

The Pilot's Survival Kit

by

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Just a few weeks ago one of the world's best-known pilots, Steve Fossett, disappeared. And, in spite of a massive search involving a dozen planes, several helicopters, ground rescue workers, and even satellite photos, two full weeks went by with no sign of this skilled and famous aviator. However, in combing the mountains and ravines of central Nevada to look for Fossett, another six to eight planes were found, some wrecked years ago, with no closure to the pilot family's loss.

How is it that so many off-field landings turned tragic? Naturally, there are factors such as weather, spacial disorientation, in-flight fires, and sudden pilot incapacitation that could lead to an unexpected and fatal crash. But, most of the time the plane suffers fuel exhaustion, or a problem such as electrical failure that allows time for an emergency landing, including field selection, controlled descent, check-list items, and radio communication. During high level competition, and the adrenaline flowing other factors lead to mid-air collisions or suddenly impacting hard terrain, usually with fatal outcomes, as at the recent air races in Reno.

For more fortunate off-field landing circumstances, once upon a mountainside or meadow if the plane and its occupants are not too badly injured, a serious survival game begins. And here is where being prepared may save some precious lives. There are many aircraft survival kits available, including special gear which have been field tested by both military and civilian organizations. Everyone, whether flying the 'pattern' or cross country should carry a survival kit in their airplane. There are about 1,500 GA accidents each year, most of which involve potential or actual pilot and passenger injury. A study by the Air Force Rescue Coordination Center found that even pilots that are not injured, have only a 50 per cent chance of surviving 72 hours. The average time from when an airplane is reported missing to the time it is found is 62.6 hours when not on a filed flight plan. With better survival gear, the crew could be rescued much quicker, with a dramatic increase of survival odds. Here are some items to look for in selecting or assembling the 'kit.'

Signaling for Help

The simplest homing device is a signal mirror. It may have a special aiming aid in the center, but you can signal far off just shining it between two fingers that are pointed in the direction of the rescue plane, helicopter, or a vehicle on a far away road. You should have a signal whistle, not one of those used by policemen to direct traffic, but a loud one such as the Rescue Howler™, which can emit a sound of 110 decibels. A compass is helpful in finding direction, if you have to go for help. The compass on the airplane could be used also. You should have at least two chemical light sticks, which can last 12 hours. Naturally, you should always bring more than one flashlight. LED light bulbs will help them last longer, up to 48 hours on a set of fresh batteries. Be sure to carry extra batteries, too. There are emergency strobe lights, which are waterproof and

visible for three miles, flashing for up to 60 hours on the included battery. Naturally, the plane should also have a currently inspected ELT, with fresh batteries to help Search-and-Rescue or the Civil Air Patrol locate a downed airplane.

Fire and Heat

You should carry a windproof lighter as well as waterproof matches. Be sure to have a striker for those matches, or carry some regular ones in a watertight container. Fire tinder is important, such as a candle, cotton balls soaked in Vaseline, or high resin wood chips. Chemical hand and foot warmers are also helpful in keeping warm, when the wind chill or overnight exposure threatens your survival. Avoid using rocket flares, which might be helpful in an emergency ditching, and are safely used over water. On land, however, they are likely to start a forest fire, which could be a greater threat to health than the wilderness or the cold.

Shelter and Personal Protection

There is nothing better to keep warm than a heavy duty all-weather blanket. Unless you have a sleeping bag and tent, that is. Outfitter stores usually carry compact emergency bags, which are wind and waterproof, shaped like a sleeping bag, and which reflect 80% of radiated heat. You should carry some hooded polyethylene ponchos, to protect you or your passengers from wind or rain. Orange bandanas are useful for shade, warmth, straining water, and for signaling or bandaging. Insect repellent is valuable, for peace-of-mind as well as mosquito protection. Medicated lip balm, sun-screen, mosquito head nets, and roll-up sunglasses will add to the comfort, while patiently awaiting rescue.

Water and Food

Carry more than one small water bottle when you go flying. A quart bottle, with undroppable lid, will suffice for a day or two. Four ounce packets of sterile drinking water are available, stored in Mylar pouch to withstand wide variations of temperature. Iodine water purification tablets can make stream or lake water safe for drinking. Carry at least one bottle of 50 tablets. A stainless steel cup with extra long handles can help not only with water collection, but cooking, melting snow, or shoveling. Survival rations can be found in many forms – dehydrated fruits and vegetables, nuts, soup mixes, energy bars, and other packaged protein sources. If you go down in the mountains or in wilderness terrain, some fish hooks and fishing line, with floats, sinkers and similar paraphernalia may provide a survival meal, as well as something to do while waiting for help to arrive.

Multi-Purpose Survival Items

One of the most useful tools is a sharp fixed-blade knife, with leather sheath. Or, you might prefer a multi-purpose knife such as the Leatherman. Small chain saws (without the motor) can be handy in cutting limbs for firewood or shelter. Aluminum foil can be used as a heat reflector, fire or stove windscreen, cooking container, or signaling. Duct tape can help with repairs, splinting, and shelter construction. You will find many uses for a roll of stainless steel safety wire. Parachute cord can be used for shelter building, transport stretchers, splints, and lowering

an injured person to a safer location. Toilet paper has multiple uses other than the obvious and customary ones. Zip-lock freezer bags can be used for foods and supplies, to irrigate wounds, and to collect or transport water. Rubber tubing can help in obtaining water from crevices, along with plastic for fashioning a 'solar still,' or making a slingshot. You should have some safety pins, paper and pencil, and, unless you are experienced in wilderness survival, an instruction manual.

Together with a First-aid kit, which we will discuss another time, you have what you need to follow the old Boy Scout motto: "Be Prepared." More important, is to keep your head, to avoid panic, resignation, giving up, or getting angry. The survivors all have one thing in common, that is they want to live, they hold on, they pray, and help everyone possible on the unfortunate team to do the same. Now that you know what to do, fly safely, so you never have to use the Kit.

*[Doctor Hansen, author of the popular book on home health care, **Get Well At Home**, currently serves as medical director of the **Emerald Valley Wellness Clinic**, and its **Live-for-Health Seminars** in Creswell, Oregon. Pilots who for health reason are having trouble passing their medical should contact us. For further information or inquiries, contact: clinic1@emeraldwellness.com]*