Emergency Egress and Restraint System Cutting Devices

The recent helicopter crash in New York City and the tragic loss of five lives is a somber reminder of the importance of preparing and planning for emergency egress. Many pilots don't give much thought to emergency aircraft egress, other than a quick mention during preflight briefings to passengers about opening doors before impact. However, in an accident or emergency sequence such as a ditching, water impact, or fire, quick egress from the aircraft may be vital for survival. A restraint system that cannot be released is a potential hazard with egression from the aircraft during an accident or emergency. Restraint systems may fail to release due to an internal failure of the release mechanism, or due to operator error, which may occur if the individual attempting to operate the release mechanism is disoriented or injured.

Aircraft restraint systems include several different types of lap and shoulder restraint attachments and release mechanisms. An approved shoulder harness restraint system should be installed as soon as possible if your aircraft is not already equipped. Pilots should regularly inspect their aircraft's restraint system for wear and tear. Any torn or frayed sections should be replaced. Many different restraint system styles and colors are approved and available, a combination lap belt and shoulder harness with an inertia reel and four attach points can make a safe, functional, and comfortable restraint system. You'll want to be sure all components of the system release quickly and easily. Many of the older style restraint systems use loops to attach the shoulder harness to the lap belt, as shown in the photo below. These restraint systems should be replaced, they will not provide a safe means of egress if pilots or passengers become entangled.

Shoulder harnesses attached to the lap belt by loops can make egress difficult.

A simple and cost-effective solution to help ensure quick egress is to carry a restraint system cutting device (commonly known as a seat belt cutter) on your person while conducting flight operations. A restraint system cutting device can easily be kept in a small holder that can be affixed to your belt. If attempting egress and the restraint system assembly will not release for the reasons mentioned above, or if a person becomes entangled;

the restraint system cutting device can be removed from its holder and the restraint system can be removed with a cut across the material - or several cuts depending on how many points the restraint system has. Additionally, pilots might want to consider issuing restraint system cutting devices to passengers onboard the aircraft, in the event the pilot may be physically incapacitated and cannot utilize the restraint system cutting device to assist others in egress. Several different types of restraint system cutting devices are seen in the photo below. They are available locally and online. All aviators hope they never have to ditch an aircraft or have an unplanned water impact, but if it does happen, you'll want to be prepared for a quick and efficient egress from the aircraft.

Several different restraint system cutting devices are shown.