

NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

July 19, 2016

Human Performance

Communications Study

A. ACCIDENT

Location: Open ocean near Jamaica
Date: September 5, 2014
Time: 1410 eastern daylight time
Aircraft: Socata TBM700, N900KN
NTSB Number: ERA14LA424

B. HUMAN PERFORMANCE INVESTIGATOR

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C. SUMMARY

On September 5, 2014, about 1410 eastern daylight time (EDT), a Socata TBM700 (marketed as TBM900), N900KN, impacted open water near the coast of northeast Jamaica. The commercial pilot/owner and his passenger were fatally injured. An instrument flight rules flight plan was filed for the planned flight that originated from Greater Rochester International Airport (ROC), Rochester, New York at 0826 and destined for Naples Municipal Airport (APF), Naples, Florida. The personal flight was conducted under the provisions of 14 Code of Federal Regulations Part 91.

D. REVIEW OF PILOT COMMUNICATIONS

At the request of the IIC, the human performance investigator reviewed radio transmissions between N900KN and air traffic control during the entire flight. Sources for this review included transcripts and summaries prepared by the FAA, recorded audio, and radar data. The review revealed routine communication exchanges occurred during most of the flight as characterized by the pilot in command (PIC) making timely communications appropriate to the information needs of the exchange, and using consistent phraseology appropriate for a pilot operating on an IFR flight plan.

There were two areas where the nominal pattern of communication diverged: 1) a period where communications between N900KN and air traffic control were interrupted, and when resumed they included transmissions made by the pilot-rated passenger; and 2) the final period of communications from N900KN after the PIC requested a descent to 18,000 feet.

D.1 INITIAL PERIOD OF LOST COMMUNICATIONS

About 0912, while operating in Cleveland Center airspace at FL280, N900KN was instructed to contact the next Cleveland Center controller but did not acknowledge the handoff nor check in on the new frequency. Controllers made multiple attempts to establish radio contact with the airplane without success. About 4 minutes and 30 seconds after the controller's initial instruction, the PIC checked back on the frequency stating, "cleveland t b m nine hundred kilo november." The controller replied with "november nine zero zero kilo november cleveland center how do you read?" Without delay the PIC answered with "loud and clear, ah something happened I don't know what happened to you but we're back." The controller then issued a new frequency for N900KN which the PIC read back.

About 0917, the pilot-rated passenger checked on with the new sector, "cleveland center zero kilo november is level at two eight thousand." The controller then issued an instruction to contact Washington Center on a new frequency and the pilot-rated passenger acknowledged. The pilot-rated passenger checked onto the new frequency stating, "washington center zero kilo november level at two eight thousand." About 0919, the controller stated "november zero kilo november ah cleared direct to pulaski that's papa sierra kilo then direct taylor rest of the route unchanged." Although the pilot-rated passenger had made the previous radio call, the PIC responded with, "ok papa see-sierra kilo then ah direct ah for nine hundred kilo november." The controller then asked, "and november zero kilo november just

want to verify proceed direct pulaski now that's papa sierra kilo then direct taylor tango alpha yankee rest of the route unchanged." The PIC replied, "pulaski taylor and as filed nine hundred kilo november." About 0921 the controller instructed N900KN to change frequencies, stating "november zero kilo november contact washington center at one three three point two seven." There was a change in speaker for N900KN as the pilot-rated passenger immediately acknowledged "one three three point two seven zero kilo november." About 0922 the pilot-rated passenger checked onto the new frequency stating, "washington center zero kilo november level at two eight thousand." No further communications were made by the pilot-rated passenger.

D.2 COMMUNICATIONS AFTER REQUEST TO DESCEND

At 1004:11, about a minute after checking in with the Atlanta Center controller level at FL280¹, the PIC called the controller and stated, "nine hundred kilo november we need to descend ah down to about one eight zero we ah have an indication that's not correct in the plane." The controller cleared N900KN to FL250 and the PIC acknowledged, "two five zero and we need to get lower nine hundred kilo november." The controller asked whether the PIC was declaring an emergency and at 1004:50 the PIC replied, "ah not yet but we'll let you know." Radar data show the airplane had started to descend from FL280 and was at FL277 about this time. The controller instructed N900KN to turn left thirty degrees and at 1005:02 the PIC acknowledged, "thirty left nine hundred kilo november." Communications by the PIC during this period were timely and contained information appropriate to the exchange.

At 1006:35, while the airplane was at FL250, the controller cleared N900KN to descend and maintain FL200. After no acknowledgement from the PIC, at 1006:43 the controller repeated his instruction and the PIC quickly acknowledged "two zero zero nine hundred kilo november." The audio recording containing this acknowledgment has a continuation of the carrier signal without voice for about 4 seconds after the PIC concluded this statement. Radar data shows the airplane did not initiate a descent.

At 1007:17, the controller cleared N900KN direct Taylor VOR. No verbal response from the PIC occurred but the audio recording contains about 2 seconds of open mic about this time. The controller repeated his clearance and at 1007:36 and the PIC immediately responded "direct taylor nine hundred kilo november." Radar data shows the airplane did not turn direct Taylor VOR.

At 1008:10, the controller asked N900KN to confirm that he had received the descent clearance to FL200. At 1008:15 the PIC replied "two zero zero kilo november." The PIC's voice on the recording was attenuated during this statement.

¹ R33 – Charlotte Radar Controller.

At 1008:40, the controller stated “november zero kilo november descend and maintain flight level two zero zero and you are cleared direct taylor.” The PIC responded immediately with “direct kilo november nine hundred kilo november.” The PIC’s voice on the audio recording was not attenuated during this statement (as it had been for the previous transmission).

There were no further communications by the PIC for the remainder of the flight.