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Over the Line

Seven steps to avoiding runway incursions

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Our point of closest proximity to another aircraft occurs on the airport and in runway environments. For that reason, one of the greatest potential threats to a major aircraft accident or incident is the runway incursion.

A runway incursion comprises “any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and takeoff of aircraft.” The National Transportation Safety Administration and the Federal Aviation Administration (FAA) have both given the effort to reduce incursions a high priority, and the National Association of Flight Instructors (NAFI) has committed to help in this effort.

Avoiding runway incursions is important not only to keeping ourselves safe but also to protecting the other users of the airport. In the first quarter of 2009, 68 percent of the runway incursions that occurred nationwide were caused by general aviation (GA) operations. This means that as GA pilots and instructors, we have some work to do. We have the ability to play a significant role in the reduction of runway incursions

across the country.

NAFI has been working with the FAA’s Office of Runway Safety to coordinate an improved understanding of runway incursions. Recently, you received a mailing from the FAA and NAFI that included a DVD about runway incursions. This is a start. If you missed that—or just want a review—the following are a few tips that will help.

1. Know airport environment signage. How well do your students understand the signage at the airport? They may be used to the environment there, and at other local airports, but what happens when they need to make that business trip to a large airport that may have multiple ground traffic controllers, and they need to taxi from the farthest end of the airport to the GA terminal on the other side? Do they really know what each of those signs means along the way? Take some time to review the *Aeronautical Information Manual (AIM)*, which directly addresses Airport Marking Aids and Signs to make sure they know what ground and signage markings require them to stop or how they direct pilots as they taxi.

2. Use an airport diagram. When you taxi during a lesson, it should

be your standard operating procedure to have an airport diagram out for reference. You’re setting an example. While you may operate out of a simple, nontowered airport, your students will likely someday fly into one that’s more complex, and those airports will require detailed study. Furthermore, a taxi diagram makes it easier to visualize the controller’s clearances and the routes you will be using when you taxi, even when you and your student are familiar with an airport. That prepares the student for those days when she’s at an unfamiliar airport or a larger one with complex taxi diagrams. Make it a practice, as you get a clearance for taxi, that your student writes it down and reads it back to the controller before your wheels move. This will verify that what she’s heard is what the controller wants her to do.

3. Keep passenger distractions to a minimum. Sometimes, as pilots, we know what we are supposed to do, but a distraction can take our mind off our task for a moment. Talking with passengers or attending to their needs can be one of those potential distractions. While taxiing, your student should know to ask his passengers

to remain quiet or, if he has the ability in his intercom, to use the “crew isolate” or “pilot isolate” function to keep a clear communication path between him and the controller. Better yet, teach him to use his passengers. He can give them a quick lesson on runway signage and what to look for, and they can help him keep an eye out for potential hazards.

4. Organize your cockpit. A messy cockpit can become a distraction—and it can leave your student in a position where she can’t find that suddenly critical taxi diagram. The turnoff from the active runway, while the ground controller is waiting, isn’t the best place to have to find that long-lost airport diagram. Teach your student to keep her charts in a position where she will be able to reach them. Again, she shouldn’t feel bad about using her passengers to help, and having the passenger in the right seat or in the back hold her charts is an example of good cockpit resource management (it also keeps her passengers engaged and feeling like they are a useful part of the flight experience). To start, show your student the importance of planning ahead. Before she enters the airport control area, she should have the next couple of charts she’s going to need ready and staged.

5. If you aren’t sure if you can cross, ask! As your student taxis, if he has any doubt that he was cleared to cross a runway—whether active or inactive—he should just ask the controller. Sometimes we get long taxi clearances that take us over long expanses of the airport, and if it’s long enough, the route may actually change if the controller has other traffic moving about. If he’s at an unfamiliar airport, particularly one with one of these marathon taxis, your student should feel comfortable asking for

a “progressive taxi” to get continuing guidance from the controller. When air traffic control knows that the pilot is “unfamiliar” with the airport, the controller will become more vigilant and quicker to offer help.

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6. Consider environmental conditions. When weather conditions limit the visibility at the airport, the likelihood of a runway incursion increases. Weather, including fog, snow, rain, blowing snow, or other visibility-limiting conditions, can start the chain of events that leaves the pilot not knowing exactly where she is, and that puts her in a position where the possibility of causing a runway incursion is increased. Another danger exists when the taxiway or runway surfaces are ice- or snow-covered. In these conditions—even in the best of visibility—sliding past a hold-short line becomes a concern. Teach your students to take these surface and visibility conditions into account when conducting operations. Certain weather conditions make it advisable to operate with increased care and vigilance.

7. Runway incursions don’t just happen at towered airports. Most runway-incursion data comes from airports that have operating control towers, which is primarily the result of having someone there to witness and record the violation. But runway incursions do happen at nontowered airports. When operating at a nontowered airport you—and your students—still have the duty to look both ways before crossing runways. Verify that, before entering a runway for takeoff or landing, you’re not cutting in front of another aircraft already in position to use that runway. Doing so could require another pilot to deviate from his actions based on you. Remember also that, even as you’re doing this, it’s important to keep your eyes outside of the aircraft and look; it’s possible that someone else may be just about to cause a runway incursion by using a surface she was not cleared for. You can avoid the mishap by staying out of the way of the pilot who is about to cause one.

These are just a few tips that can help you avoid a runway incursion. There are no doubt countless more that you can come up with, and I strongly encourage you to share them with your fellow pilots. Use them as a conversation starter to discuss how we can all help reduce runway incursions throughout the entire flight community. Runway incursions present a very important risk at airports. Take the time as an instructor to help promote good runway safety and understanding of the factors that contribute to runway incursions. Every pilot you help understand these risks is one less pilot that may cause an incursion on the runway you are lined up to use.

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