

Emergencies – Front Seat, Back Seat

By Chris Hope, Master CFI

Look through any aircraft POH, new aircraft and old aircraft, and you will see a section on aircraft description, aircraft performance charts, operating procedures, and emergency procedures.

And in the emergency procedures section, you will find the steps to take when the engine catches fire on the ground or in the air. You will see the proper procedures for dealing with a rough-running engine or an engine that quits running altogether. And if your aircraft has more complicated systems, you will find the steps to take of their failures: electrical system failures, turbo-charger failures, prop-controller failures, pressurization system failures, and more and more. For the new pilot, it seems that every switch that is installed is doomed to fail.

But in the entire Pilot's Operating Handbook, the aircraft manufacturer never discusses one entire group of emergencies, nor do they discuss an entire group of responses. Hold that thought for a moment.

I am often asked, by students or low-time private pilots, "What is the difference between the skills needed for a Private Certificate and a Commercial Certificate?" Or, if they have looked at a Commercial Pilot syllabus or PTS, they ask, "Why do commercial pilots need to learn to perform lazy eights and chandelles and eights on pylons? Does anyone

actually do these maneuvers on a day-to-day basis?"

Well, the difference between private pilot and a commercial pilot is that a private pilot needs only to be able to concentrate on flying the airplane. The commercial pilot needs to be so skilled at flying the plane that he/she

ELECTRICAL FIRE IN FLIGHT

1. STBY BATT - OFF
2. MASTER - OFF
3. VENTS / CABIN AIR / HEAT - CLOSED
4. FIRE EXTINGUISHER - ACTIVATE
5. AVIONICS (BUS 1 & 2) - OFF
6. ALL SWITCHES (EXCEPT MAGNETOS) - OFF
7. VENTS / CABIN AIR / HEAT - OPEN WHEN FIRE EXTINGUISHED
8. CIRCUIT BREAKERS - CHECK FOR OPEN CIRCUITS, DO NOT RESET
9. MASTER - ON
10. STBY BATT - ON
11. AVIONICS (BUS 1) - ON
12. AVIONICS (BUS 2) - ON



IF FIRE IS OUT AND ELECTRICAL POWER IS NEEDED FOR FLIGHT

can fly the airplane without a lot of thought, because a commercial pilot needs to be able to concentrate on the job at hand - whether that job is putting the plane in the correct position to allow the parachute jumpers to hit their target, or putting the plane in the correct position for the perfect photograph, or crossing the soybean field to put the correct chemicals down in the correct position. Or even, ensuring that the plane load of passengers have a safe and pleasant experience.

And though it may not seem so, there is a good deal of skill required in ensuring that our passengers have a safe and pleasant experience. In fact, those companies which exist solely to carry people spend a good deal of time ensuring that their passengers are safe and comfortable. (Okay, you can insert your airline comments here.) And

because passenger comfort and safety is such a time-consuming task, airlines from the very beginning of commercial aviation put additional crew members on board to address that need. But when is the last time you had a crew member on board your four-seat aircraft to attend to your passengers' needs?

FAR 91.519 requires us to instruct our passengers on the basic information about the plane, and about emergencies where the passenger might be involved. But nowhere do we, as private pilots, get any help in dealing with passengers who, themselves, might have an emergency. But whether we are new Private Pilots or old hand Commercial Pilots, we are still responsible

All of us have been taught, since we first began flying, that we can ask the person at the other end of the microphone for assistance. And there are many pilots who have made safe landings because a controller at the local Approach Control or Center was able to provide calm, clear information regarding nearby airports or nearby VFR weather. But what if the emergency is not in the front seat, but is in the back seat? And what if we are flying a four-seat aircraft without the luxury of a cabin crew?

The question arose recently among a number of high-time pilots, and we were a bit stumped. None of us had actually considered it. The question was, "What service can ATC provide in a case of serious medical situation

– for example, we suspect that our passenger may be suffering from a heart attack or a stroke." The answer is, "It depends."



The question was posed to Eric Morgan, a support specialist with the Kansas City Approach Control, at a meeting of instrument-rated pilots. We asked, "If I was flying in your airspace and asked for assistance with a medical emergency, what would happen?" Well, it turns out, quite a bit.

Approach Control can provide immediate vectors to any airport in their region, and can provide priority handling so as to avoid any traffic delays. Furthermore, they can notify emergency equipment to have paramedics standing by upon landing. But actually, this solution is not as tough as it sounds. If we are talking to Approach Control, we are already most likely within 20 to 30 miles of a major city, and therefore close to a major hospital. Furthermore, since the radar controllers live and work in the same metropolitan area, it is likely that the controller we are talking to knows not only all of the airports in the area, but has a fairly good idea of where some

of the hospitals are located relative to those airports. The more difficult situation is one where the emergency occurs over a very rural part of the country. And for this we turn to the Center.

In this case, my call went to Lowell Hought, the Executive Officer with the Kansas City ARTCC, and the answer was very much, "it depends". The Center has two difficulties, relative to Approach Control. First, the towns and cities with acceptable medical facilities are much more spread out. Secondly, because a Center's airspace takes in such a large geographical area, it is rare for a Center controller to know what medical facilities might exist in the towns in the sectors they control. And during a medical emergency of unknown seriousness, both pilot and controller will be struggling with the dilemma of landing at a closer airport with a low level of care, versus travelling to a more distant airport with a possible higher level of care.

All is not doom and gloom however. The fact that the controller is on the ground with support staff in the room is one advantage that we in the plane do not enjoy. The Center can

make phone calls immediately to various law enforcement agencies in their area and request advice. Secondly, it may sound very basic, but Center has the luxury of pulling up a computer and doing the same kind of data search that we would do if we were on the ground. Except, we are not on the ground.

Finally, because Center (as well as Approach Control) keeps a phone list of law enforcement agencies within their area, once an airport is agreed upon, they can summon whatever medical care is available to meet the aircraft.

So, while the Controller cannot put an EMT in the plane with you, they can provide some consultation regarding a possible solution to getting to the proper airport quickly. And once you as the pilot make that decision, you can be assured that you will be on the ground as quickly as your plane can fly. And you can expect that the Controller, whether Center or Approach Control, will make the necessary arrangements to have medical assistance standing by upon your arrival. And then you can concentrate on just flying the aircraft.

Don't just practice until you get it right. Practice until you don't get it wrong

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