



2009-December : Newsletter

EMERGENCY PROCEDURES TRAINING

I have written an article on Emergency Procedures Training for ALEA's Air Beat magazine to be published in 2010. However, the recent trend of training accidents needs to be addressed NOW. The NTSB has not completed their investigations of all of these accidents, however, what we do know about common causal factors should give us pause to address many of the causal factors.

There have been 10 law enforcement accidents in the first 10 months of 2009; double what we had for all of 2008. Nine of the accidents were in helicopters, and seven of the nine occurred while practicing emergency procedures. Historically, autorotation training accounts for approximately 90 percent of these accidents. This year, they include engine failure, hydraulic off procedures and anti-torque failure

There are generally more accidents training for emergencies than there are actual mechanical failures. This creates a real dilemma. The key to performing these maneuvers safely requires having qualified flight instructors, good preflight planning that takes into consideration the environmental conditions, aircraft make and model performance characteristics, and conformance with the Operator's Manual emergency procedures.

First, performing these maneuvers only every six months or once a year is insufficient for many pilots to remain proficient. And, if you have a small aviation unit, your instructor may not be able to remain as proficient performing these maneuvers only once or twice a year. Furthermore, during real operations we often fail to properly diagnose the problem, often entering autorotation with a perfectly good running engine. This should be a wake-up call that we need to better identify and manage risks associated with emergency procedures training.

Most of these accidents occur because the instructor did not take control of the aircraft soon enough to avoid an accident. This is most often the result of the instructor not having the skill and experience to avoid these mishaps. It is important that new flight instructors use their ability, not the student's or their instructor's abilities, to define when they should execute a recovery during emergency procedures training. So how can we manage the risks associated with emergency procedures training? Let's consider the following issues.

Factory instructors or flight schools should be used to teach emergency procedures. In-house instructors can be used, but we need to be realistic about their skills. Let's be honest - just because your instructor has lots of hours or has not had an accident, does not mean he or she is qualified to teach emergency procedures. Minor incidents or close calls are signs of a bigger problem. But, most of the time when we make mistakes, nothing happens; so, we think everything is OK when it's not.

Three of the autorotation training accidents occurred while practicing 180-degree autos from 600 feet AGL and below. In the one real engine failure, the pilot attempted a 180-degree auto at night, resulting in substantial damage to the aircraft and the pilot was seriously injured. This is generally an unnecessary risk and creates the unrealistic expectation that this can be performed successfully in a working environment over densely populated areas. In the real world you

don't have the luxury of having an unobstructed runway to land on when the engine quits. And, when a real engine failure occurs at low altitude, by the time you recognize the failure, crosscheck the gauges to verify you have an actual engine failure, and find a place to land, you cannot make a 180-degree turn and expect a good outcome. However, flight instructors need to be qualified to teach the limitations of 180-degree autos. In the real world you are probably going to make a 90-degree turn or less (most often less), especially at night. Therefore, most training should focus on conducting autos from straight-in to 90 degrees.

We also need to be realistic about our expectations when we send our instructors or line pilots to a factory or comparable flight school. You don't always receive as objective a flight evaluation of your skills and knowledge as you need. Management must make it absolutely clear that they want a candid assessment of their instructor's skills, judgment and experience. We all know that there are "Santa Claus" flight examiners in the FAA and the training industry. Having a piece of paper that says you passed an instructor course will not help one bit when your student loses control and your instructor cannot recover and safely land the aircraft.

Eliminating training accidents requires proficient and experienced instructors, good flight planning, and supervisory oversight. Every flight should be debriefed, especially addressing any safety issues. Failing to debrief is a missed opportunity to improve performance. If you have a low-time instructor, any adverse weather or other environmental issues, or a minimally performing aircraft, red flags should be coming from every direction. Safe training flights are a function of good risk management. For more information on risk management, go to the ALEA website, Safety First section, and download the Safety Management System Toolkit.

Comments and questions are always welcome at: safety@alea.org.

Remember – Safety First!

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