

# Helicopter Transition Training Recommended Practices



## *Introduction*

Analysis of US helicopter accident data<sup>i</sup> reveals a trend that indicates pilots with less time in a particular make or model are more likely to have an accident, regardless of total pilot flight hours. A contributing factor to that trend has been identified as the pilot's unfamiliarity with the new airframe or installed equipment. Lack of familiarity could be the result of inadequate training or more specifically, insufficient structure of the learning environment, training content, or completion standards. In an effort to address the accident statistics, improve safety in the industry, and provide training support to helicopter pilots, the following recommendations should be considered when transitioning into a new aircraft.

## *Seek Out Training from a Qualified Instructor*

Pilots who are pursuing an opportunity in a new or unfamiliar aircraft should always seek aid and advice from an expert. This would be an instructor pilot with the knowledge, skills and experience in the specific aircraft variant that can mentor a fellow pilot and train them to a known industry standard. Flight instruction should be formal, intentional, and structured in such a way that the student leaves the training environment confident in their abilities, and in possession of the skills to support that confidence. Aircraft manufacturers will often provide this type of instruction with "factory training," and pilots flying for commercial air carriers will receive training required by regulation. But there are also numerous institutions and individual instructors that can provide a similar learning environment of equal quality to those pilots who may not have access to the OEM or don't work for a commercial operator.

## *Maneuvers Training is only a Portion of the Transition*

Adapting to new flight characteristics is an important part of transitioning to a new airframe and tends to be the most enjoyable portion of a training event. However, of equal importance is knowledge of systems and related components under normal and emergency conditions.

Resource management and situational awareness can suffer with unfamiliar instruments and indications, which emphasizes the need for a strong working knowledge of the aircraft downstream of the flight controls or the user interface. Some crucial areas to effective transition training beyond the maneuvers are:

- General systems knowledge (powerplant, electrical, fuel, hydraulic, etc.)
- Avionics and navigation systems training
- Performance and limitations review
- Aerodynamic and Mechanical Hazards (LTE, Mast Bumping, Ground Resonance, etc.)

Transition training should include relevant examples of items listed above using training scenarios in both the classroom and aircraft. Transition training scenarios should challenge the pilot to demonstrate the use of the new procedures, systems, and avionics under duress when competency is most important.

## *Going Smaller vs. Going Bigger*

Moving into a larger aircraft generally requires intense training in additional systems and procedural knowledge. However, risks and challenges when transitioning to new aircraft work both ways— moving into a smaller airframe carries just as much risk as when "going bigger." Lighter aircraft can have less automation, narrower power margins, higher control sensitivity, and less stability. When moving from a larger helicopter to a smaller one, make sure to identify and respect both the pilot's and aircraft's limitations, and develop personal safety margins while the pilot familiarizes themselves with the flight characteristics.

## *Available Resources*

The final report, *Helicopter Make/Model Transition and Differences Training Syllabus*, delivered as an output under Helicopter Safety Enhancement (H-SE) No. 116, is available for download along with several other USHST resources at [ushst.org](http://ushst.org).

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<sup>i</sup> COMPARATIVE REPORT, Volume 2 U.S. JHIMDAT Data to U.S. HSAT Data, Aug 2014