



Aeronautical Decision Making (ADM)

The Issue

Pilots make decisions with such high frequency that most of them can be considered “routine” or “procedural.” However, when two or more choices present themselves and when the outcome of choosing either option cannot be fully predicted, the pilot is then faced with a risk. Ineffective risk management or poor aeronautical decision-making can be associated with almost every type of fatal general aviation accident.

History Repeating

In 2007 a Cessna 150 on cross-country crashed into a mountainside, killing the pilot. He had been told by a mechanic that the plane’s alternator needed replacing and a new part would arrive in two days but he didn’t want to wait. He had the mechanic reinstall the faulty alternator and took off into dark, mountainous terrain under IMC conditions. In 2011, a Eurocopter on an EMS mission crashed following a loss of engine power as a result of fuel exhaustion. The pilot, likely distracted by his phone, failed to properly initiate emergency procedures. All onboard were killed. Lastly, in July 2011, a Mooney M-20F struck a parking lot and skidded into a building. The pilot, his wife, and two children were killed in the mishap. The pilot, having less than three months of flying experience and only rated VFR, flew into IMC conditions despite receiving several weather warnings advising otherwise. What do these three mishaps have in common? In each, a series of poor or poorly executed decisions led to the destruction of property and the tragic loss of lives.

Finding a Solution

ADM provides a systematic approach to the mental processes used by pilots to consistently determine the best course of action in response to a given set of circumstances. The three major categories of ADM are pre-flight, in-flight, and post-flight and each has its unique set of concerns. Understand that effective risk management takes a great deal of introspection, patience and practice. Just a few of the key factors to identify while working through the process are the ability to:

- note that a change has (or hasn’t) occurred;
- identify your own biases;
- be honest with yourself and your ability;
- set (and adhere to) personal minimums;
- resist external pressures (perceived saving time/money/face);
- prepare (and use) a plan B;
- and continuously evaluate the outcome.

**To learn more, visit “The Art of Aeronautical Decision-Making,”
a program offered on FAASafety.gov.**

<http://go.usa.gov/ZXtV>

