

THE REJECTED TAKEOFF

As you begin the roll to launch an IFR departure, you're focused on the airplane's performance — not on a surprise call from the tower.

by Harry Kraemer

The tower controller just has cleared you for takeoff. The weather is poor with low clouds and restricted visibility. Your balanced field length is tight today with the wet runway.

You line up on the runway and push both throttles forward. As you approach V₁, you hear the words, "November One Two Three Four, abort, abort!"

You immediately go to max reverse and push hard on the brakes. As the wheels lock momentarily, the aircraft starts to slide a bit, but the airplane remains under control though you use the entire runway to grind to a halt.

With the brakes smoking and possibly a few flat spots on the tires, you taxi clear of the runway. With your eyes scanning the warning and advisory lights trying to find out why you were ordered to abort, you contact ground.

The ground controller informs you that ATC ordered the abort because of some type of airspace problem. Still shaking, you decide to taxi back to operations to have the aircraft looked at by maintenance personnel and calm down a bit before launching again.

What's Wrong Here?

For starters, the wording is incorrect. According to the Controller's Manual (FAA Order 7110.65M Air Traffic Control), the proper phraseology is, "Cancel takeoff clearance," followed by the reason.

Second, the Controller's Manual also states, "Once an aircraft has started takeoff roll, cancel the takeoff clearance only for the purpose of safety." It also goes on to say, "In no case should a takeoff clearance be canceled after an aircraft has started its takeoff roll solely for the purpose of meeting traffic management requirements."

It's one thing to read and write about what is a correct procedure and why, but it's a different ball game when you are experiencing it firsthand.

For one thing, not knowing why the order to abort was issued would be pretty disconcerting. Am I on fire? Is there traffic that I don't know about? Is there an airplane lost on the airport surface? Is there a bomb threat to the aircraft?

There are more than just a few possibilities that might exist on the airport that you, as the PIC, may not know about.

In any case, it would be hard to ignore a controller's order to abort just because he used improper wording. At a critical time like this, you don't have time to clarify phraseology or ask for reasons. You have to react. A split-second delay can change the outcome.

Rolling below V₁ helped in this scenario. But what if you were at VR, past the decision point? Do you go? Do you abort?

At an airport where the departure end is two miles from an intersecting runway, the tower may see conflicts that are invisible to a departing flight.

The unknowns still would be pounding at you. If you knew that you would run off the runway trying to abort, you might go if all indications on board the aircraft were good.

Staying alert on the frequency and trying to keep tabs on the aircraft in the area will give you a good picture of the traffic in the area, helping in the decision-making process.

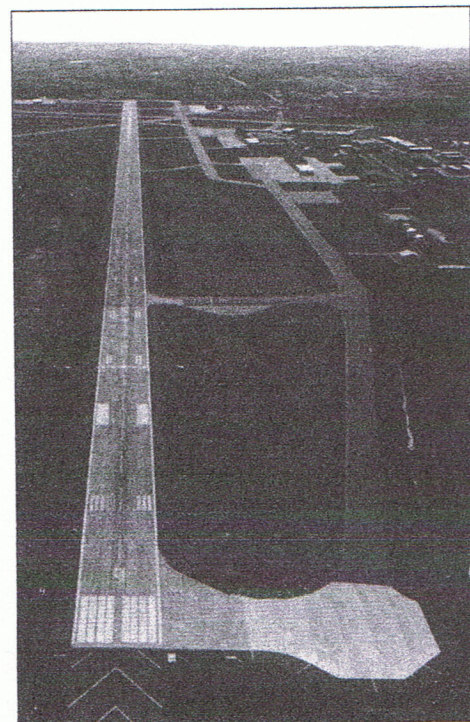
ATC Problems

The pilot isn't the only one with unknowns. The controller issuing the clearance also is faced with unknowns.

For one, he doesn't know if you are at or above the speed at which you can safely abort. The PIC must keep this in mind if or when he is issued cancel takeoff instructions. Don't think that because ATC issues the order to abort, it can be done safely.

It is imperative that the PIC has total situational awareness and is fully aware of what he and the aircraft are capable of doing at all times and phases of flight.

I am not saying to disregard ATC's instructions, only that the PIC must have all available information to make good decisions. The more information



FIELD TIPS

that you have, the easier it will be to make useful decisions.

In basic training, instructors practice aborted takeoffs with their students. The order to reject the takeoff comes from inside the cockpit, and some simulated reason is given.

Often because of this very early basic training, pilots have become somewhat accustomed to the abort order when it comes from inside the cockpit but may be somewhat startled and thrown off when it comes from outside the cockpit. How would you react?

Land And Hold Short Ops

The pilot of a departing aircraft should be particularly aware of land and hold short clearances, especially if the land and hold short runway is the runway on which he is departing. A LAHSO clearance to a landing aircraft could end up with an abort clearance to a departing aircraft.

ATC may issue and the pilot may

accept a LAHSO clearance if certain conditions are met. Once a pilot accepts a LAHSO clearance, however, it must be adhered to; it is just like any other ATC clearance.

A problem may arise when a pilot is trying his best to adhere to the accepted LAHSO clearance rather than initiating a go-around. In such a case, the pilot may have misjudged his descent rate or tailwind component or may have been a little fast and be floating a bit in the flare.

It will become obvious after touchdown that the aircraft is not going to stop in time to comply with the LAHSO. ATC may just have issued you your takeoff clearance, and you may have started your takeoff roll.

An alert tower controller might notice that the landing aircraft is not going to be able to stop before it gets to your runway. Excited, the controller may yell for you to abort.

Land and hold short operations are one scenario that should encourage

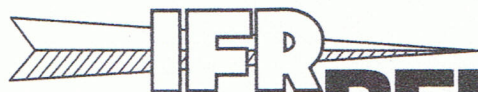
you to keep an ear on the frequency. The PIC needs to stay in touch with the flow of traffic and have a good picture of conditions in the area that may be of concern.

Hearing ATC issue a LAHSO clearance for your departing runway is a heads-up that things could get complicated quickly.

If, after starting your takeoff roll, an abort clearance comes from ATC, you still may have unknowns, but having the big picture and a glance down the runway may give some insight as to the reason of the abort clearance.

This is where total situational awareness is vital, not just to the aircraft accepting the LAHSO clearance but for other aircraft and flight crews departing on the intersecting runway.

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