



Response to Petition for Reconsideration

July 7, 2020

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In accordance with its rules (Title 49 *Code of Federal Regulations* [CFR] 845), the National Transportation Safety Board (NTSB) has reviewed the petition for reconsideration and modification of the probable cause for the aircraft accident involving a Canadair CL-600-2B16, N613PJ, on July 22, 2015, in West Palm Beach, Florida (ERA15LA288). The petitioner has met the requirements for the NTSB's review of his petition; specifically, as a pilot of the accident airplane, he has a direct interest in the investigation, and he offered claims that our report was erroneous. Based on its review of the January 2018 petition and additional documents, the NTSB hereby denies this petition in its entirety.

On July 22, 2015, about 1410 eastern daylight time, a Canadair CL-600-2B16, N613PJ, registered to Paragon Transport Management LLC, and operated by USAC Airways 691 LLC, doing business as Paragon Jets, was substantially damaged when it struck an all-terrain ground vehicle (ATV) while taxiing at Palm Beach International Airport, West Palm Beach, Florida. Both airline transport pilots were not injured. The positioning flight was operated under the provisions of 14 CFR Part 91. Visual meteorological conditions prevailed, and an instrument flight rules flight plan was filed for the flight, which was destined for Opa-Locka Executive Airport, Miami, Florida.

Our final report indicates that the pilots were "rushed" as they performed their preflight preparations of the jet and forgot to close the baggage door. Ground personnel drove an ATV out to the airplane so that they could advise the crew of the open door. After dismounting from the ATV, which was parked about 10 ft in front of the airplane's left wing, the ground handler warned the captain, who left the cockpit to close the baggage door. Once the door was closed, he returned to the cockpit, then looked out the side window and noticed that the airplane was rolling forward; he asked the first officer what she was doing. About that time, the airplane struck the ATV. The flight crew stated that once they realized the airplane was moving, they attempted to apply the brakes, but it was not until they shut down the engines and re-applied the parking brake that the airplane came to a stop. A postaccident functional check of the airplane's hydraulic and braking systems did not reveal any anomalies. Review of the airplane's cockpit voice recorder (CVR) revealed that the crew did not verbally follow the airplane's before start checklist, which required them to verify hydraulic system pressure, and that the parking brake was set before starting the engines. Had the flight crew followed this procedure, monitored the airplane's motion during and immediately after the engine start, and been more cognizant of the objects surrounding the airplane, it is likely that the ground collision would have been avoided.

The probable cause of the accident, adopted on May 1, 2017, was as follows: the flight crew's failure to properly use the before start checklist, to monitor the airplane's motion, and to see and avoid objects around the airplane, which resulted in an inadvertent roll into a ground vehicle.

Petitioner's Claims

The petitioner was the captain of the accident airplane. The petitioner submitted several emails and requested that the NTSB reopen its investigation. He indicated that

[b]ased on the fact that the aircraft has a triple redundancy hydraulic system and all three systems appear to have been working properly and fully engaged, there is no doubt that there was sufficient hydraulic pressure available to operate the braking system...both pilots attempted to operate the brakes during the initial phases of the accident and they did not operate. It must be concluded that with the Parking Brake Handle in the set position or not, the system should have operated.

He further stated that “the conclusion is that the brakes failed to operate and there was nothing either pilot could do to prevent the motion of the aircraft. This was probably due to an anti-skid malfunction which is evidenced by the fact that on the first attempt at flight after repairs were completed, a very similar situation occurred indicating a failure of the braking system.” The petitioner cited six reasons for his request for reconsideration, as outlined below. In support of his claims, the petitioner included a statement from another pilot regarding the first scheduled test flight of the airplane after the accident and subsequent repairs.

First, the petitioner claimed that the “aircraft in question is listed as a Challenger 604 when in fact it was a Challenger 601. These are two separate types of aircraft.” The petitioner questioned if the NTSB erroneously used information regarding the hydraulic systems from the 604 in its investigation. He further indicated the report references the pilots verifying the hydraulic pressure. However, he noted that there are several times hydraulic pressure is evident, the first of which is “when the #3 system is turned on by an overhead switch....This is required to provide pressure to allow the nose gear doors to be closed during preflight and to set the parking brake. If that switch was not on and hydraulic pressure not available, the nose gear doors would have not closed and it would have been an indication of a failure. The nose gear doors closed during preflight in a normal fashion.” He further indicated that “if the #3 hydraulic system is active, both inboard and outboard braking systems are available....When the engines are started, the hydraulic pump on each engine is automatically on line.” He stated that after both engines were running, there were three systems online and functioning. He indicated that “beyond that there are a set of brake accumulators that as long as pressure has been provided, they are now charged and good for a braking event should the electrical and primary hydraulic systems fail.” He said that the fact that the test right after the accident showed that the hydraulic systems were operated and that both engines were functioning normally, “this proves that there had to be another reason for the brake failure.”

Second, the petitioner stated that during the first scheduled test flight after the accident and subsequent repairs, “the airplane duplicated the mechanical error experienced in the accident and three witnesses were present to corroborate the event.” The petitioner included a statement from Captain David Hamilton, an airline transport pilot who is type rated in the Challenger 601, who indicated that he conducted the first scheduled test flight in the airplane after the accident and repairs. He indicated that he set the parking brake and that the red brake light did not come on; after testing the lights and ensuring they worked, he released and reset the brake but again had “no light” and “no brakes.”

Third, the petitioner indicated that “the conclusion reached is not reasonable. It assumes that the pilots were not aware of their immediate surroundings and that by following procedures in a different manner the accident could have been avoided. The facts...clearly show that this was a mechanical malfunction and that no amount of additional pilot procedures could have prevented the eventual outcome.” Specifically, the petitioner stated that he and the first officer were performing the engine startup “using a flow pattern, backed up by the checklist.” He indicated that as they were completing the second engine start, they noticed a line man waving at them; the captain realized that they had left the baggage door open and left the cockpit to close the baggage door, which he estimated “took about 15 seconds and I was back in my seat. In my absence, the PF [pilot flying, the first officer] had continued the flow to the after-start checklist. **(At this point the crew had not gotten to the challenge and response portion of running the checklist because they had not even gotten to the point of asking for taxi clearance. This is normal procedure in this type of operation with this aircraft.)** [emphasis in original].” He stated that he then noticed that the airplane was moving forward, but when he applied full braking, it continued to roll. He stated that, after feeling a collision, he grabbed both throttles and shut the engines down, after which the first officer released and reset the parking brake quickly. He indicated that, in order to do so, the first officer would have had to be pushing down hard on the brakes. He further stated that, about 2 seconds after he shut down the engines (and about 1 second after the first officer reset the parking brake), the brakes engaged and the airplane “came to a skidding halt.” He stated that had there been no hydraulic pressure in the system, the brakes would not have worked at all, “thus proving that the appropriate hydraulic systems were properly set and functioning. They were being overridden by the antiskid system.”

Further, the petitioner indicated that “because the motion began so gently it was not immediately noticed. The brakes were set.” He added that the pilots were still performing the checklists and “were not immediately aware of the motion...” Regarding the location of the ATV, the petitioner stated that it came out to the airplane during engine start and that the pilots did not see it arrive or park because “it was parked in a location that was not easily observed by either pilot. Even if it was visible, that should not be a consideration for whether or not the accident could have been avoided.” He further said that “The engines were shut down within 5-6 seconds after the start of movement. It took about 2 seconds for the electrical system to shut down and the brakes to take effect. There was no time to run a checklist.” He indicated that it is unreasonable to assume that neither pilot was taking action to stop the airplane.

Fourth, the petitioner stated that information regarding the antiskid system was provided to the NTSB investigator. He stated that the Challenger 601 has an electrically operated antiskid system and that this system is checked on initial taxi. He claimed that the accident airplane had a “plethora of electrical issues” and that “an electrical surge of some kind engaged the anti-skid system just as if someone had pushed the test button. It released the brakes and the airplane began to roll just as I was getting back to my seat. It was still activated when I tried to stop the aircraft with aggressive use of the brakes before contact with the ground vehicle.” The petitioner stated that when he shut the engines down, “the anti-skid test system, being no longer electrically active, allowed the hydraulic pressure to the brakes to return and the brakes then engaged.”

Fifth, the petitioner indicated that a portion of the Federal Aviation Administration (FAA) inspector’s statement had been redacted “but I was told by him in a phone conversation shortly after the accident that he would accept no explanation other than ‘the PIC [pilot-in-command] was

not in his seat at the time of the accident.’ Therefore, he could not have applied any braking. The CVR proved that to be a false assumption.”

Finally, the petitioner indicated that witness statements by the line crew of Atlantic Aviation are “self-serving and inaccurate.” He indicated that the cockpit sits “well above the heads of anyone standing on the ground” and that there was a glare on the windshield. He further stated that the line crew went into “panic mode” after the airplane started moving and that “it is doubtful whether they were even looking at the cockpit during its 7 seconds of travel.” He indicated that their “statements as to the whereabouts of either of the pilots during that time cannot be considered with any credulity.”

NTSB’s Response

Regarding the petitioner’s overall claim that the brakes failed to operate and that the antiskid system malfunctioned, we considered this scenario in our investigation but dismissed it. Conversations with the manufacturer informed us that the antiskid system cannot “kick off” the brakes in any operating mode with an antiskid system failure, and the antiskid system on this model airplane would not be operative when the airplane is parked or below wheel rotation, as was the case in this accident. Thus, the system would not have been active (as designed) when the airplane was parked on the ramp. Further, the captain stated that they had not asked for taxi clearance, and he did not indicate that they had checked and armed the antiskid system, which is part of the Taxi Check checklist. Regarding the possibility of an electrical surge engaging the antiskid system, the captain or first officer did not describe any potential indications of an electrical surge or failure in their postaccident interviews. If an electrical fault had occurred that affected the antiskid system, the crew would have received an indication (an INBD FAIL/OUTBD FAIL light) that antiskid functionality was no longer available; however, the captain did not mention seeing such an indication. In addition, the crew did not mention any flickering of lights or other indications of an electrical surge that could have impacted other systems. Further, no evidence of an electrical surge or failure was noted during the postaccident test by the FAA inspector and operator. Thus, it is not likely that this occurred during the accident sequence.

Regarding the petitioner’s claim about the type of airplane noted in our report, the accident airplane is listed on NTSB Form 6120.1, Pilot/Operator Aircraft Accident/Incident Report, and in our final report as a CL-600-2B16; this information directly corresponds with how the airplane is listed on the FAA’s online registry.¹ Further, in our final report, we indicate that we reviewed the Challenger 601-3A/3R checklist manual, excerpts of which are in the public docket for this accident.² Information from the 604 model was not used during this investigation, and it is unclear why the petitioner has made this assertion. While we concur that there are differences between the 601 and 604 variants, information from the 601 model was considered during this investigation.

Regarding the statement from Captain Hamilton, we note that he referenced the date of the accident incorrectly (he specified that the accident occurred on July 22, 2017, when the accident occurred on July 22, 2015); further, it is unclear when, exactly, Captain Hamilton conducted the system check because he did not provide a specific date in his statement for the test flight.

¹ The FAA’s registry can be accessed at https://registry.faa.gov/aircraftinquiry/NNum_Results.aspx?omni=Home-N-Number&nNumberTxt=n613pj.

² The [public docket for this accident](https://www.nts.gov/investigations/SitePages/dms.aspx) can be accessed at <https://www.nts.gov/investigations/SitePages/dms.aspx>.

Regardless, we considered his statement in our review of this petition. He indicated that, during the test after the accident and repairs, he set the parking brake, but the light did not come on; however, the lights worked when tested. After releasing the brake and resetting again, he indicated that there was “no light” and “no brakes.” The NTSB notes that Captain Hamilton also indicated that the test was rescheduled to another day after the squawks were repaired, but the petitioner has not provided any additional information about further tests or repairs to indicate specific details of any potential mechanical failures or anomalies. We note that the postaccident test of the hydraulic systems and braking system conducted by the operator’s director of maintenance and as documented in the public docket for this accident showed no abnormalities with those systems. Specifically, all three hydraulic systems showed normal indications of pressure and fluid quantity; the parking brake was set and released, and the airplane stopped normally when brakes were reapplied. This postaccident test did not show any indications similar to those described in Captain Hamilton’s statement. Further, we note that the accident airplane sustained substantial damage, and the test documented by Captain Hamilton was conducted after repairs to the airplane, most notably a new wing. It is not clear based on the information that the petitioner submitted if additional repair work was performed on the airplane or what systems could have been affected by the repairs. The test conducted by the FAA and the operator promptly after the accident is more illustrative of the condition of the airplane at the time of the accident, before major repairs. Further, neither the captain nor the first officer mentioned that the parking brake light was not illuminated during the accident sequence, as Captain Hamilton had noted in his statement regarding the test. If they had believed that the parking brake was set, as the captain stated in his petition, then the light should have been illuminated. If they believed that the parking brake had been set but the light was not on, they likely would have recognized this anomaly if they were performing the flow and checklists properly. Thus, this information submitted by the petitioner regarding Captain Hamilton’s postrepair test is not persuasive to alter the probable cause and the findings of this investigation.

Regarding the claim that the pilots were not aware of their immediate surroundings, the captain and the first officer admitted being “rushed” during their preflight preparations and forgot to close a door. Neither pilot realized that the door was open until being alerted to that fact by the ground crew. Further, although the pilot indicated that he did not see the ground crew arrive or park and that their ATV was not easily visible, it is reasonable to assume that the ground crew arrived in a vehicle and that it was likely parked close to the airplane, given that the ground crewmembers were close enough to get the pilot’s attention.

The petitioner asserted that no amount of pilot procedures could have prevented the outcome and that the flight crew was following a flow and was performing checklists. We note that the Before Starting Engines checklist, which is included in the docket for this accident, includes steps for both an exterior preflight inspection and also verifying that there is a green light in the cockpit for the cabin/baggage door; however, neither pilot noticed that the door was open until after the engines were started and they were alerted to it by the ground crew. Thus, although the captain indicated that they were following checklist procedures, they clearly made omissions. In addition, we note that the captain was not in the cockpit for a short amount of time. According to the CVR, he left the cockpit after the engines were started. During that time, the CVR recorded sounds consistent with switch manipulation. The captain, therefore, did not observe the steps that the first officer took while he was out of the cockpit, and it is possible that additional steps in the checklists were missed, completed incorrectly, or not completed at all.

Next, the petitioner states that the FAA inspector did not believe the pilot was in his seat at the time of the accident. We note that the analysis section of our final report indicates that “[t]he captain then looked out the side window and noticed that the airplane was rolling forward, and he asked the first officer what she was doing. About that time, the airplane struck the ATV.” The CVR specialist’s report, located in the public docket for this accident, also noted that the captain’s voice was recorded in the cockpit before the sound of a collision was recorded. Thus, the NTSB’s report does show that the pilot was in the cockpit at the time of the accident.

The petitioner also discusses the witness statements from the ground crew. We note that the captain saw the ground crewmembers, so it is likely that the ground crewmembers could also see the cockpit given that the ATV was parked about 10 ft away from the airplane. We considered the ground crewmembers’ statements (none mentioned a glare on the windshield), just as we considered the pilots’ statements, in our analysis of the accident and determination of the probable cause, and we provided details from both statements in our final report.

In conclusion, the petitioner has not provided any direct evidence of an antiskid or electrical malfunction during the accident flight, and neither the captain nor the first officer noted any problems with the electrical or antiskid systems while they were starting the engines. The petitioner provided a statement from the pilot who was conducting a test flight after the airplane sustained substantial damage and underwent repairs that said he had no light and no brakes. However, the test pilot provided no additional information, and because the test occurred after the airplane was repaired, it was not in the same condition that it was in immediately after the accident. To the contrary, during the postaccident test documented by the FAA inspector, the airplane stopped normally and did not experience an electrical surge or braking issue of any kind.

Disposition

Accordingly, the petition for reconsideration and modification of the NTSB’s final report regarding the aviation accident involving a Canadair CL-600-2B16, N613PJ, in West Palm Beach, Florida (ERA15LA288), is denied in its entirety.

Chairman SUMWALT, Vice Chairman LANDSBERG, and Members HOMENDY, GRAHAM, AND CHAPMAN concurred in the disposition of this petition for reconsideration.