



**2010-November : Newsletter**

### **DECISION MAKING IN THE TRAINING ENVIRONMENT**

The recent surge in training accidents warrants special attention to assessing risks and making good decisions associated with training. There have been 10 training accidents in the last 2 years, and all of these accidents occurred while practicing emergency procedures. Six of the 10 accidents occurred while practicing autorotations. During the same timeframe, there were only two accidents that occurred during actual engine failures, resulting in one fatality and one serious injury. So when we have an in-flight emergency, the outcome is most often not very good. We have five times the number of accidents while training for in-flight emergencies than we have actual emergencies. But when we have a real emergency, the results are often fatal or serious. This requires some serious consideration of how we address this dilemma and underscores the need for good flight planning and decision making.

Aeronautical decision making is a systematic approach to the mental process to consistently determine the best course of action in a given set of circumstances. It is the process of selecting from several choices and taking action in order to bring about a desired result. It includes the following steps:

- Define the situation and desired outcome
- Know your strengths, weaknesses and skills
- Identify options, alternatives and consequences
- Manage resources to ensure adequate information
- Evaluate options then select the best action
- Develop a plan of action
- Evaluate results
- Start again if the results are not acceptable

Good decision making is the key to effective risk management. Unfortunately, the people assigning flights often have minimal experience and are not even pilots. This was true for me as well; I had minimal aviation experience and no formal decision making training. We also tend to overestimate our ability and underestimate risks. So here are some easy steps you can take to do a better job with flight planning and decision making in flight training.

Develop a formal risk assessment model that is based on a numerical value. The higher the risk, the higher the level of approval that's required. This forces us to be proactive in identification and management of risk.

Do a rational debrief following every flight that includes an evaluation of decisions made during the flight and their impact on safety.

If you intend to conduct off-site training, notify your base prior to and when leaving the area of operation. This is fundamental flight operations control that should be part of every training flight.

In the training environment, the flight instructor can combine education and principles with decision making to improve a student's judgment and decision making. These principles include always operating in the safest manner possible and never taking unnecessary risks. However, we have seen several accidents in A-Stars conducting hydraulic failure training

trying to fly the aircraft to a hover, and losing control before they can land. This is not the fault of the aircraft, rather the instructor, in performing a maneuver not approved in the flight manual. This is poor decision making and unnecessarily risky.

The fact is that most accidents involve some form of "rule breaking." Most of the time when we break rules, e.g. not conforming to the flight manual, nothing happens. And, familiarity and prolonged exposure without a mishap leads to a loss of appreciation of risk. So we think it's OK, but it's not. Most training accidents involve multiple bad decisions, e.g. poor or no flight planning, failure to manage known risks (aircraft performance limitations, high gross weight, failure to comply with the flight manual, flying outside the envelope, and failure of the instructor to take control in a timely manner). And, in many cases the instructor is not qualified to teach emergency procedures. You can save a lot of money and grief by going to the factory or professional flight school for emergency procedure training. The problem is we don't think that accident is going to happen to us. It's always the other guy. But, we are the other guy when an accident occurs. Nobody takes off thinking they're going to have an accident. We need to recognize that we can have accidents. If we make good decisions and comply with the rules, we can operate accident free. Eighty percent of accidents involve some form of rule breaking.

Errors or misjudgments by the student should be viewed as opportunities for learning, not as occasions for criticism. While on routine training flights, the instructor should give the students "activities" designed to further develop their appreciation for decision making concepts based upon an actual preflight or in-flight hands-on experience.

These steps only take a few minutes. They will raise every pilot's awareness and help instill the importance of making good decisions that will have a meaningful improvement in managing risk.

Decision making will be ALEA's safety theme for 2011. I am willing to bet that many of us probably did not receive much, if any, formal decision making training as part of our primary or recurrent flight training. If you do not have anyone that is qualified to provide this training, consider attending an ALEA Safety Seminar or Annual Conference and get this much needed training from experts. You will literally live or die, succeed or fail, based on the decisions you make.

***Remember – Safety First!***

Keith Johnson

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