

= Crossair Flight 498 =

Crossair Flight 498 was a commuter flight from Zurich , Switzerland , to Dresden , Germany , that crashed two minutes after takeoff in the Swiss municipality of Niederhasli on 10 January 2000 . The seven passengers and three crew members aboard the two @-@ turboprop engine Saab 340B aircraft all died on impact . It was the first fatal crash for the Swiss regional airline Crossair in its 25 @-@ year history .

The official report into the disaster found that the crash was due to a loss of control resulting from multiple human failures .

= = Background = =

The 33 @-@ seat Saab 340B airplane used for Crossair Flight LX498 had been leased to Crossair from Moldavian Airlines since 1 October 1999 . The plane was scheduled to depart from Zurich Airport on Monday , 10 January 2000 , at around 6 : 00 p.m. and arrive at Dresden Airport a few hours later . The cold , drizzly weather was normal for the area , there were no indications that anything was wrong with the aircraft , and , although this particular aircraft had 24 @,@ 000 flying hours since its November 1990 delivery , this type of airplane had a very good safety record . Captain Pavel Gruzin , 41 , had 8 @,@ 100 hours of flying time , with 1 @,@ 900 in the Saab 340 type . Co @-@ pilot Rastislav Kolesar , 35 , had about 1 @,@ 800 total hours , with 1 @,@ 100 hours in the Saab 340 type . The plane was carrying no unusual payload such as freight or mail and the plane was not due for its next regular maintenance check for another 21 days , on 31 January 2000 .

= = Event = =

After the seven passengers and three crew members boarded , the plane was cleared for takeoff on time at 5 : 54 p.m. (16 : 54 UTC) . The aircraft departed Runway 28 heading west . From takeoff , the plane climbed normally . But after 7 @.@ 2 kilometers (4 @.@ 5 mi) the plane suddenly started to lose altitude and turn to the right instead of following the approved flight path to the left . When air traffic controllers asked the pilot if he meant to turn right , they were answered with " Stand by , " followed by a loss of radio contact .

At 5 : 56 p.m. (16 : 56 UTC) , one minute and 56 seconds into the flight , the plane disappeared from radar screens . Officials later determined that the plane went into a diving right turn before vanishing from radar screens . Burning wreckage was scattered for 200 to 300 metres near houses in Niederhasli , some 5 kilometres (3 mi) northwest of the runway at Zurich 's Kloten airport . The flight data and cockpit voice recorders were recovered from the accident scene , both heavily damaged .

= = Parties involved = =

Four of the passengers were Germans , the other three passengers were French , Swiss and Spanish . The three @-@ person crew included Moldovan pilot Pavel Gruzin , Slovak copilot Rastislav Kolesar , and a French flight attendant . There were no survivors .

At the time of the crash , Crossair was a majority owned subsidiary of SAirGroup . The crash of Crossair Flight LX498 was the first time in Crossair 's 25 @-@ year history that the regional airline had lost an aircraft , and was the deadliest accident to hit the SAirGroup since the crash of Swissair Flight 111 , an MD @-@ 11 flying from New York to Geneva that crashed into the Atlantic Ocean off Nova Scotia on 2 September 1998 , killing all 229 aboard .

At the time , Crossair operated 17 Saab @-@ 340 type planes , but eventually phased them out with Embraer ERJ @-@ 145 regional jets . The crash came about in the midst of a bitter labor @-@ management dispute between Crossair and its pilots over a possible pay raise and work rules changes . The pilots ' union had just canceled pay agreements with Crossair in December 1999 ,

with a termination effective in summer 2000 . In addition , and prior to the accident , two Crossair pilots told Swiss media that some foreign pilots employed by Crossair posed a safety risk because of an insufficient knowledge of English . These two pilots were fired by Crossair , but were then elected to head the pilots ' union , " Crossair Cockpit Personnel (CCP) " . An investigation of the accident later revealed that the pilot Gruzin and copilot Kolesar were only able to communicate with each other in English , but Gruzin 's ability to speak English was too limited to hold more than a basic conversation .

After the crash , both Crossair and CCP , including the pilots who had previously spoken to the media and been fired , publicly stated that the coincidence between the accident and the dispute was very unfortunate and that reports about pilot error being involved in the crash were speculation , although this conclusion was later established to be the probable cause of the accident .

= = Investigation = =

= = = Background = = =

The Saab 340 is widely used in the United States , Australia , and elsewhere as a commuter plane . Before the hull loss of Crossair Flight LX498 , there had been only four crashes worldwide of the 400 Saab @-@ 340 plane types since 1984 and only two of those were hull losses . The two hull losses were a 1994 KLM Cityhopper crash that killed three in the Netherlands and a 1998 Formosa Airlines crash that killed 13 in Taiwan .

An examination of pilot Pavel Gruzin 's body revealed traces of the drug Phenazepam (A benzodiazepine @-@ class sedative) in his muscle tissue . Investigators also found an open packet of the Russian @-@ made drug in baggage belonging to Gruzin .

= = = Causes = = =

According to the Investigation Report of the Swiss Aircraft Accident Investigation Bureau , the accident was attributable to the flight crew losing control of the aircraft for the following reasons :

The flight crew reacted inappropriately when departure clearance was ordered by ATC .

The co @-@ pilot made an entry without being instructed to do so by the commander , which related to the change to the SID ZUE 1 standard instrument departure . In doing so , he omitted to select a turn direction .

The commander dispensed with use of the autopilot under instrument flight conditions and during the work @-@ intensive climb phase of the flight .

The commander took the aircraft into a spiral dive to the right because , with a probability bordering on certainty , he had lost spatial orientation .

The first officer took only inadequate measures to prevent or recover from the spiral dive .

According to this same Investigation Report , the following factors may have contributed to the accident :

The commander remained unilaterally firm in perceptions which suggested a left turn direction to him .

When interpreting the attitude display instruments under stress , the commander resorted to a reaction pattern (heuristics) which he had learned earlier .

The commander 's capacity for analysis and critical assessment of the situation were possibly limited as a result of the effects of the benzodiazepine drug Phenazepam found in his muscle tissue .

After the change to standard instrument departure SID ZUE 1Y the crew set inappropriate priorities for their tasks and their concentration remained one @-@ sided .

The commander was not systematically acquainted by Crossair with the specific features of western systems and cockpit procedures .

The investigation did look at the possibility of electromagnetic interference and tested a similar

aircraft using mobile phones . It concluded that there were " no indications that aircraft systems were negatively affected by electromagnetic interference (EMI) " .