Hot Blooded, but Cold Feet

By Steve Sparks

As fall fades away and winter weather arrives, safety experts from the United States Helicopter Safety Team (www.USHST.org) aim to put a freeze on helicopter accidents. The USHST is focused on a vision of zero accidents, and so far this year, total accidents have decreased significantly creating much needed traction heading into the winter season. As a result, the USHST wants to ensure that the helicopter industry doesn't slip in the wrong direction and reverse these positive trends.

To "break the ice," the USHST offers several tips to mitigate certain risks associated with winter flying. Everyone plays an important role as we crank up the thermostat on safety.

Dress for Success

Personal comfort is a major factor when it comes to safety. Just think back to the last time you rushed through a winter activity seeking shelter as quickly as possible to warm your hands and feet. Urgency can be a powerful force influencing human behavior and a false sense of urgency is even worse; it can tempt even the most professional of flight crews into taking shortcuts. It's amazing what humans will assume from a safety perspective when their bodies are uncomfortably cold. Those assumptions can be dangerous, however, so make sure "urgency" doesn't turn into an "emergency" for you this winter flying season.

Outdoor performance wear is an easy way to improve personal comfort levels to be able to handle the cold. Even summertime batting gloves can offer great thermal protection while providing finger flexibility for completing hands-on tasks around helicopters. Such specialty items also make great gifts for helicopter professionals. Remember, cold soaked parts on the helicopter will cause shivering discomfort to uncovered hands and fingers. Insulating the body from harsh temperatures can help maintain focus and fend off distractions caused by Old Man Winter.

Preflight and Ice

Helicopters left in freezing temperatures can cause major transformations in your equipment which can lead to unintended consequences. Never assume anything when you mix freezing temperatures with metal, rubber tubing, fluids, and/or control surfaces. As always, make sure ice, snow, and frost are completely removed from your helicopter prior to engine start. The only ice you want involved in your flying career is the amount you shovel into your soft drink at lunch.

Crews should approach preflight activities with the upmost respect. Airworthiness issues caused by cold weather can literally wreck your day. Ice is one wintery element that should be on every pilot's mind.

In January 2013, the FAA issued a Special Airworthiness Information Bulletin SW-08-03R3 (http://go.usa.gov/dkZH) addressing safety issues regarding airframe ice/snow on turbine-powered helicopters. The bulletin alerts crews to completely remove snow and ice from suspected and unsuspected areas on the helicopter. This action will help prevent possible power loss cause by ingesting such wintery elements into the engine.

For additional information regarding airframe icing please read Matt Rigsby's article "Baby, It's Cold Outside" (http://www.ihst.org/portals/54/Baby_Its_Cold.pdf). Rigsby does a great job sharing ideas for combating the effects of snow and ice on helicopters.

White-Out leads to Wipe-Out

Pilot induced white-outs are dangerous situations. These conditions can develop any time helicopters are taking off or landing in snow-covered areas. The rotor downwash picks up snow particles and re-circulates them through the rotor systems like a large mixing bowl. This can happen even on bright, sunny, and clear days. This zero visibility situation creates a feeling like you are flying inside a giant snow globe.

To help prevent helicopter self-induced white-outs, pilots should minimize time spent hovering over unpacked snowy areas. If landing on unprepared landing zones, be ready to abort anytime conditions become suspect. No one is forcing you to land in milk jug-like conditions. If this occurs, abort the mission and land somewhere else. It's ok to get cold feet in these dangerous situations close to the ground.

Adequate preparation for fending off the cold is crucial, while shortcutting safety for gains in personal comfort will certainly chill your day. Remember, the most important safety device in a helicopter is YOU. Like Santa, check your list twice this winter season. Please don't get cold feet on this one.

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