IS YOUR SAFETY PILOT SAFE?

Finding a competent and pleasant safety pilot isn't easy, but choosing the right person for this very demanding job is essential.

by Fred Simonds

It's a beautiful Sunday morning. You're flying practice approaches under the hood, with your trusty safety pilot in the right seat.

Suddenly, just under the corner of the hood, you see an airplane whiz by—opposite direction and nearly at the same altitude. Your now formerly trusty safety pilot should have seen it, but admits that he never did. The other plane is gone as quickly as it appeared.

What went wrong here? It's simple: You put your trust in someone who didn't deserve it. A safety pilot holds both of your lives in his or her hands. That calls for a lot of trust, a word and concept that has a very limited place in aviation. "In God we trust. Everything else we check."

To be worth anything, trust must be earned. The regulations (14 CFR Part 91.109) require your safety pilot to hold a private pilot ticket or better with category and class ratings for the aircraft you intend to fly. If the airplane is a twin and the pilot is only single-engine rated, they cannot act as safety pilot. And, uh, no fair shutting one down to get around this rule.

The safey pilot must also hold a valid medical certificate since he or she is a required flight crewmember. Since you can presumably be PIC, the safety pilot needs neither a flight review nor 90-day currency, but common sense would dictate that your safety pilot have some recent flying experience, from the right seat if possible, and be familiar with the airplane.

Consider sitting together in the airplane before you fly to review its systems and avionics. It's time well-spent toward a productive flight and a great way to get to know each other better *in situ*.

How do you qualify someone as a safety pilot? There is no safety pilot endorsement and even if there were, it would say little about the individual in whom you are about to place a barrel of trust (there's that pesky word again).

One flight together will tell you more about the person's safety pilot skills than their ratings, hours or anything else. Why not go on a simple VFR trip first and see how you work together? You fly one way, your partner the other. You'll gain an opportunity to evaluate each others' skills and see how your crew chemistry works before tackling simulated IFR.

It is amazing how a person can be one way on the ground and altogether different in the air. This is not necessarily bad: Amy may be casual and carefree in the office, yet all business in the air. However it turns out, you won't know until you go.

During your VFR flight, look for traffic spotting skills. You want someone who can spot traffic better than Chuck Yeager could spot a bogey, and if necessary react quickly and correctly. Does your safety pilot know the right-of-way rules? Does he have the good sense to break a rule if necessary to avoid a close call or worse? My favorite trick is to simply alter course and fly behind a converging aircraft. Unless the bogey has figured out how to back up an airplane in flight, I'm safe.

Key to spotting traffic is knowing where to look for it. Traffic tends to concentrate just outside and underneath Bravo and Charlie airspace and around the edges and above Delta airspace. VORs and initial approach fixes are traffic magnets and call for extra vigilance in their vicinity.

Being an instrument student or instrument-rated is a big plus because they know IFR flows and procedures. Motivated IFR students make excellent safety pilots. And no kidding, being just a little paranoid and obsessive-compulsive is a plus, too.

Instrument approaches call for special vigilance. By definition everyone using the approach is going to occupy the same space as you—preferably at different times. Your safety pilot needs to make accurate and useful radio calls, and properly interpret other radio calls to determine their location relative to yours.

In this context, announcing that you are at GIGOH intersection

inbound is nearly useless. Non-instrument rated pilots won't have a clue where GIGOH is and rated pilots may not know either. Instead, your safety pilot should announce your position in terms all pilots can understand: "Airpark traffic, Cessna 172 is five north, inbound, 2,000 feet descending to 600, practice VOR approach to runway 17, Airpark traffic."

And it's not just what the safety pilot says, but how he says it that matters. English is the international language of aviation, and recent ICAO rules now mandate English proficiency to the point where this endorsement appears automatically on newly issued FAA certificates.

For some pilots for whom English is a second language, deciphering aviation jargon and speaking clearly on the radio can be a challenge. Language difficulties are a great risk in safety pilot work because they present a direct barrier to clear communication between you, your safety pilot and other aircraft.

This problem is not limited to foreign pilots. Many Americans speak with accents that are so pronounced as to make them barely intelligible to other Americans, let alone to those from other countries. No matter where your safety pilot calls home, insist on the use of proper aviation English on the radio. Anything less could be very dangerous.

Stay Focused

Your safety pilot should be able to maintain focus. Human beings are not good at monitoring things for any length of time. We get bored and seek distraction, and that fancy GPS is a prime distractor. Consulting the GPS or looking inside for more than a few seconds must not distract the safety pilot away from her primary task of seeing and avoiding other aircraft. Safety pilots who keep their eyes mostly outside are to be prized.

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The best safety pilots do not just sweep the sky through the windshield. They scan a piece of sky and then move to the next segment. At night, you may see traffic sooner by not looking directly at it. Learn more at the Air Safety Foundation web site (www.asf.org) which offers several articles on effective scanning techniques.

Things You Don't Want To Discuss, But Should

You and your potential safety pilot had a great conversation over the telephone to learn about each other's experience and habits, and to discuss the mission for the proposed flight and the rules of the game. Just when you thought everything was perfect, you arrive at the airplane to discover that your safety pilot has some rather unpleasant personal qualities.

Bad breath is among the worst offenders, and tough to deal with in a confined cockpit. The best way to handle this is to always carry a packet of mints or breath strips in your flight bag. As soon as you get in the airplane, take one for yourself and offer one to your safety pilot. Most people will take the candy just to be polite.

There's not much you can do to mitigate offensive body odor, though, especially on a hot summer day. Most pilots are considerate and will arrive fresh and clean, but if your safety pilot's aroma is going to distract you or otherwise be unbearable, consider bowing out of the flight by claiming to have come down with a headache.

Sometimes marital status and gender can strain cockpit relations. A married individual may be uncomfortable with someone of the opposite sex in the close quarters of a cockpit. While it would seem obvious that such a person would choose a same-gender crewmember, his, her or their mutual discomfort might not become evident until they are airborne. In some small two-place aircraft it's nearly impossible for two large adults sitting side by side to not rub up against each other. This is another reason to fly VFR first before attempting the closer coordination required of simulated IFR.

Build In Your Own Safety Factor

You can add to safety by flying an approach above published altitudes. Add 500 feet or even a thousand to each altitude and you have just provided your own built-in traffic separation. Landing from this might be a bit of a challenge, but hey, that's what missed approaches are for.

If you fly an aircraft equipped with a collision avoidance system, use it. You and your safety pilot must understand the symbology used by the system to indicate the threat level of a target, as well as the criteria by which it makes such decisions.

Turn on the landing light and strobes! They are two of the best collision avoidance tools you have.

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SAFETY PILOT CONSIDERATIONS

Every multi-pilot trip should begin with a thorough pre-flight briefing. Assuming that each of you possesses the requisite class and category ratings for the aircraft to be flown (see FAR 91.109), you need to decide in advance which one of you will *act* as pilot-in-command of the aircraft during the flight. This is not the same thing as who can *log* PIC time as the sole manipulator of the controls (see FAR 61.57).

Consider that the safety pilot may at some point need to take the controls to avoid a mid-air collision while you're under the hood. Does this person have good stick and rudder skills? Has he ever flown from the right seat before? Can he execute an evasive maneuver without putting you and your airplane into an unusual attitude?

Agree in advance that if the safety pilot says, "My airplane," he or she has seen traffic and you need to let go of the controls instantly. You respond with, "Your airplane," to which the safety pilot should reply, "My airplane" to confirm. A positive exchange of controls is essential.

Who will take the controls in an actual emergency, the person who is looking out the window or the person who has the most experience, particularly in make and model? Don't wait to figure this out until the moment the engine quits.

Discuss your objectives for the flight. Work out an orderly flow for the approaches to minimize travel time.

Consider external influences that might affect your plan, such as weather and NOTAMs. Are there any squawks on the airplane? Does that ADF receiver really work? How's the Mode C feeling today? Is the GPS database current? If you're filing IFR, when was the last time anybody recorded a VOR receiver check?

Clear every turn before you make it. If your safety pilot does not clear you, ask him or her to do so. The one time you don't clear a turn is the time you'll get clipped. Finally, consider asking for ATC flight following.

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Critique Technique

If you ask for a critique of your performance after the flight, recognize that your safety pilot may not be the most qualified person to evaluate your performance. Take whatever you hear and analyze it for yourself.

If you serve as a safety pilot for someone and that pilot asks you for feedback, do what good instructors do: Focus on two or three specific items. Try your best to be positive, constructive and objective.

Flying with or being a safety pilot can be great fun, very useful and productive. A little due diligence can add a lot of safety to your flight. Just remember that trust should be earned, not given.

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This month's program features an interview with Maj. Nicole Malachowski, who was the first female member of the U.S. Air Force Thunderbirds demonstration team. We caught up with her at the Smithsonian National Air and Space Museum, where she spoke about the coordination, concentration and mutual trust required to fly neck-to-neck with five other F-16 jets. These qualities, she says, are also critical to pilots flying together under simulated instrument conditions.

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