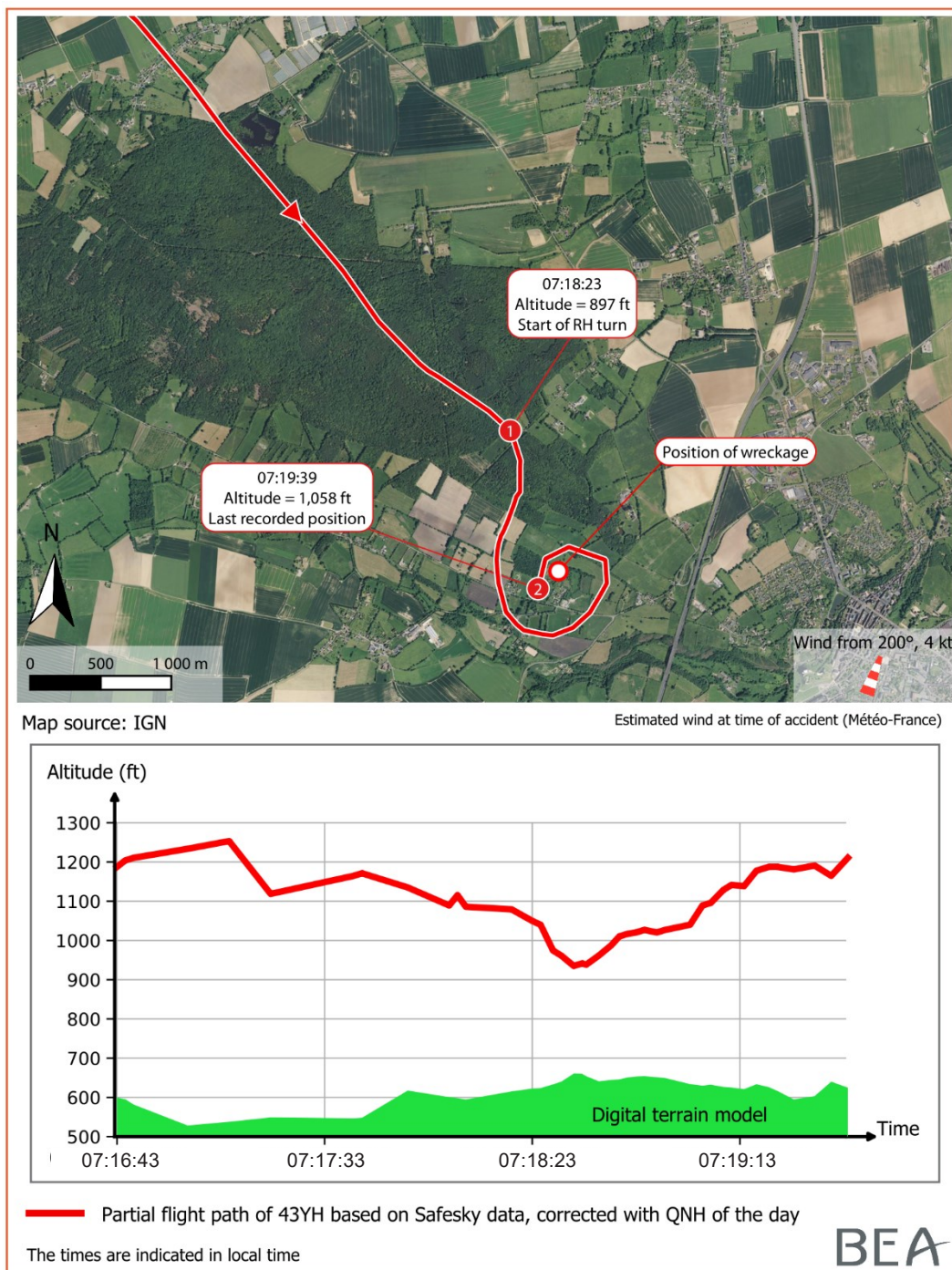


Figure 1: partial flight path of the microlight

## 2 ADDITIONAL INFORMATION

### 2.1 Pilot information

The 69-year-old pilot held a microlight pilot certificate issued in June 2017. According to his logbook in which the last date recorded was 09 October 2021, and a notebook in which the pilot recorded his flights, he had logged approximately 175 flight hours. Most of these flights were bound for Courseulles-sur-Mer microlight strip (Calvados), located 8 NM north of Caen-Carpiquet. Two weeks before the accident flight, a flight bound for Falaise-Monts-d’Eraines aerodrome (Calvados), located 19 NM south-east of Caen-Carpiquet airport and 3 NM north-east of the town of Falaise, was recorded in the notebook.

The pilot co-owned, with two other microlight owners, a hangar located at Caen-Carpiquet airport, in which he parked his microlight.

The results of the forensic examinations did not reveal any anomaly prior to the impact that could explain the accident.

## 2.2 Passenger information

The 65-year-old pilot held a microlight pilot certificate issued in August 2021.

## 2.3 Microlight information

The SuperGuépard 912 UL is a high-wing microlight equipped with an emergency parachute. The microlight has neither an artificial horizon nor an emergency locator transmitter.

According to the microlight's flight manual, the microlight's maximum weight is 525 kg. The microlight's identification sheet, issued in December 2016, indicated a first entry into service in October 2008 and a maximum weight of 472.5 kg.

*Note: the difference in maximum weight between the flight manual and the microlight's identification sheet can be explained by changes in the basic European Regulation (EU) No 2018/1139<sup>3</sup>, which made it possible to exempt certain aircraft not certified by the European Aviation Safety Agency (EASA) from European rules, beyond the limits of Annex I of this regulation, which identifies these categories of aircraft. Therefore, based on the [provisions established by the French civil aviation safety directorate \(DSAC\)](#), Aeroservices Guepard, having demonstrated the microlight's ability to fly at the increased weight and updated its technical file submitted to the DSAC, could benefit from the weight increase, which went from 472.5 to 525 kg for a SuperGuépard with parachute. On his part, the pilot of 43YH, who was also the owner, did not take the expected actions to update the microlight's identification sheet in order to benefit from the increased maximum weight.*

At the time of the accident, the microlight's weight was approximately 500 kg, taking into account the amount of fuel remaining, the weight of the two people on board and the luggage. Even if this weight is greater than that indicated on the microlight's identification sheet, it is still less than the new maximum weight of the microlight as demonstrated by the manufacturer and authorised by the DSAC.

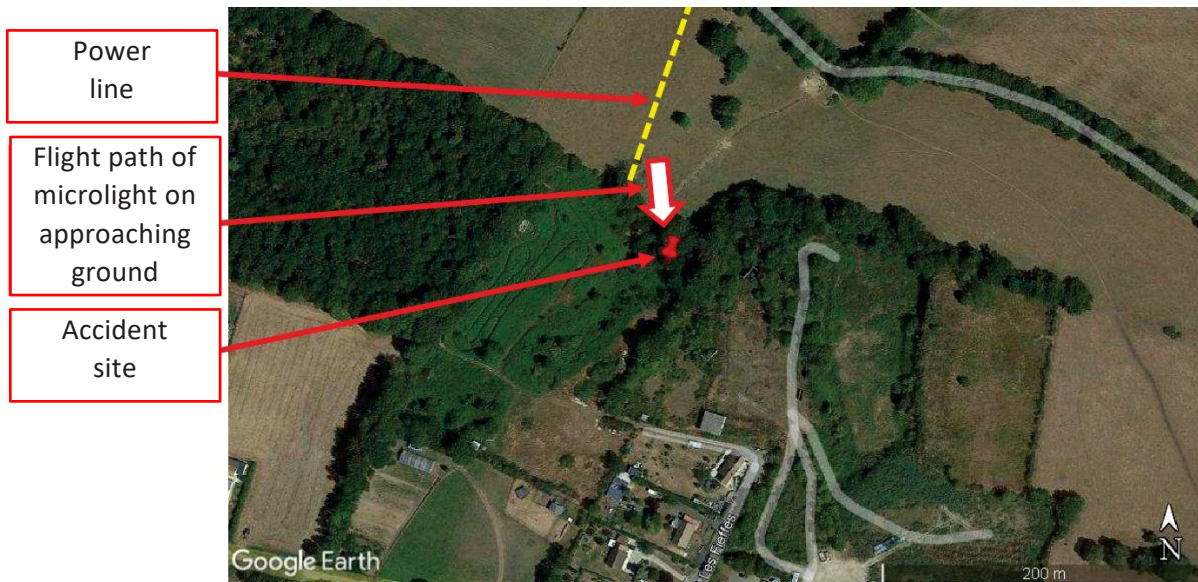
The stall speeds of the microlight at the maximum weight were as follows:

Microlight bank angle	0°	30°	60°
Flaps retracted	68 km/h	76 km/h	96 km/h
Flaps at take-off	60 km/h	65 km/h	85 km/h
Flaps at landing	48 km/h	52 km/h	68 km/h

<sup>3</sup> Regulation of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency ([version in force on the day of the accident](#)).

## 2.4 Examination of site and wreckage

The accident site was located at an altitude of approximately 190 m, around 35 km south of Caen-Carpiquet airport and less than 3 km from the town of Falaise. The wreckage was found in a wooded area surrounded by several fields clear of vegetation. A low-voltage power line located before the accident site (in relation to the aeroplane's final path) crossed one of the fields. It was not damaged by the microlight. The marks in the vegetation indicated a final path of the microlight oriented south before collision with the ground at a steep angle (see *Figure 2*).



*Figure 2: accident site*

The microlight's structure was destroyed, with the fuselage being strongly compressed in its centreline and the wing being torn off. Damage observed on the wing resulted from the accident. This damage and the marks in the vegetation indicated that the microlight generated a substantial amount of kinetic energy before it collided with the ground.

The wreckage was not dispersed. The flight control linkages were continuous prior to the collision with the ground. In the cabin, the position of the flap control lever corresponded to the landing position. The connecting rods attached to the flaps were distorted, which did not make it possible to determine the position of the flaps. It was not possible to determine the trim position at the time of impact.

Damage observed on the propeller hub showed that the engine was transmitting torque and was operating prior to the collision with the ground.

The emergency parachute was not activated.

## 2.5 Meteorological information

The meteorological conditions estimated by Météo-France at the accident site around 07:20 were as follows:

- light southerly to south-westerly wind;
- ground visibility of 3 to 5 km, or even less than 1 km in the hills;
- mist or fog;

- stratus clouds with a base at an altitude of between 600 and 750 ft in low-lying areas, probably hanging on the terrain, and with a top at approximately 1,500 ft;
- temperature +16 °C, dew point temperature +15 °C;
- QNH 1009.

The automatic METAR reports available at Caen-Carpiquet airport at the time of take-off were as follows:

- at 06:30: 22004KT 4300 BR BKN008 BKN042 BKN110 16/15 Q1009=
- at 07:00: 21004KT 5000 BR BKN008 OVC050 16/15 Q1009=

The (low altitude) SIGWX chart France issued on 3 September at 06:00, which was available before the flight, specifically forecast visibilities locally lower than 5 km and 1.5 km as well as mist and fog for 08:00 (see *Figure 3*).

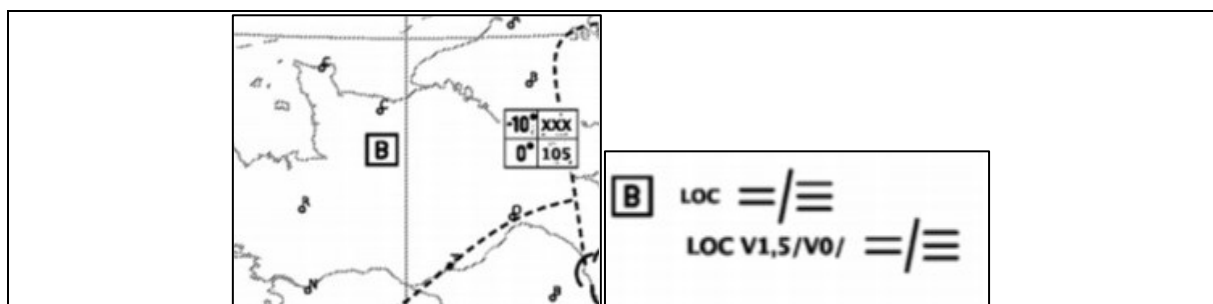


Figure 3: excerpt from the SIGWX chart France with the weather forecast for 3 September 2022 at 08:00

The satellite image (see *Figure 4*) showed low-level clouds, also confirmed by the METAR reports available. The brown colour indicated stratus clouds with a top at approximately 500 m. The orange colour indicated stratocumulus clouds with a top at approximately 2,000 m.

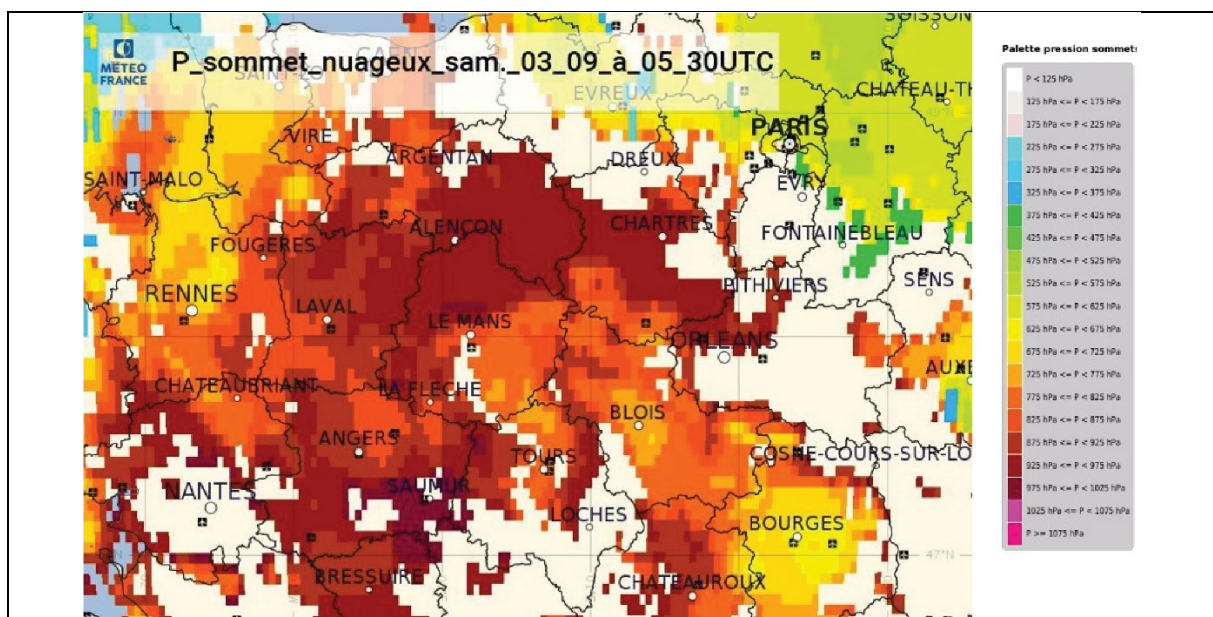
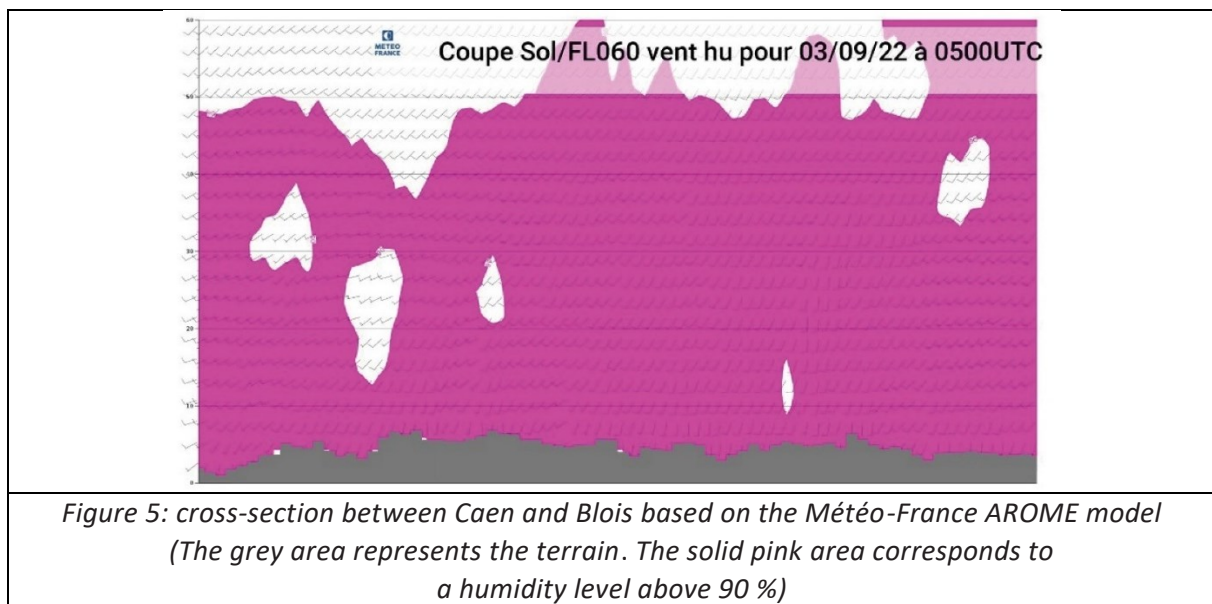


Figure 4: satellite image at 07:30

A cross-section, based on the Météo-France AROME model, extending from the ground to flight level 60 (FL060) between Caen and Blois at 07:00 on 3 September, showed stratiform clouds touching the terrain (see *Figure 5*).



## 2.6 Statements

### 2.6.1 Co-owner of the hangar housing 43YH<sup>4</sup>

One of the two co-owners of the hangar shared with the pilot of 43YH said that he took off about two minutes earlier with his Pioneer 300, also bound for Blois aerodrome. The two pilots planned to meet there to spend the day at the World Microlight Exhibition.

He indicated that he and the pilot of 43YH prepared the flights together in the days leading up to the flights. Preparation was principally based on the route to be taken and the arrival procedures at Blois aerodrome, defined to include the temporary restricted zone set up for the World Microlight Exhibition. The two pilots agreed to meet on Saturday at approximately 06:30 to take the two microlights out of the hangar. They planned to analyse the meteorological information separately before take-off.

He added that he noticed mist and fog with low visibilities on the SIGWX chart France at 08:00. He specified that he and the pilot of 43YH did not discuss this point. The only information they shared concerned the need to take off as quickly as possible to avoid a potential sea haze moving inland and then a possible reduction in visibility given the changing weather conditions in the morning.

He explained that the pilot of 43YH contacted him over the frequency agreed between them to ask about the weather conditions. He replied that he was flying at an altitude of 2,000 ft, above the stratus clouds, and that visibility was excellent. The pilot of 43YH replied that he was going to climb.

The co-owner of the hangar added that he could not land at the Falaise-Monts-d'Eraines aerodrome, where he was supposed to pick up a friend, because of the fog that covered approximately half the runway length. He landed at Blois at around 08:45 after flying at an altitude

<sup>4</sup> Retired airline transport pilot, flying club instructor.

of 4,000 ft. Shortly after, he started to worry about the pilot of 43YH and his passenger who were not there but who had been due to arrive almost at the same time as him. He then informed the World Microlight Exhibition flight director and search operations were initiated.

*Note: the Aeronautical Rescue Coordination Centre (ARCC Lyon) was informed at 10:16 and initiated the search operations which located the wreckage at 12:37.*

The co-owner explained that the pilot of 43YH had encountered sea haze moving inland during a previous flight. On that occasion, an instructor had helped him over the frequency. Since then, the pilot of 43YH was reluctant to fly above the cloud layer.

### 2.6.2 Other co-owner of the hangar

The third co-owner of the hangar said that he and the pilot of 43YH regularly flew together, each onboard their own microlight, and often towards the Courseulles-sur-Mer microlight strip (Calvados). He indicated that the pilot of 43YH did not like to fly when there were clouds and had little flying experience in adverse weather conditions.

## 2.7 Read-out of recorded information

SafeSky is an application installed on a mobile device (tablet, smartphone) that is designed to share traffic information with other users of the application. The device's position and GNSS altitude are transmitted to the SafeSky servers and then shared with other users. The confidentiality policy established by the company protects anonymity. Nevertheless, it includes clauses allowing the transfer of data under certain specific conditions, such as safety investigations or SAR operations.

As the position of the wreckage could not be determined with sufficient precision, SafeSky was contacted at around 12:15 to help locate the last position of the microlight.

## 3 CONCLUSIONS

*The conclusions are solely based on the information which came to the knowledge of the BEA during the investigation.*

### Scenario

A first microlight pilot took off two minutes before the pilot of 43YH, both bound for Blois aerodrome where they planned to spend the day at the World Microlight Exhibition. This first pilot flew above the low cloud layer and reached Blois. The pilot of 43YH flew at an altitude of approximately 1,500 ft and probably found himself in visibility conditions that were not compatible with flying under VFR rules. He told the first pilot over the frequency that he was going to climb. He then turned about 90° to the right before making a continuous turn to the left, at a height of between 350 and 600 ft. At the end of the first U-turn, the turning radius was reduced from 400 m to 250 m. These turns may suggest that the pilot wanted to abort the flight and carried out a reconnaissance overhead a field clear of local fog. The investigation was not able to determine what happened between the last recorded point on the path and the accident site, which was surrounded by several fields clear of vegetation.

## **Contributing factors**

The following factors may have contributed to the pilot of 43YH flying in weather conditions not compatible with flight under VFR rules and colliding with the ground:

- His limited navigation experience, which may have affected his ability to identify certain risks, such as a reduction in visibility, and to manage these risks during the flight preparation phase, or when the situation occurred during the flight.
- His decision to undertake the flight in order to spend the day at the World Microlight Exhibition, possibly reinforced by the fact that he and the pilot of another microlight, more experienced and qualified as an instructor, had prepared the flight together, and by the fact that this pilot took off a few minutes earlier.
- The stress generated by the reduced visibility conditions encountered.

***The BEA investigations are conducted with the sole objective of improving aviation safety and are not intended to apportion blame or liabilities.***