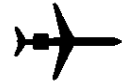


Why Humans Error

by Jerry E. Tobias



Okay, admit it. You and I both know that we sometimes make mistakes. Granted, in some settings, that might not be a big thing. In the cockpit or hangar, though, that is *always* a big thing. In aviation, how well we understand what we need to understand and how accurately we process what we need to process is critically important. And that, of course, is because of the crucial nature of the resulting cognitive responses (decisions) and motor responses (“stick and rudder” or maintenance inputs). Still, far too many aviation accidents and incidents are the result of *poor human performance* and human error.

I have previously written about how compromising, complacent and cavalier *attitudes* often lead to incredibly poor judgment, bad decisions and unprofessional performance. However, there are other “human factors” that influence the performance of human beings and contribute significantly to the frequency and magnitude of human error. While the list of such factors would include at least individual, crew, operational, organizational and regulatory issues, let me just briefly mention some of the *individual* human factors that crewmembers, maintenance technicians and operations specialists face each day.

The first of these factors is the PHYSICAL factor, which has to do with basic physical condition, age, motor skills, senses, etc. An easy-to-understand example of this issue is the fact that an 85-year-old pilot just would not be able to keep up (neither cognitively nor physically) with the demands of an F-22 fighter.

Another factor is the PHYSIOLOGICAL issue, which addresses general health, stress, fatigue issues, etc. If you don’t feel well, for example, let someone know, as your performance *will* be diminished. If you are stressed about something before flying or working, that stress *stays* with you and *will* impact your performance in the cockpit or hangar. And, if you didn’t sleep well the night before, the resulting fatigue *will* impact your cognitive processes the next day (probably most noticeably - and most dangerously - toward the end of your flight or your shift).

PSYCHOLOGICAL factors can also disrupt human performance. These issues have to do with attention span, mood, personality, emotions, etc. Have you ever heard someone say, “I’m so angry that I can’t think straight?” There’s probably more truth to that statement than most people understand. Fear and pride are two other emotions that can cripple cognitive responses by inhibiting cognitive processing and decision making.

PSYCHOSOCIAL factors also clog reasoning “filters.” Relational stress and conflict, for example, often completely overpower sound judgment. As a matter of fact, several aircraft accidents and even more incidents have resulted from documented maintenance vs. management or cockpit crew conflict.

The bottom line? Yes, we all make mistakes. But, understanding some of the *attitudes* and *human factors* that influence our performance and potentially cause us to error might encourage us to process a bit more thoroughly and, ultimately, to maneuver whatever is attached to the wrench, the stick or the yoke in our hands just a bit more cautiously. And, that should be a good thing. ■

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