CALLBACK
From NASA's Aviation Safety Reporting System
Issue 522 July 2023

TIME PRESSURE

Focusing on Time Pressure this month, *CALLBACK* continues its informal look at Human Factors (HFs) in aviation. A fascinating HF, Time Pressure is present to some degree at each moment of every flight. Imperceptible at times, it can be intense under demanding conditions.

Time Pressure is complex. It has influence on quality of decisions, and it rarely acts alone, but rather in concert with other HFs. Events can suddenly thrust a pilot or crew unwittingly into a continuum where decisions must be made in minimal time. A good decision may reduce pressure, advance clearer thinking, and effect better results. A lesser decision could cause or increase pressure and may further jeopardize judgment and the safest course of action.

This month, we feature reported incidents that occurred across varied situations and aviation operations where Time Pressure was predominant in some way. Enjoy the many facets, vectors of involvement, and complexity that Time Pressure assumes in these narratives.

Part 91 Approach Turmoil

Last minute changes elevated Time Pressure and resulted in an undesirable aircraft state for this jet transport crew.

From the First Officer's report:

■ *We…were initially expecting…the X runways but were later changed to the YY runways. At the last minute, they switched us over to plan the RNAV visual for ZZR. This led to…task saturation and ultimately…to the snowball effect.… Our last fix on the arrival was the first fix on the visual approach. We were in a hurry to get this entered last minute and dual verify our fixes.… My Captain noticed we were really high in reference to the airport.… VNAV was not stepping [us] down.… We were still on manual sequence, which we didn't notice in our flight plan sequence, since we were busy manually going to vertical speed [mode] to reach the altitudes at each fix.… I was…getting us down. My Captain was trying to work on what caused this.… I was still expecting the FMS to sequence to the next fix.… Instead, it kept heading in manual sequence toward a hotel.…*

Human error is ultimately the issue. There was…a lot going on at once. Usually…there aren't so many changes to a flight plan.… We…didn't get a lot of time to see our mistake.

From the Captain's Report

■ *We were heading for a hotel and we were way too close. We made an immediate left turn. The GPWS alarm sounded as we were turning away from the obstacle. Once headed toward the runway, we…were able to stabilize the approach and land normally.… All the points on this approach are so close together, it makes it difficult to analyze where you are, where you should be, and if necessary, how to get to where you should be. All this happens…when you are configuring the aircraft and communicating with your flying partner and…ATC.… Eliminate or simplify this procedure.*

Part 135 Medevac Action

Time Pressure was key in demanding conditions and led to an oversight by this air ambulance helicopter pilot.

■ *Another helicopter was inbound to the same Helicopter Air Ambulance (HAA) helipad that I was occupying (ZZZ1). I had to hurry and leave the medical crew to clear the pad and reposition to ZZZ. Weather was marginal as reported by ZZZ2 Tower but above 1000/3. Enroute, the weather seemed lower toward ZZZ, and I obtained ATIS Victor, reporting 6 miles visibility and 900 BKN. I contacted ZZZ Tower with the ATIS and my request for landing at FBO.… I received the squawk code, but I forgot to also request a Special VFR (SVFR) clearance.… After my readback and ZZZ verifying my position…Tower stated something like, "Cleared into the Charlie with special," and I replied, "Roger, inbound to [FBO] with Victor." My mistake was that I forgot to ask for the SVFR clearance on initial [contact] when I called to establish communications with the controlling agency, ZZZ Tower. Due to the haste of clearing the HAA helipad, deteriorating weather conditions (which were getting close to company weather minimums), flying at a lower altitude than normal (between 400 to 500 feet), scanning outside more intently to avoid a potential collision with antennas because of the lower altitude, and ongoing radio traffic chatter, I believe I was getting task saturated and time compressed. Also, I haven't had to use SVFR clearance in over at least 10 years, so it didn't come to mind. Had I slowed down and preplanned in my mind for the possibility of lower VFR weather…or even weather below VFR minimums…when I lifted, that might have allowed me to recall the requirement for the SVFR clearance if weather was less than a 1,000 [foot ceiling] or 3 [miles visibility].*

Part 121 Critical System Failure

A B737-800 Captain describes the crew's actions to resolve an urgent situation that rendered time at a premium.

■ *Conditions were IFR with light to moderate rain and visibility of 2 ½ miles.… The Pilot Flying (PF) was the First Officer (FO).… Descending on…downwind, the FO stated that the aircraft was making an uncommanded turn. With his hands on the controls, the autopilot disengaged. The FO struggled to regain control, indicating strong control force and a pitch down trim force. Concern was a possible runaway trim. I immediately deployed the trim wheel handle and began to trim the airplane aft according to FO instructions. My only concern at the time was flying the airplane and regaining control.… ATC called several times to issue turn instructions. We did not respond, due to the urgency of aircraft control. After regaining control, there were concerns about the trim, as expressed by the FO. I…cutoff the stab trim switches and informed the FO that switches were cutoff and that we were now manual trim. I then responded to ATC and [requested priority handling].…*

We now had control under what seemed to be manual reversion. The FO was doing a great job turning and descending…to 4,000 feet to establish ourselves on final. There was much dialog and sense of urgency in our communication in the flight deck. I wanted to land immediately, since time was a factor and weather was not in our favor.… We started to configure with flaps. We attempted to extend the gear, but the gear did not extend. At this point…the approach to landing would not have been feasible. I requested a straight out miss, maintaining 4,000 feet. ATC granted that request, and shortly thereafter gave us a climb to 8,000 feet and a turn.… At this point, we got busy in a hurry. The FO wanted to clean up the flaps. This made sense at first, and then I reconsidered. Valuable time was being wasted trying to climb and configure. I also did not see any advantage to clean up with a hydraulic issue. I did not want to lose the use of flaps and then complicate the issue more.… The FO and I…agreed not to clean up completely, and we left the flaps at 1, but the indicator stopped at 5.… ATC…gave us clearance to maintain 5,000 feet. This helped us focus on the gear problem.…

Up to this point, everything was just happening too fast, and I needed to slow things down and get the gear down. I opened the QRH and started the Manual Gear Extension checklist. I had the jump seat pilot extend the gear, since he had great access to these handles. The right gear was dropped first. This caused a yaw to the right and a pitch down attitude. More manual trim was required. Then the nose and left gear [were lowered]. This stabilized the yaw.

At this point, I was ready…for the approach and advised ATC. They…gave us headings back to the ILS.… I asked the FO if he was OK or needed a break.… He was good to continue…flying.… I instructed the FO to keep the turns to no more than 10 degrees [of bank]. I advised ATC that we needed a shallow intercept to final. The HYD B system was at 60 percent, and brake pressure was just above 2,500 PSI. I…and the FO…agreed that he would only fly the plane. I had the thrust levers and the trim. We settled on a speed of 170 knots for approach.… We broke out at 400 feet AGL with the runway in sight and light showers. Once landing was assured, I set the power to idle. The FO needed back trim to arrest the sink rate, so I trimmed back aggressively. We landed and maximum braking was applied. Control was exchanged, and I was able to turn off, slowly clearing the runway. We were towed to our gate.

Recreational and Part 107 Transgression

Time Pressure nudged this UAS operator to fly unprepared within airspace regulated by both FAA and local ordinance.

■ *I was flying my drone…and was so focused on the video clips I was recording, that I failed to realize I briefly broke an FAR by flying my drone over moving traffic.… I did not realize I broke an FAR, as I am a newer drone pilot. After I made this mistake, I showed the video to a friend, who is a Part 107 pilot.… He made me aware of my mistake. He also informed me that I need to be a Part 107 pilot to fly in that area, due to the local drone ordinance.… I was in a rush to use my drone before sunset, and I did not do the proper research prior to flying in this location.…*

To correct my actions in the future, I will be obtaining my Part 107 drone license to enhance my knowledge on the FARs for UAS operations, and I will be ensuring I get more drone experience before I fly my UAS in a complex area to navigate. Also, I need to further analyze the PAVE model (Pilot, Aircraft, EnVironment, External pressures) before flying my UAS. Better usage of the PAVE model would have alerted me that I was rushing and was not in the correct mindset for flight.… The external pressure of rushing to fly before sunset caused me to lose situational awareness.… I should have called the flight off for another day so I could have had time to do proper research prior to flying and be in the correct state of mind to conduct UAS operations.

Sign up for the *UAS Safety In Sight* email today!

Stay connected to learn more about emerging UAS safety topics and ASRS UAS safety reporting.

ASRS Alerts Issued in May 2023	
Subject of Alert	**No. of Alerts**
Aircraft or Aircraft Equipment	3
Airport Facility or Procedure	2
ATC Equipment or Procedure	4
TOTAL	**9**

522

A Monthly Safety Newsletter from

The NASA Aviation Safety Reporting System

P.O. Box 189 Moffett Field, CA 94035-0189

https://asrs.arc.nasa.gov

May 2023 Report Intake	
Air Carrier/Air Taxi Pilots	5,450
General Aviation Pilots	1,828
Flight Attendants	750
Controllers	456
Military/Other	293
Mechanics	219
Dispatchers	213
TOTAL	**9,209**