

Black box

**AIRCLAIMS FRANCE**  
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SUBJECT: *RWANDAN STATE – DISASTER OF 6 APRIL 1994*  
*FALCON 50 9XR-NN*

I am pleased to send you below the report of our investigations as drawn up today.

**I/ CONDITIONS OF INSURANCE**

<b>POLICY</b>	ORDINARY AIRCRAFT (no war risk cover)
<b>POLICYHOLDER</b>	GOVERNMENT OF RWANDA
<b>PERIOD OF COVER</b>	12 months from 22 May 1993
<b>TYPE OF AEROPLANE</b>	FALCON 50
<b>REGISTRATION</b>	9XR-NN
<b>AGREED VALUE</b>	USD 9,560,000
<b>EXCESS</b>	1% of the agreed value (with minimum of USD 50,000) except in the case of total loss

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**CONDITIONS OF USE:** Presidential use and/or as authorised by the reinsurers

**PILOTS** Jean-Pierre Martelli, Jacky Héraud, Jean-Pierre Mivabery  
and as approved by the policyholder, minimum flying hours  
5,000, including 50 on same type or simulator

### **2/ CIRCUMSTANCES OF THE DISASTER**

On 6 April 1994, the presidential Falcon 50 registration 9XR-NN crashed on its approach to Kigali.

The first information obtained immediately after the accident seem to suggest that the aeroplane was hit by rocket fire.

The President of Rwanda, Juvénal Habyarimana, and the President of Burundi, Cyprien Ntaryamira, were among the passengers on the flight.

### **3/ CONTACTS ESTABLISHED**

Considering the conflict triggered immediately after the incident, it was not possible to go to Rwanda to undertake our investigation.

We made contact with various organisations able to help us determine the causes of the accident:

- the Dassault flight security manager

The manufacturer Dassault had not received any information other than that disseminated by the press.

- French television.

This did not have photographs of the wreckage of the Falcon 50, but journalists contacted had the impression that it was an act of war, without having the means to prove it.

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- the French AIB

This was not involved in the investigation into this accident.

- the Flight Security Office of the French Air Force.

In the absence of the Major General of this Office, we met his deputy, who confirmed to us that the crashed aeroplane was the Falcon 50 9XR-NN, object of your policy; he also gave us the names of the crew:

Pilot-in-command:	Jacky Héraud
Co-pilot:	Jean-Pierre Mivabery
Ground engineer:	Jean-Michel Pervine

- The Ministry for Foreign Affairs

These latter two organisations were interested in this accident since the crew comprised former officers of the French Air Force.

- External contacts of the Air Force.

It was indicated to us that they had collected very little information and were incapable of telling us whether or not the aeroplane was attacked.

#### **4. The article in the magazine “Jeune Afrique”**

“Jeune Afrique” published an article in its issue dated 28 April/11 May after having met the family of President Habyarimana, who apparently lived in Paris at this time.

The President’s residence in Kigali was situated very close to the airport.

We have transcribed below the beginning of this article, which covers the Falcon 50 accident.

The whole article is given in annex 1:

*“Listen, Jeanne, I can hear your father’s aeroplane.”  
Agathe Habyarimana cannot be mistaken. The presidential residence is less than one kilometre from Kigali airport, in the line of the sole runway. The wife of President Juvénal Habyarimana has learned to recognise the aeroplanes by ear. And there was no flight scheduled apart from the one returning from the summit of Dar-es-Salaam and Burundi.*

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*It was 20:30 on Wednesday 6 April. Less than 100 metres from home, Jean-Luc and his cousins have just left the swimming pool. They also hear the Falcon 50. The lights of the trijet soon appear. The noise intensifies. Suddenly, three detonations resound in a few seconds. After the first, the aeroplane tips and its engines seem to race. After the second, it catches fire. After the third, it explodes. The flaming debris of the cabin falls into the garden of the Head of State, the wings beyond the boundary by a few dozen metres.*

*Jean-Luc Habyarimana, aged 18, is a pupil at the French lycée of Cairo with his 15-year-old sister, Marie-Merci. Both are on holiday in Kigali. Jean-Luc has seen everything. He describes the scene and the clear trajectories of the rockets from Massaka, the hill that the aeroplanes fly over upon landing, just in front of the residence. His mother was in the villa, along with his older sister, Jean, who is 28 and lives in Kigali with her husband, Alphonse Ntirivamunda, and their children.*

*Hearing the explosions, Jeanne rushed outside, on the other side of the house from the pool. She sees the pieces of the Falcon fall. "Mum!" she yells. "They have shot down Dad's aeroplane!"*

### **Examination of the photographs**

The photographs published by "Jeune Afrique" are also provided in annex 1.

We contacted the editor-in-chief, who told us that these photographs were given to him by the family of the President of Rwanda, which had shown him other photos. He had returned to the family all the photos that had been lent to him for this article.

In reading the article, we learn that the residence of the President is located less than 1km from the aerodrome and approximately along the line of the runway.

If we take the hypothesis that the end of the runway is 500m from the airport boundary, the normal point of touchdown of the wheels on the runway, which is 300 metres, would be 1.8km (1 nautical) from the President's residence. This means that an aeroplane on the usual gradient of 3° or 5% would fly over the residence at a height of around 90 metres or 300 feet.

Photo 1 shows the rear part of the fuselage and principally the tail unit. The part in the air is a horizontal tail unit; we can see the vertical tail unit on the right of this stabiliser at the ground. We can easily observe that the junction of the horizontal tail unit and the vertical tail unit had been in a major fire.

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Photographs 2 and 3 show what we think to be the rear section of the fuselage.

The 3 photos show that these two pieces of the aeroplane did not skid on the ground; we cannot see any trace of a skid on the photographs of the tail units; there are broken trees but that is all. It is the same for the rear part: the brick wall has been pushed; if this section of the fuselage had had a trajectory speed upon impact, the wall would certainly have exploded.

The ruptures at each end of the rear section do not seem to be the result of the impact of an aeroplane on the ground, but resemble much more holes which would be due to rockets.

We can summarise our examination of the photos as follows:

- absence of skidding of the wreckage on the ground. This shows that the aerodynamics of the aeroplane were disturbed, for example by rocket fire.
- intense fire at the rear end of the fuselage, where the engines are. Rocket fire guided by the heat of the engines probably affected the rear of the aeroplane.
- large holes in the fuselage.

### **5. INTERVIEW WITH THE FAMILY OF THE PRESIDENT OF RWANDA BY BELGIAN TELEVISION**

The text of this interview is given in annex 2.

### **6. THE CREW**

As indicated above, to our knowledge and as we have been told by the security office of the French Air Force, the pilot-in-command was Mr Jacky Hérauld and the co-pilot Mr Jean-Pierre Mivabery.

There was also an on-board engineer as was the case for all flights of this Falcon 50, which we learned at the time of the previous trip to Kigali, Mr Jean Michel Pervine. The engineer was responsible for all mechanical problems that may arise and for resolving them in liaison with the workshops.

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### **7. FLIGHT RECORDER**

It has been said that the black boxes (which everybody knows are orange) were allegedly removed from the aeroplane and sent to France.

The daily newspaper “Le Monde” had an article on 28 June 1994 on the subject of a black box that the ex-captain of the police force, Mr Barril, allegedly brought back from Rwanda; Mr Barril was previously in office in the Elysée, the residence of the French President, before being relieved of his duties. Mr Barril went to Kigali twice, with, he says, a mandate from the widow of the Rwandan President, in order to investigate the causes of the accident, seek out the truth, determine the responsibilities and take all necessary steps with regard to the insurance companies.

He came back from Kigali with what he thought was a black box. From what we have seen in the newspapers this box was not an accident recorder, insofar as it had been manufactured by Litton and Litton does not construct recorders.

Furthermore, it did not have the correct dimensions and was not orange with two white stripes, as should have been the case.

Mr Barril, who had been invited to discuss the matter on television the next day, admitted his error.

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We have checked with the manufacturer DASSAULT, which indicated to us:

- the Falcon 50 was not equipped with a data recorder,
- it was equipped with a CVR facility, but the CVR box (voice and sound recorder in the cockpit) was not installed.

### **8. OPINION**

On the basis of:

- the interview with the President’s family in “Jeune Afrique”,
- the interview with the same family by Belgian television

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- our examination of the photos of the wreck

we are of the opinion that the aeroplane was attacked when it was on its normal night approach to Kigali.

*Vincent Fave*