

The incident as a “situational example” and as told by the F/O

You are the first officer on a scheduled continental flight that departs normally.

An hour and a half into the flight — early in the evening — the three circuit breakers located on a rear cockpit wall panel and associated with the aft lavatory’s flush motor trip in rapid succession.

The captain makes two consecutive unsuccessful attempts to reset the circuit breakers.

So far into the story, what would you have done differently (if anything)?

Ten minutes later, a passenger seated in the last row asks the no. 3 flight attendant to identify a strange odour. She takes a fire extinguisher and sees that a light grey smoke has filled the aft lavatory; however, she sees no fire.

Once advised, the chief flight attendant instructs the no. 2 flight attendant to inform the captain and then to assist the no. 3 flight attendant in moving the passengers forward.

The chief flight attendant then takes a fire extinguisher and proceeds to saturate the lavatory with carbon dioxide by spraying the panelling and the seam from which smoke is seeping, as well as the lid of the trash bin.

What would the next move be?

Upon being notified of the situation, the captain orders you (the F/O) to inspect the lavatory. You leave the cockpit without smoke goggles or a portable oxygen bottle and cannot get to the aft lavatory because the smoke has spread over the last rows of the aircraft. The chief flight attendant then relates what he has seen and says that he has not been able to determine the source of the smoke.

Fifteen minutes into the incident, you go back to the cockpit and advise the captain that it would be better to land. You do not tell him that the chief flight attendant has told you that the fire is not in the trash bin.

However, before the captain can respond, the chief flight attendant comes to the cockpit and tells him not to worry, saying, “I think it’s going to be easing up.” You look back into the cabin and see that it is starting to clear. The captain directs you to go back and gives you your smoke goggles.

Shortly thereafter, the chief flight attendant confirms that the smoke is clearing.

The captain believes the fire was in the lavatory trash bin and that the fire is out; therefore, he decides not to descend.

What would you have done differently (if anything)?

In the meantime, you (the F/O) return to the aft lavatory and decide not to open the lavatory door when you discover that it feels hot to the touch. You return to the cockpit and tell the captain, “I don’t like what’s happening. I think we’d better go down, okay?” The captain concludes that you believe the fire is out of control.

If you were to change anything in the above communication – what would it be?

A mayday call is made and a rapid descent and approach is initiated.

Data, discussion and human factors

Analyses of in-flight fires have led to the conclusion that the **major difficulties are the detection, localization and identification of the severity of the fire**. Even when initial detection evidence is available from sensors or human observation, localization of the fire’s source and identification of the severity of the incident are often delayed or inaccurate. These delays result in less time available to make a safe landing.

If you were the investigator on this accident, what other causes would you potentially include in your analysis (if anything)?
