



**Accident** on 29 June 2021  
at Paris-Charles de Gaulle airport (Val-d'Oise)  
during disembarkation from the **AIRBUS A350**  
**registered F-HTYH**

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

<b>Time</b>	Around 08:20 <sup>(1)</sup>
<b>Operator</b>	Air France
<b>Type of flight</b>	Passenger commercial air transport
<b>Persons on board</b>	Captain, co-pilot, 10 cabin crew members, 246 passengers
<b>Consequences and damage</b>	One passenger severely injured
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.	

## Fall of a passenger on steps during disembarkation

### 1 - HISTORY OF THE FLIGHT

*Note: the following information is principally based on statements and radio communication recordings.*

The crew of flight AF351 took off at 18:41 from Toronto airport (Canada) bound for Paris-Charles de Gaulle. The flight included nine Persons with Reduced Mobility (PRM), most of whom were assisted by one or more travel companions.

Upon arrival, after a flight lasting around seven hours, the aeroplane parked away from the terminal, at parking point H07, at 07:42.

Disembarkation steps were positioned at door 2G by the ground handling team. Two vehicles reserved for the transportation of PRMs were also provided: one HELP vehicle<sup>(2)</sup> at door 4G, and one van-type vehicle called a "Passerelle" after the name of its operating company (refer to para. [2.2.3](#)), parked near the steps.

<sup>(2)</sup> Vehicle with lift  
adapted to the  
specific requirements  
of the PRM assistance  
services. The model  
in question has a  
maximum capacity  
of eight passengers.



Source: Bulmor

Figure 1: example of HELP vehicle

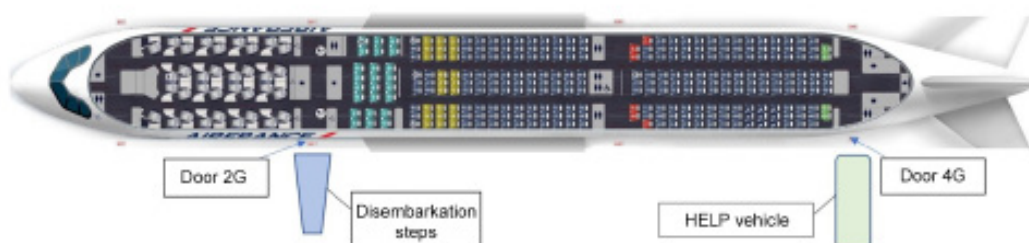
Following the disembarkation of all able-bodied passengers, the cabin crew undertook to disembark the persons with reduced mobility and their travel companions. As the number of people wanting to board the HELP vehicle exceeded the vehicle's capacity, the cabin crew informed the passengers that only PRMs could board it.

One PRM and her travel companion said that they did not want to be separated and were therefore directed to the front of the cabin to board the "Passerelle" vehicle. At door 2G, the travel companion voiced his annoyance to the arrival agent whilst the PRM descended the steps on her own. About halfway down the steps, she tripped and fell to the bottom of the steps.

A cabin crew member went to her aid whilst the chief purser notified the captain, who at 08:26, contacted the air traffic controller over the ground frequency to request medical assistance.

At 08:37, as the emergency services had not yet arrived, the captain, concerned about the condition of the passenger who appeared to be severely injured, contacted the controller again, before making the decision at 08:39 to issue a MAYDAY to speed up the arrival of the airport rescue service.

The latter arrived at 08:45 at the foot of the aeroplane and were joined by an ambulance crew from outside the airport one minute later. They took charge of the passenger who was transported to hospital.



Source: Air France

Figure 2: cabin configuration

<sup>(3)</sup> As defined by Regulation (EC) No 1107/2006 of the European Parliament and of the Council of 5 July 2006 concerning the rights of disabled persons and persons with reduced mobility when travelling by air ([Version in force on the day of the accident](#)).

<sup>(4)</sup> Regulation (EU) No 965/2012 known as "AIR OPS" ([Version in force on the day of the accident](#)), refer to chapter CAT.OP.MPA.155 as well as the associated AMC/GM, in particular GM3 CAT.OP.MPA.155(b) for the definition of a passenger capable of assisting in case of an emergency.

<sup>(5)</sup> Implementing Regulation (EU) No 923/2012, known as "SERA" ([Version in force on the day of the accident](#)), article SERA.14095. Notion included in part A of the Air France operations manual.

## 2 - ADDITIONAL INFORMATION

### 2.1 PRM information

#### 2.1.1 Categorisation of PRMs

In the Air France reference documentation, persons with reduced mobility<sup>(3)</sup> are divided into sub-categories depending on their level of independence, in particular for customers requiring a wheelchair:

- ☐ WCHC: disabled persons requiring assistance at all times.
- ☐ WCHS: persons who are able to walk unaided, but who cannot ascend or descend steps.
- ☐ WCHR: persons who can walk unaided and ascend or descend steps over short distances.

The categorisation of a passenger as a PRM, then the allocation of their sub-category, is based on the customer's declaration, whether this is at the time of ticket purchase or during check-in.

The injured passenger had declared herself as WCHR.

#### 2.1.2 Travel companions

Persons with reduced mobility can be accompanied by one or more travel companions. These companions can have a specific status with regards to operator procedures, as is the case of "safety assistants", for example, who must be able to take active part in providing assistance to the PRMs for whom they are responsible<sup>(4)</sup>.

However, in most cases, as in that of the injured passenger, this is essentially a commercial status that is not associated with specific regulatory or procedural prerogatives. In this case, the travel companion of the injured passenger was her husband.

### 2.2 Disembarkation information

#### 2.2.1 Context of disembarkation

The disembarkation was at the end of a long-haul flight during which the body can be fatigued by the flight conditions (cabin altitude, duration, aerological phenomena), as well as by the quality of rest, food and hydration for passengers and the workload for the aircrew. In these conditions, an arrival away from the terminal, even if this is not unusual, can cause additional discomfort for all of the aeroplane's occupants. The occurrence of even the slightest complication can result in impulsive reactions.

#### 2.2.2 Roles and responsibilities during disembarkation

The flight crew, and in particular the captain, are tasked with safely managing the flight. In this context, a pilot may have to transmit an emergency message for a situation constituting a "serious and/or imminent danger" and "requiring immediate assistance"<sup>(5)</sup>. During the flight, a certain number of safety-related tasks fall to the cabin crew. First aid training is part of their mandatory training. After the flight, the prerogatives and responsibilities of pilots and cabin crew stop at the aircraft doors.

The operator's "arrival" agent is responsible for ensuring the correct management of passengers, in particular unaccompanied minors and persons with reduced mobility, in terms of their transfer to the terminal building. This must be ensured in coordination with the cabin crew and the airport or service provider agents. The Air France manual specifies that should a passenger fall ill or be injured when going from or to an aeroplane parked away

from the terminal, the airline agent must directly contact the Emergency Medical Services or the airport Rescue and Fire Fighting Service. In the case of this accident, the arrival agent contacted the control station, which had been informed that the emergency services had been alerted.

### **2.2.3 Organisation of assistance to PRMs at Paris-Charles de Gaulle.**

European Regulation No 1107/2006 specifies that the responsibility for providing assistance to persons with reduced mobility on the ground lies with the managing bodies of airports. This point is included in the Air France reference documentation, which specifies that the company, Paris Aéroport assumes full responsibility for managing persons with reduced mobility at Paris-Charles de Gaulle.

On the day of the accident, Paris Aéroport had outsourced this activity to the company Passerelle CDG. The latter used procedures defined with Air France.

### **2.2.4 Preparation for disembarkation of PRMs with HELP**

For its arrivals at Paris-Charles de Gaulle, Air France has a procedure that ensures that the names of passengers intending to use the HELP vehicle are communicated to the crew by ACARS message before arrival. This procedure enables the cabin crew to inform the relevant passengers prior to landing or as soon as possible during disembarkation. It is reserved for arrivals away from the terminal after 05:00 and when the number of PRMs exceeds the number of assistants assigned. The first step requires that the list of flights carrying more than 15 PRMs is sent to Passerelle CDG the day before to enable the company to determine the distribution of PRMs between vehicles. During the investigation, Air France specified that they only activate this procedure for flights carrying more than 15 PRMs.

### **2.2.5 Coordination of management of PRMs on arrival**

Outside of this preparation procedure, information pertaining to PRMs on board flights is given to Passerelle CDG on the morning of the flight's arrival. Passerelle CDG's procedures stipulate that the distribution of PRMs between vehicles must be defined before their agents arrive at the aeroplane. Its procedure does not describe the exact moment they must make contact with operating personnel to coordinate the management of persons with reduced mobility. For the accident flight, agents providing assistance to PRMs arrived at the aeroplane with the distribution organised.

Air France's procedure<sup>(6)</sup> stipulates that the arrival agent must contact the chief purser and the coordinator of the PRM team to discuss the final points regarding the persons with reduced mobility and their management. The procedure does not describe the time line to be followed for the exchange of information. In the case of the accident flight, the operator's arrival agent requested information regarding the distribution between vehicles of persons with reduced mobility from the assistance personnel after all able-bodied passengers had disembarked.

### **2.2.6 Access to HELP vehicle by travel companions**

When disembarkation takes place away from the terminal, the travel companion of a person with reduced mobility (unless the latter is a minor or WCHC who requires assistance at all times) is not generally authorised to use the HELP vehicle, except at the express request of the customer and only if there is enough room in the vehicle. In practice, cabin crew and agents providing assistance to PRMs state that, as far as possible, they endeavour to ensure that travel companions are able to board the HELP vehicle, subject to available room.

<sup>(6)</sup> Reference: HUB-INST-0200.

### 2.2.7 WCHR passenger assistance

The Air France procedure<sup>(7)</sup> contains a reminder that assistance is provided throughout the route through the airport for WCHR passengers. A wheelchair is made available only when these passengers request it. If a wheelchair is not requested, arm support is provided. This information is given to the service provider at the time of booking.

In fact, the provision of assistance to WCHR passengers can vary from cabin crew to cabin crew: some rely on the fact that this status means that the PRM can walk unaided to limit this assistance to luggage carrying and focus on WCHS and WCHC passengers who require a greater level of assistance. However, others note that WCHR passengers, who are classified as PRMs, need to be assisted throughout their journey and up until they are transferred to a ground attendant.

## 2.3 Statements

### 2.3.1 Crew

The cabin crew members stated that the list of passengers selected to take the HELP vehicle had not been given to them before the arrival. It was only during the disembarkation phase, after the able-bodied passengers had boarded the buses, that the arrival agent handed this list to the chief purser, who had to explicitly ask for it. The cabin crew added that it is usual for the situation to become confusing when disembarking a lot of PRMs away from the terminal, as passengers not initially identified as PRMs may request assistance due to fatigue caused by a long flight, and their travel companions often want to board the HELP vehicle.

They stated that when the travel companion of the injured passenger was informed that he could not accompany her in the HELP vehicle, he complained to the crew and refused to be separated from his wife. He mentioned having had a similar experience during which they had been separated for several hours during transfer.

When the passenger fell, the chief purser was in the cabin at door 2G with another cabin crew member. The front purser was providing assistance to a passenger in a wheelchair going to door 4G and the rear purser was at door 4G. The arrival agent was at the top of the steps with two unaccompanied minors. The chief purser and the other cabin crew member nearby stated that they had not seen the actions of the passenger due to the presence of her husband in front of the door.

The cabin crew member who administered first aid to the passenger stated that the latter had visibly fractured her arm and injured her head. Given the extent of the bleeding as a result of this injury, the cabin crew member reported to the captain her perception of the injuries as life-threatening.

The cabin crew members added that their roles and responsibilities officially end at the aeroplane's doors but that they frequently provide assistance to passengers requiring help to descend the steps during disembarkations away from the terminal.

The lack of information prior to arrival regarding the distribution of PRMs between vehicles, the actual capacity of the means of transportation – in particular the “HELP” vehicle – or the handling of travel companions, was evoked by most of the cabin crew members as a factor contributing to the confusion during disembarkation.

The captain specified that his decision to issue a MAYDAY had in particular been motivated by not knowing how long it would take the emergency services coming from outside the airport to arrive and by the information that the victim's injuries were potentially



life-threatening. He added that he had applied the principle of immediate assistance required associated with the definition of MAYDAY in the Air France operations manual.

### 2.3.2 Ground personnel

The arrival agent of the air operator stated that his main mission during the disembarkation is to look after the unaccompanied minors. He added that he had tried to explain the procedure regarding use of the HELP vehicle to the travel companion of the injured passenger as he had appeared to be very angry. It was during this phase, whilst the agent, the cabin crew member at the door and the husband were in discussion, that the passenger descended the steps on her own and fell.

The agents responsible for providing assistance are employed by Passerelle CDG, the airport's PRM service provider. They stated that when a lot of persons with reduced mobility arrive on an aircraft parked away from the terminal, the procedure is to divide the passengers between a HELP vehicle and another vehicle.

The agent in charge of the Passerelle vehicle remembered having taken charge of two people who he had helped to board the van. He then accessed the aeroplane to assist his colleague, who was in charge of the HELP vehicle, with a WCHC<sup>(8)</sup> passenger. It was whilst they were with this passenger that the two agents realised that a passenger had fallen down the steps.

The two agents stated that, according to them, under no circumstances should a PRM be allowed to descend these steps unaided, as they consider the steps to be dangerous for elderly persons and unassisted disabled persons. However, this point is not addressed in the procedures for this situation.

They added that they believed that communication with the cabin crew had not been optimal, in particular concerning spaces available on board the HELP vehicle.

## 2.4 Emergency services organisation

The emergency services at Paris-Charles de Gaulle airport, which include the emergency care of an individual, is ensured by the Aircraft Rescue and Fire Fighting Service (ARFF) on behalf of the Paris Fire Brigade.

The ARFF service has two distinct missions at the airport:

- ❑ Its main mission is to protect aircraft, especially against the risk of fire. This mission involves responding to incidents, mitigating risks, as well as evacuating and providing first aid to the passengers and crew of an aircraft involved in an emergency on the ground. At the airport, two ARFF teams are positioned so as to be able to access either end of the runway within three minutes. To provide this service, each ARFF team has a level 10 RFFS<sup>(9)</sup>, which corresponds to a minimum of three fire fighting vehicles, six airport-based fire fighters and a supervisor<sup>(10)</sup>.
- ❑ Its second mission is to provide emergency care. Two ambulances are reserved for this. The response time is not subject to the same time requirements as the response to an aeronautical emergency. The average response time of the ARFF for the provision of emergency care in the restricted zone is estimated by the manager of this service to be approximately seven minutes. Moreover, this manager stated that he considers a time of 20 minutes to be acceptable<sup>(11)</sup> on occasion. Parking area H is removed in relation to the other areas and to the accesses to the airport

<sup>(8)</sup> See para. 2.1.2

<sup>(9)</sup> Order of 18 January 2007 pertaining to the technical standards applicable to the aircraft rescue and fire fighting service at airports ([Version in force on the day of the accident](#)).

<sup>(10)</sup> The average response time for the provision of emergency care in France was 14 min and 47 s in 2020, with 90 % of patients receiving treatment in less than 15 min and 54 s (source: French Ministry of the Interior).



At 08:39, in order to compel the attendance of the airport fire fighters whom he believed would arrive quickly, the captain issued a MAYDAY.

This MAYDAY was also relayed to the ARFF. The emergency services' intervention report stated that the aeronautical alert was raised at 08:41.

The ARFF intervention team mobilised one minute later to arrive on the scene at 08:45. This team comprised:

- ☐ six fire fighting trucks;
- ☐ a rescue vehicle;
- ☐ an ambulance;
- ☐ three light command vehicles;
- ☐ eighteen fire fighters;
- ☐ three supervisors.

The ambulance from outside the airport, which arrived at the foot of the aeroplane at 08:46, took charge of the passenger and left the zone at around 09:25 to transport her to hospital.

### 3 - CONCLUSIONS

*The conclusions are solely based on the information which came to the knowledge of the BEA during the investigation. They are not intended to apportion blame or liability.*

#### Scenario

The aircraft arrived at a peak time for long-haul flight arrivals, which stretches emergency care and assistance resources. The distribution of persons with reduced mobility on board the aeroplane, between the different specialist vehicles upon arrival was not shared with the crew prior to the landing and the matter was only addressed after the other passengers had disembarked. The cabin crew then had to manage an unplanned situation involving a number of passengers wanting to board a specialist vehicle beyond the vehicle's capacity, when all of the aeroplane's occupants were fatigued from the flight.

A PRM and her travel companion did not want to be separated and chose to use the disembarkation steps to stay together. The heavy workload associated with the confused situation, as well as the behaviour (described as aggressive) of the travel companion, prevented the crew members, the arrival agent and the assistance personnel from spotting in time that the passenger was descending the steps alone and unaided. She subsequently tripped during her descent and fell to the bottom of the steps.

The emergency services were alerted in compliance with the procedures in force. The public emergency services took longer to arrive than the average response time for this type of intervention at Paris-Charles de Gaulle. The crew members considered the response time to be too long, likely due to the perceived severity of the medical emergency and to their knowledge of the usually very quick response times of the ARFF in the aeronautical domain.

Due to the lack of updates on the expected arrival time of the emergency services, the captain decided to issue a MAYDAY to put an end to his uncertainty. This alert, which was issued several minutes before the arrival of the emergency services mobilised first, led to the subsequent mobilisation of substantial fire fighting resources.



### Contributing factors

The following factors may have contributed to a situation that caused irritation and confusion during which a passenger requiring assistance took it upon herself to descend the steps unaided and fell:

- ❑ The choice of Air France to wait to have a high number of PRMs on board before activating the procedure aimed at anticipating the distribution of PRMs between the specialist vehicles, by means of an ACARS message sent prior to landing.
- ❑ The lack of coordination and communication during the disembarkation between personnel tasked with assisting the PRMs, the arrival agent and the cabin crew.

### Actions taken

Following its internal investigation, Air France defined several actions, including:

- ❑ The greater sharing of information with the crew when a HELP vehicle is organised for the arrival. The names of the PRMs and their travel companions will be systematically provided, as well as the maximum number of persons that may board the HELP vehicle.
- ❑ The alignment of an internal procedure regarding the handling of PRMs by ground personnel with the “Manuel Sécurité Sauvetage” (Safety and Rescue Manual), promoting communication between ground personnel and air crews.
- ❑ Clarification for ground personnel concerning which emergency organisations to contact in the event of a medical emergency.

### Safety lessons

Pilots may consider the issuance of a MAYDAY message as a guarantee of rapid intervention. Regardless of this notion of response time, the emergency care mission and the main mission of an ARFF, even when they are ensured by the same service at a given airport, do not have the same operational objectives and do not involve the mobilisation of the same resources. Pilots could benefit from clearer information on the topic and about acceptable response times for the provision of emergency care.