CALLBACK

From NASA's Aviation Safety Reporting System

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What Would You Have Done?

In this latest "interactive" issue of *CALLBACK*, all of the reports involve incidents that occurred before, during, or immediately after takeoff. In "the first half of the story," you will find report excerpts describing the situation up to the decision point. There are no "options" presented as in some of our recent "interactive" issues. It is up to the reader to determine all the possible courses of action and make a decision (preferably within the time frame suggested by the report).

The selected ASRS reports may not give all the information you want and you may not be experienced in the type of aircraft involved, but each incident should give you a chance to exercise your aviation decision-making skills. In "the rest of the story," you will find the actions actually taken by reporters to resolve each situation. Publication of a report does not constitute ASRS endorsement of the reporter's action and the decisions presented may not necessarily represent the best course of action. Our intent is to stimulate thought, discussion and training related to the type of incidents that were reported.

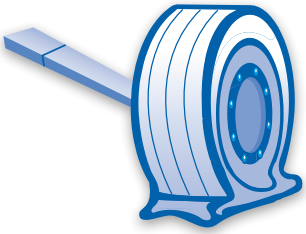
The First Half of the Story

Situation #1: Flat Out Right…or Wrong

(Experimental Aircraft Pilot's Report)

■ [After landing], *I realized that I had a flat left main tire. However, due to the strong winds, I was able to apply right aileron, lift the left main and taxi to the FBO on the right main and tail wheel.*

I…applied "Fix-a-Flat" to the tire [but it] *failed to stop the leak. Because the aircraft uses "unusual" wheels, obtaining a replacement tire from the FBO was not an option. Ordering a replacement would have taken a week or so. My options were to fly the airplane home or leave the airplane at the FBO and get a replacement tire.*



I began seriously considering flying the airplane home. My thought process was as follows: This is a tail wheel aircraft well known for its ability to takeoff and land at very slow airspeeds in very short distances. With a touch of flap and lightly loaded, it can lift off at approximately 20 knots. I had 20 knots of wind directly on my nose. I would be airborne with a ground speed of less than 5 knots. Takeoff would not be a problem, even with the flat. My home airport was reporting winds of over 25 knots down the runway so landing would also be a slow ground-speed event…. Having already landed with the flat, I knew that landing and ground handling was not an issue. I elected to fly the airplane home.

I…was cleared to taxi…. Ground asked me if I was aware that I had a flat left main tire…. I said…I was OK with departing if he was OK with letting me go. Upon contacting Tower, I was told, "Enter the runway at your own risk." I asked if I was cleared for takeoff. Tower said, "No takeoff clearance will be granted. Enter the runway at your own risk." I said, "I don't want to enter the runway if someone else is on final. Am I cleared?" Tower said, "No traffic is observed in the area. Enter the runway at your own risk."

What would you have done?

Situation #2: Sticky Situation

(DHC-8 Captain's Report)

■ [The field] *was IMC with moderate snow. Type 1* [de-icing] *fluid was applied followed by Type IV* [anti-icing fluid]. *About 15 minutes after being treated, we were cleared for takeoff. At V1/VR, I applied smooth backpressure on the yoke. Suddenly it felt like the yoke was sticking and the nose wouldn't come off the ground.*

[An ASRS analyst's callback to the reporter revealed the following additional information: 1. The pilot was familiar with control issues on the DHC-8 attributable to Type 4 anti-icing fluid. 2. A very thorough check of the control movement was accomplished during taxi with no abnormalities noted.]

What would you have done?

Situation #3: Unplanned Formation Takeoff
(B737-800 Captain's Report)

■ *Runway 9R; winds 080/27; wet runway; aircraft weight 155,000 lbs; OAT 30° C;* [field elevation 20 feet MSL; V_1= 151; V_R= 161].

There was a large [thunderstorm] *cell directly ahead of the 9L/R Runways and closing. The aircraft in front of us was issued a right turn to 120 degrees after takeoff. We were cleared into position and hold Runway 9R…. The rain shower was now over the field and intensifying. We changed the power setting to max power and reduced V1 by 5 knots. We were cleared for takeoff and given a right turn to 140 degrees to avoid the weather.*

At approximately 100 knots, I could see a B757 out of my left side window between 50 and 100 feet in altitude. He was low enough that I could not tell if he was taking off or performing a go-around on Runway 9L. The B757 had not called the Tower announcing a go-around…. Tower had issued instructions to all departing aircraft to turn right to the southeast to avoid the cells.

What would you have done?

Situation #4: Low and Slow
(Light Sport Aircraft Pilot's Report)

■ *I was to ferry a light sport airplane to its new owner. Since the departure conditions were gusty and the crosswind component was near the maximum demonstrated for the airplane, I considered my choices carefully—whether to leave at all, which runway to use, etc.*

Among the considerations was the takeoff flap [setting]. *The manufacturer recommends either no flap, or 15 degrees. For a while, I was "on the fence." No flap would minimize my initial drift while I was low, but 15 degrees (first "notch") would have me climbing faster…. At one point I decided that my previous decision to use no flap was not the best choice. I moved the flap selection lever to select 15 degrees...more than the 15 I had already put in, and forgotten…. I failed to verify the setting by looking. Had I done so, I would have seen that the selection lever was pointing at 30 degrees.*

At takeoff, the airplane was climbing very poorly. I found myself drifting off center-line, low and slow over flat airport property in a matter of seconds.

What would you have done?

The Rest of the Story — The Reporters' Actions

Situation #1: Flat Out Right…or Wrong

■ *I asked the controller straight out, "Are you going to issue me a takeoff clearance?" He replied, "No." I was not about to cross the hold-short line without a clearance. "Enter the runway at your own risk" was not a clearance in my mind. So I decided that this flight was now over.*

In the end, I am glad that the Tower Controller did not clear me onto the runway and I am also glad that I elected not to cross the hold-short line without a clearance. Ultimately, not taking off and putting the airplane back in the hangar was the right decision. There is just no sense in increasing risk and, while I was sure that both the airplane and I could handle the situation, there is no question that the risk of taking off and landing with a flat tire is higher than without a flat tire.

Situation #2: Sticky Situation

■ *I applied even more pressure and after about three seconds we became airborne. Once airborne I did roll and pitch corrections to see if anything was abnormal. Everything seemed to be working normally and we continued with no problems.*

Thanks to our training department and those other crews that have dealt with this, we took all the precautions during our taxi checks even doing extra control checks with the elevator. So, when the event occurred, I can't honestly say I was ready for it, but…I knew exactly what was occurring. This was my first time getting Type IV fluid on a [DHC-8]. *We have had a few aborts due to failure to rotate* [presumed to be] *due to de-icing* [fluid anomaly] *events.*

Situation #3: Unplanned Formation Takeoff

■ *Without a clear understanding of which direction the B757 would turn to avoid the thundershower, I had no choice but to abort the takeoff to avoid a potentially catastrophic incident. The rain intensity would have shielded the Tower views of the low altitude go-around. We did not hear a go-around call from the B757 or any Tower instructions. I was not comfortable doing a formation takeoff in IMC conditions…. The abort was initiated at 120 knots. All systems worked as advertised…. The aircraft stopped on the centerline.*

Situation #4: Low and Slow

■ *I realized the error immediately and elected to land on the flat ground, into the wind, rather than attempt to remove any flaps while I was low and relatively slow. The landing itself was normal and no damage resulted. I advised Tower that all was well and I prepared for another departure attempt.*

A friend, who was seeing me off, sent me a text message pointing out that I didn't have to leave. I had a chance to reconsider. Incredibly, the thought of postponing hadn't even crossed my mind. That message loosened up whatever mental cog was stuck. A decision to leave the next day seemed obvious, especially when I thought about how this would read in an NTSB report (Pilot attempted to take off; landed off runway after aborting; crashed on second attempt!) That no damage or injury was sustained is largely a matter of luck.

Nobody would be the least inconvenienced or concerned if this flight took place a day later. What was I thinking? Factors: false urgency; "get-there-itis;" failure to fully appreciate just how vulnerable low-power, low-wing-loading aircraft are to strong crosswinds; failure to look and confirm settings; getting mentally stuck in a groove (i.e. not considering postponing the departure, even with "in my face" evidence of the unsuitability of the prevailing conditions).

ASRS Alerts Issued in May 2011

Subject of Alert	No. of Alerts
Aircraft or aircraft equipment	8
ATC equipment or procedure	4
Airport facility or procedure	2
TOTAL	**14**

378

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

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May 2011 Report Intake

Air Carrier/Air Taxi Pilots	3017
General Aviation Pilots	1008
Controllers	753
Cabin	317
Mechanics	138
Dispatcher	71
Military/Other	22
TOTAL	**5326**