

CALLBACK

From NASA's Aviation Safety Reporting System



Issue 463

August 2018



The go-around is a dynamic and complex maneuver. It requires decision making, situational awareness, Crew Resource Management (CRM), precise flying skills, and rigorous procedural execution to perform well under the best of circumstances. Add possible elements of surprise, distraction, lack of planning, weather, aircraft problems, or crew fatigue, and the task can become very challenging.

Aircrews periodically practice go-arounds in simulators and are evaluated on their performance. Only a small percentage of approaches flown in aircraft result in actual go-arounds, so it is not surprising that performance sometimes suffers during the real-world maneuver.

This month *CALLBACK* shares reports of go-around incidents that reflect the constant need to maintain the gold standard of flight operations. These reports also reveal some unvarnished truth about go-arounds and provide topics for discussion that may enhance safety during a critical phase of flight.

Procedural Flu is Going Around

An A320 First Officer observed a procedural error during a go-around. Hesitation and confusion culminated in quickly changing conditions and undesirable consequences.

■ *While executing a go-around, the Captain failed to reach the [Takeoff/Go-Around] (TO/GA) detent, resulting in a "TOO LOW, GEAR" warning. I directed the Captain to push up the throttles. The flaps were retracted to 3 as directed by procedure, then to 1. A climb to 2,000 feet and a turn to 220 degrees were given by ATC. Approaching 2,000 feet, the aircraft began to accelerate. I told the Captain to come out of TO/GA, but he delayed in doing so, causing a flap overspeed before I could retract flaps. ATC then issued climb instructions to 4,000 feet. In the confusion of the moment, the turn to 220 degrees was delayed, and a traffic conflict arose. We were instructed to call the Tower after landing.*

Ups and Downs of Going Around

This B767-300 flight crew was unfamiliar with a missed approach procedure that was described as "very unusual." Confusion existed, the aircraft's flight path compromised flight safety, and serious consequences could have resulted.

From the Captain's Report:

■ *[While] on the ILS to Runway 13R [redesignated Runway 14R] at Boeing Field, the glideslope and localizer were captured in IMC. At approximately 1,900 feet, inside ISOGE, we got a line through the glideslope [indicator along with the] AUTOPILOT light. The aircraft lost the glideslope and basically waffled in the air. [Having] no chance of re-intercepting the glideslope, we decided to go around, executed our procedures, and informed ATC. ATC told us to descend to 1,500 feet and track the localizer. We elected to level off. In the Go-Around mode and a heavy B767, we didn't think it prudent to enter a descent to 1,500 feet. ATC gave [us] a climb and vectors. They pointed out traffic, which we acknowledged. The second approach was uneventful. During the second approach, we asked ATC for missed approach instructions, ... and they told us to descend to 1,500 feet and track the localizer. After landing, we were told to call TRACON [Terminal Radar Approach Control]. TRACON...told us that we're expected to descend on the go-around to 1,500 feet due to traffic...into Seattle. [They] described it as a "very unusual procedure." He also told us there was a conflict with another aircraft.*

The causal factor in this incident is the missed approach procedure for Runway 13R. ... I have never heard of a missed approach procedure that requires you to descend on a go-around.¹ ... [I am] not sure that is the safest way to do a missed approach. In addition, we were also in the 13th hour of duty. We had diverted earlier because of weather.

From the First Officer's Report:

■ *We decided to execute a missed approach. The aircraft started to climb. I called Boeing Tower to report the go-around, and they said to descend to 1,500 feet; I said, "What?" They said to call Seattle Center. I called Center, they gave us a turn to 040 [degrees] and a climb to 3,000 feet [for] vectors back to the ILS. We called Center on the ground... They said we needed to descend to 1,500 feet on the missed approach. We are not taught to descend on missed approach procedures. This is a very dangerous [missed] approach.*

First Things First

A B737-700 flight crew experienced a malfunction during a go-around that had been initiated at minimums. Both surprise and distraction were factors in the situation that developed.

From the Captain's Report:

■ Commencing the ILS approach, visibility was reported to be 1,800 RVR. The approach was normal until the minimums call. With no part of the runway environment or approach lights in sight, I initiated the missed approach by pressing the Takeoff/Go-Around button...one time and calling for flaps 15 and landing gear up. I flew the pitch up to the flight director cue, and about the time the pitch was correct for the procedure, the autothrottles abruptly went to full MAX power causing an abrupt pitch up beyond 20 degrees.... During the initial procedure, I was thinking that we were very close to our pre-briefed fuel state for a diversion versus a second approach decision. I diverted my attention momentarily to the fuel gauges. I was following the thrust levers lightly with my hands rather than having them firmly in my grasp. The missed approach was very controlled and smooth up to that point, and I felt quite relaxed with how it was proceeding. As the thrust levers moved rapidly to MAX, I lost physical contact with them while the nose pitched abruptly up.

My initial reaction (after one of those "What...was that?!" moments) was to reach for and grasp the thrust levers and begin pulling them back, while pushing on the yoke. The thrust levers came back more quickly than the nose came down, as I had underestimated the amount of force required, and an already decreasing airspeed decayed more rapidly. At this point, I had just disconnected the autothrottles, and simultaneously with the "AIRSPEED LOW" annunciation and stick shaker activation, quickly moved the thrust levers forward, adding to the difficulty of holding the nose level. I was hesitant to lower the nose further to break the impending stall because of the low altitude.... Holding essentially level (deviations both up and down due to the forces involved), the aircraft powered out and airspeed increased sufficiently to resume the climb and missed approach.

Remarkably, with the airspeed having decayed as low as 97 KIAS, the aircraft never stalled. We were just under our maximum landing gross weight.... At heavier approach weights, it is quite apparent to me that, even with MAX power, airspeed will decay quite rapidly if the aircraft is allowed to pitch up as the power moves up. I could...have handled the uncommanded power application better had I been totally focused on the task at hand and not trying to rethink ahead to something we had already...briefed. It took no time at all from a second's inattention to a highly undesired aircraft state.

From the First Officer's Report:

■ On go-around, the Pilot Flying (PF) selected the go-around button once with the autothrottles engaged. The

autothrottles commanded full thrust, and the PF wasn't ready for the uncommanded thrust setting. This caused a big pitch increase and subsequent stick shaker. We landed on the next approach and wrote up the autothrottle system.

Back to Basics - Again

This B737-700 flight crew was set up high on the approach by ATC. The resulting go-around provides a mosaic of intricacies, insight, and flight management philosophy that both challenges and champions aviation excellence.

From the Captain's Report:

■ Approach Control vectored us in too close and too high to get properly established on the ILS.... I was the Pilot Monitoring (PM), and said to my First Officer, "This isn't going to work by 1,000 feet." We were at 3,000 feet MSL, and the PF was urgently configuring the flaps to 30 degrees. I told Approach, "We're going around." The PF added power, but allowed the nose to pitch up too high, giving us an "AIRSPEED"...warning.

I know the PF corrected somewhat, with the pitch, by lowering the nose, but again, the nose pitched up and we got a second "AIRSPEED"...warning. I was moving the flap lever to 15 degrees (I think?) when we got the first "AIRSPEED" alert. After the second warning, the PF pushed aggressively down on the yoke to get airspeed back. I said, "Level off" with his more aggressive maneuver... He did and the airspeed [increased]. We got vectors back around for another approach and landed without incident.

[Factors included] mishandling on the PF's part...and my own mishandling, as a Captain, not to take controls and be ready to help coach through a dramatic...go-around, which is rarely done and unexpected.

From the First Officer's Report:

■ The approach should not have been continued. I should have commenced the go-around once it was apparent the glideslope was too low. There was a clear disconnect between the crew. Only one was flying the aircraft and the other was talking to ATC. The go-around maneuver was not completed together, in a timely manner, resulting in the error.... PM and PF coordination was lost. We seldom perform go-around maneuvers and can be caught off guard. We briefed the go-around procedures on the [charts], but we should mentally or verbally go over the maneuver.

1. Although not common, other locations within the United States including, but not necessarily limited to, Teterboro, Orlando Executive, and Van Nuys airports currently have missed approach procedures that may require a descent in the event of an early go-around.

ASRS Alerts Issued in June 2018	
Subject of Alert	No. of Alerts
Aircraft or Aircraft Equipment	5
Airport Facility or Procedure	5
ATC Equipment or Procedure	5
TOTAL	15

463
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>

June 2018 Report Intake	
Air Carrier/Air Taxi Pilots	5,535
General Aviation Pilots	1,355
Flight Attendants	559
Controllers	535
Military/Other	305
Mechanics	218
Dispatchers	195
TOTAL	8,702