

Surviving passengers escaped out the two forward doors (L1 and R1) and the right over-wing exit. 51 persons escaped via the forward doors and 27, including two infants, escaped out the right over-wing hatch. There were some problems opening the right forward door, due to the slide slipping out of its housing and jamming the door. As soon as the left forward door was opened, foam sprayed into the cabin.

The Flight Attendants described the evacuation not as a mad scramble, but as a steady flow of people, like "a load of Penguins shuffling out". They had to pull on the passengers clothing to guide them. The evacuating passengers acted confused, panicked, couldn't make up their own minds, and had to be shown everything. One man stopped in the aisle and temporarily blocked the forward evacuation because his family was still on the plane. Some of the passengers climbed over seat backs to get to exits due to persons collapsed in the aisles.

The forward Flight Attendants also stated that the passengers moving towards the forward doors acted like a plug that reduced the amount of smoke spread to the front of the cabin. When the smoke reached the forward exits, the Flight Attendants stated they could only see a few inches and were unable to breathe or shout. They stated there was about six inches of smoke free breathable air at floor level. They also stated that upon exiting the aircraft, it was a total white out due to the foam being sprayed by the responding ARFF.

Both flight crew exited via the right cockpit window and were immediately sprayed with foam. The first ARFF unit was on scene within 30 seconds after the aircraft came to a stop and

began foam application on the fire. Subsequent ARFF vehicles arrived during the next 40 seconds and applied foam to the forward and right over-wing exits.

A 14 year old boy was dragged out of the right over-wing exit 5 1/2 minutes after the aircraft came to a stop. He was placed on a respirator in the hospital, but eventually recovered. Seven minutes into the response it was clear that no further survivors would exit unaided.

A team of firefighters in proximity gear and SCBA entered the aircraft. One firefighter was blown out of the aircraft by an exploding pressurized cylinder. ARFF decided that the interior fire was too severe to permit effective rescue or firefighting. Conditions were reported to be very bad, with thick smoke within two feet of the floor and an intense fire in the rear cabin. Both exterior and interior fire damage to the fuselage structure allowed the entire tail to sink to the ground. Interior firefighting operations were abandoned

The interior fire was extinguished in approximately 30 minutes with turret streams, when the top of the aircraft burned off. A 31 year old male was found alive inside the aircraft after 33 minutes. He died six days later from pulmonary edema. Of the 54 persons who died, 9 were fire deaths, and 45 perished from incapacitation from toxic gases and smoke inhalation.

The two Flight Attendants assigned to the rear cabin perished in the fire. A major point brought out in the accident report was the lack of effective methods for fighting internal cabin fires. This incident showed that persons can survive for a considerable amount of time in catastrophic aircraft interior fires. They won't be in great shape, but they may be able to be rescued and resuscitated. Persons that die from smoke inhalation were at some time during the incident savable and rescue able by responding firefighters.

#### *Incident Example, DC – 9 Lavatory In-flight Fire*

In 1983, an interior fire occurred on a DC-9 that shocked and surprised ARFF professionals throughout the United States, as well as internationally. In the minds of almost all U.S. airport firefighters at the time, nothing like it had ever happened before. *(Photo below)*

ARFF personnel everywhere had never trained for this type incident scenario. The airport fire department that responded to the incident was criticized for many years afterwards for their handling of the incident.

Over twenty years later, some airport fire departments are still capable of making the same mistakes. The aircraft had 46 persons on board. 2 hours and 26 minutes into the flight, three

