

CALLBACK

From NASA's Aviation Safety Reporting System



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WINTER FLIGHT OPERATIONS



Aviation professionals frequently experience winter weather challenges that can probe one's preparedness, skill, and judgment. Winter weather phenomena largely develop from water and freezing or cold temperatures acting separately or together to create hazardous conditions for flight operations. Hazards range from snow or ice-covered ground surfaces and aircraft structural icing to performance issues, systems problems, reduced visibility, unfavorable winds, and more.

Winter conditions demand healthy respect from all parties. Pilots and crews must be equipped and able to manage these seasonal threats, making thorough preflight inspections, effective communication, procedural discipline, and good judgment indispensable to maintaining the safety of flight.

With warm Season's Greetings, *CALLBACK*, this month, presents reported incidents that resulted from common winter conditions during various phases of flight. Consider each narrative, and savor the wisdom and lessons revealed.

Part 91 – Systems Effects

An HS125 First Officer reported multiple systems problems stemming from an unexpected common system trigger.

■ *On departure from ZZZ, we were cleared to climb via the ZZZZZ Departure except maintain 16,000 MSL. During the climb out, we lost pressurization. Main Air Valves 1 and 2 warning lights came on and Cabin Altitude warning illuminated along with Elevator Trim warning. Autopilot was disconnected and the Captain hand-flew the airplane to troubleshoot the issues at hand. We ran the QRH and the checklist to fix the issues and had to recycle the landing gear to clear the warnings. The problem occurred due to ice accumulation on the Right Main Gear Squat Switch. Maintenance looked at the aircraft after arrival and reporting [the] issues, and the airplane was returned to service following inspections.*

Part 91 – Icing Strikes Again

On an IFR flight, this PA28 pilot climbed to an altitude where icing was encountered. Related problems surfaced, and Air Traffic Control provided the needed assistance.

■ *Filed for 3,000... [feet, we were] told to climb to 6,000. There weren't any icing AIRMETs at the time, so we*

complied. As soon as we got to 6,000, we hit ice. Our pitot-static system failed, and airspeed indicator went to zero, and ice was packing on. Our aircraft does not have an icing envelope. I requested priority handling. ATC helped out with the [utmost] professionalism and catered to our needs. We descended, the ice melted, and then ATC asked if I...still wanted priority handling. I replied, "No, we seem stable." We regained our pitot-static system. We landed safely.

Part 121 – Pushback Hazards

A commercial fixed wing First Officer described a pushback that wasn't quite the ride or experience anyone had expected.

■ *Ground...advised to push at our discretion. The Captain and the tug driver exchanged the proper callouts to begin the push, including the parking brake being released and the tug driver clearing the start of the engines. As the push began, I started the engine as directed by the Captain. As I was heads down starting the engine, the tug driver stated to the Captain that the tug had applied the brakes, and the tug and the aircraft were sliding. The Captain responded, asking if the tug driver would like the aircraft parking brake [set]. The tug driver responded yes, and when the parking brake was set, the aircraft stopped moving. The Captain and I did not notice anything unusual about the push. The tug driver and the Captain then coordinated to disconnect the tug and power back to the gate. The Captain tried to power back to the gate, but was unable and then coordinated being towed back to the gate. The Captain and I were unaware of any damage to the aircraft. During pushback, the tug slipped on ice and hit the aircraft. The area beyond the J-line that we pushed into was not clear of ice before commencing the pushback.*

Part 121 – The Lesser of Two Evils

This ERJ170 Captain was confronted with an uncomfortable choice during a winter weather taxi for takeoff.

■ *While on Taxiway 1, in ZZZ in nighttime, snowy conditions on contaminated surfaces, we ended up becoming number 4 in line due to a disabled aircraft that required a tow off the taxiway and back to a gate. We and the other aircraft sat for over 45 minutes with both engines running due to slick airport surfaces, where braking action was less than good. When the line on Taxiway 1 started to move again, it started*

off fine, however, there was one point where the aircraft in front of us came to a stop. I applied brakes and thought that this was taking longer to stop than normal. I pressed harder on the full brakes, and nothing was happening. At this point, I realized that we were, in fact, sliding towards the 737 in front of us. Unable to stop, I thought that it would be safer to try to turn the aircraft towards the left edge of the taxiway and possibly slide off the pavement instead of into another aircraft. I slowly began to turn the tiller, thinking if I aggressively turned, we would've continued to slide forward. I also applied the parking brake. The aircraft began to turn and slide in both directions, forward and towards the edge of the taxiway, but came to a stop a few feet before the edge of Taxiway 1. My FO reported on Ground that [we] were sliding and eventually came to a stop. The aircraft in front of us at that time began to slowly move forward. We never left the taxi surface. When we had enough spacing, I was able to release the brake and slowly align the aircraft back up with centerline and continue taxiing.

Part 121 – Takeoff Considerations

This B737-700 Captain met with a surprise during takeoff. The situation developed quickly, was mitigated just as fast, and in the end, wisdom was gleaned.

■ [I] rejected the takeoff [at] less than 80 knots, due to unstable directional control. [The] aircraft taxied down Taxiway 1, which was covered with snow, partially compacted. [The] aircraft was cleared for takeoff on Runway XXL, full length. We had run performance data for windshear and briefed the precautionary windshear profile, as ATIS was reporting that low level windshear advisories were in effect – wind was 310/15G25. After raising the power to 40 percent N1, I pushed TO/GA, and the thrust levers accelerated to max takeoff power. As soon as the aircraft started to accelerate, the aircraft started to veer to the right. I applied left rudder, and the aircraft started to come back to centerline. Approaching centerline, I reduced left rudder and added right rudder, but the aircraft continued to the left through centerline and was not correcting. I made the decision to reject the takeoff at approximately 60 – 65 KIAS. As we slowed through about 20 – 30 knots, the aircraft started to slide on the runway, even with full brakes applied. We stopped on the runway and then taxied clear. Total distance from brakes release to taxiing clear of the runway was approximately 2,000 ft. I thought that the nose wheel was aligned with the runway centerline, but the possibility certainly exists that it was slightly canted to the right. I underestimated the runway conditions, which I feel exacerbated any misalignment that may have existed prior to takeoff power being applied.

Part 121 – A Winter Wonderland Landing

Following a near textbook approach and touchdown, this commercial fixed wing Check Airman described details of the landing and rollout, which did not go exactly as planned.

■ [I] just gave a check ride to a Captain into JAC. Weather was standard for JAC at this time of year (night, -SN, BR, 3/4 vis, 500 ft. OVC, gusty winds, -12 degrees). Captain was very diligent throughout the flight getting regular updates from Dispatch on field condition (FICON) and braking action (BA). We even had a Company flight land 15 minutes in front of us who said BA was good throughout rollout. Runway 19 FICON was 20% compacted snow, BA reported good (1/8” or less of dry snow). Runway plowed and recently brushed. Flaps 40, max autobrakes ILS Z Runway 19. 115k landing weight. Captain used 10-7 landing data tables good-medium braking numbers to be conservative. Great approach and stuck the landing just prior to 1000 ft. (hard to tell because you couldn't see any runway markings because of the snow, but he landed just prior to abeam the PAPIs). Braking action was good. Captain kept autobrakes on and full thrust reversers until 80 kts GS. Passed Taxiway A2 and elected to continue to exit A1. GS was 40 knots. Because he had about 2000 feet to go, he elected to keep his speed at 40 knots. As he was approaching A1 (about 1000 ft. to go), Captain tried to slow down (was roughly at 30 knots GS) and started to have directional control problems when he did (sliding laterally). IAW SOP, he released the brakes and used nose wheel steering, rudder, and differential braking to come back to center line (there was a...x-wind ~5 kts). BA at the end of the runway had significantly degraded. That caused his landing rollout to increase, of course, and [he] was only able to slow the aircraft to 13 knots approaching A1. Captain did not feel it was safe to try and make the turn at 13 kts... so elected to go straight and continue to slow, which forced him into the overrun (100 feet?). He continued to decelerate to 3 kts, where he did a U-turn and exited at A1 safely (with Tower approval). His debrief captured the appropriate lessons learned. First Officer (FO) was also debriefed about his responsibilities to monitor the groundspeed and speak up if he thought the groundspeed was too high (given the conditions).

The reports featured in CALLBACK are offered in the spirit of stimulating thought and discussion. While NASA ASRS does not verify or validate reports, we encourage you, our readers, to explore them and draw your own conclusions.

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ASRS Alerts Issued in October 2025	
Subject of Alert	No. of Alerts
Aircraft or Aircraft Equipment	2
Airport Facility or Procedure	15
ATC Equipment or Procedure	7
Hazard to Flight	1
Other	3
TOTAL	28

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A Monthly Safety
Newsletter from
The NASA
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P.O. Box 189
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94035-0189
<https://asrs.arc.nasa.gov>

October 2025 Report Intake	
Air Carrier/Air Taxi Pilots	5,098
Flight Attendants	1,772
General Aviation Pilots	1,640
Military/Other	791
Controllers	298
Mechanics	232
Dispatchers	210
TOTAL	10,041