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In this monthly column, Ric Peri of the AEA's Washington, D.C., office, informs members of the latest regulatory updates.

THE VIEW FROM WASHINGTON

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Personal Minimums

I recently was asked to define the term "personal minimums" as part of a presentation to introduce the Aviators Code of Conduct. As you may know, I have been part of the permanent editorial board of the Aviators Code Initiative for over a decade. More on the Aviators Code Initiative and access to each of the Aviators Codes of Conduct can be found at SecureAv.com. As part of this work, we have developed a PowerPoint presentation that has identified how the Aviators Codes can help an aviator establish their personal minimums, which is a steppingstone toward a personal safety management system.

To explain a personal minimum, we can first look at how the Internal Civil Aviation Organization describes aviation safety. According to ICAO, while the establishment of ICAO predates the United Nations, "the drafters of the Convention on International Civil Aviation had anticipated the emergence of a United Nations type of post-war organization." As such, they drafted Article 64, which covered the possibility of ICAO becoming a constituent of such an organization. On Oct. 3, 1947, ICAO formally became a specialized agency of the United Nations.

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When talking SMS, ICAO defines safety as, "The state in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft are reduced and controlled to an acceptable level." When we consider personal minimums, we are talking about the risks that are acceptable to the individual, whether a pilot, maintainer, or business owner.

As published by the General Aviation Joint Steering Committee as the February 2015 safety enhancement topic, the GAJSC describes a personal minimum as follows: "Personal minimums refer to an individual pilot's set of procedures, rules, criteria, and guidelines for deciding whether and under what conditions to operate (or continue

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operating) in the national airspace system. Personal minimums should be set so as to provide a solid safety buffer between the pilot skills and aircraft capability required for the specific flight you want to make, and the pilot skills and aircraft capability available to you through training, experience, currency, proficiency and, in the case of the airplane, performance characteristics."

While an equivalent description is lacking on the maintenance front, what is published regarding a maintenance personal minimum focuses on the human factors affecting the technician's ability to perform the task. I think we can revise the pilot's language to address maintenance as well. I suggest personal minimums for maintainers should be set to provide a solid safety buffer between the requested task and the technician's ability to perform that task.

As a pilot, when establishing your personal minimums, you evaluate your skills and predefine your personal go or no-go criteria. Usually, the personal minimums are related to weather, heath, fatigue, stress, etc. For maintenance, we can do the same thing.

The Federal Aviation Administration's maintenance personal minimum checklist is based on human factors as defined by the Dirty Dozen. This is a good checklist for assuring compliance with the maintenance regulations – that is, making sure you have the correct training and qualifications, the required tooling and equipment, aviation grade parts and materials, and of course, properly trained and qualified to perform the task.

As we know, or should know, the 12 human factors referenced as the Dirty Dozen include lack of communication, lack of teamwork, lack of assertiveness, complacency, fatigue, stress, lack of knowledge, lack of resources, lack of awareness, distraction, pressure, and norms.

In the pilot community, The FAA's Aeronautical Information Manual has an excellent chapter on medical facts for pilots (chapter 8) that focuses on a pilot's fitness for exercising their privileges as a pilot. If a pilot's health should keep them from flying, should this list not also be considered for critical maintenance tasks?

The AIM offers the pilot community a "personal checklist" that helps them answer the question: Am I physically and mentally safe to fly?

- Illness
- Medication
- Stress
- Alcohol
- Fatigue
- Emotion

While we generally reference personal minimums with independent pilots or mechanics, I suggest personal minimums establish the foundation of an organization's safety culture as well.

The checklist, often called the "I'm SAFE" checklist, helps the pilot to assure their knowledge, abilities and piloting skills are not impaired. If we overlay this checklist to the maintainers, I believe the logic can be used as well for personal minimums for maintainers. As a maintainer, are my knowledge, abilities and maintenance skills at their peak, or are they being impaired by internal or external factors?

There are a few items of overlap between the I'm SAFE checklist and the Dirty Dozen, specifically, stress and fatigue. I believe the inclusion of illnesses, medications and emotions are certainly issues that should be considered when deciding if I am fit for duty. Of course, alcohol and drugs are always an underlying consideration, whether the maintenance organizations are included with a defined drug and alcohol prevention program. If we merge the two lists, I have a solid basis to build my personal minimums. I've realigned the list to focus on the topics that are typically organizational and those that tend to be personal.

Organizational

- Lack of communication
- Lack of teamwork
- Lack of resources
- Lack of awareness
- Norms

Personal

- Lack of knowledge
- Lack of assertiveness
- Distraction
- Pressure
- Illness
- Medication
- Stress
- Alcohol
- Fatigue
- Emotion
- Complacency

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When considering these well-established factors that introduce risk into an aircraft maintenance environment, what are your acceptable levels? This is a fantastic list to consider in determining what is and is not reasonably acceptable to you. When considering what is reasonably acceptable to you, you establish these "acceptable risks" when they are not a factor. Evaluate them when you're not in the work environment. This is how you establish your personal minimums.

While we generally reference personal minimums with independent pilots or mechanics, I suggest personal minimums establish the foundation of an organization's safety culture as well. An organization that not only recognizes personal minimums but also encourages their use and fosters solid minimums is an organization with a positive safety culture.

Where ICAO discusses the safety culture in its Safety Management Manual, it refers to a culture as "characterized by the beliefs, values, biases and their resultant behaviour that are shared by members of a society, group or organization." It further discusses a "healthy safety culture" as a culture that "actively seeks improvements, vigilantly remains aware of hazards and utilizes systems and tools for continuous monitoring, analysis and investigation."

The elements discussed above that are used to evaluate a technician's personal minimums support the overall corporate minimums as well. It is an excellent starting point for repair stations as well as the individual technicians.

ICAO talks about the need for balance between productivity and safety. While ICAO focuses on the role of the organizational culture in identifying, establishing and managing this balance, as a technician maintaining the airworthiness of the customer's aircraft, this concept can easily be applied to the individual when establishing your personal minimums.

Within the Safety Management Manual, ICAO states the "Organizational culture refers to the characteristics and safety perceptions among members interacting within a particular entity. Organizational value systems include prioritization or balancing policies covering areas such as productivity versus quality, safety versus efficiency, financial versus technical, professional versus academic, and enforcement versus corrective action."

What is your balance? ❑