

CHAPTER 14: PERSONAL EQUIPMENT

The proper personal equipment can contribute to your comfort, safety, and enjoyment while flying. In this chapter, you will learn about the proper clothing to wear while soaring, the need for sufficient food and water during a flight, the inspection and use of a parachute, and what to carry in a survival kit.

14.1 Attire for Flying

When deciding what to wear for a given flight, remember to consider not just the conditions that you will encounter during the flight, but also those that you might encounter if you had to land out. While it may be unbearably hot on the ground on a summer day, it may be unbearably cold if you have to spend that night at high altitude on a mountain. While the likelihood of being stranded on any given flight is very low, it is worth taking a little time to consider how to minimize the consequences if something does go wrong.

Hat

A proper hat can benefit the pilot in several ways. First, a hat that shades your face, ears, and neck from the sun will help reduce the chance of getting these tender areas sunburned. Keeping your head shaded also helps to keep your entire body cool. You can even dip your hat in water while on the ground or before takeoff to help keep you cool until you are able to climb to more comfortable temperatures.

A good hat for a glider pilot will be soft so that if it hits the canopy when you turn your head, it will give. It should be light in color, so that it doesn't heat up in sunlight (unless you are flying in cold conditions, in which case you might want a dark hat or stocking cap).

Sunglasses

Sunglasses protect your eyes from the sun's damaging rays and provide increased comfort.

You should choose well-made, durable, optically accurate lenses with ultraviolet (UV) protection. While polarized lenses may increase your ability to see faint clouds, the variation in opacity that occurs at different angles leads most pilots to choose un-polarized lenses. Glasses should be large enough to protect your eyes. Small designer sunglasses are usually not appropriate.

Clothing

Protecting your skin from UV damage is important, especially when flying at higher altitudes. At 6,000 feet, there is 20% less protection provided by the atmosphere than at sea level. At 18,000 feet, the atmosphere provides only half

the protection it does at sea level. Many pilots will wear a long-sleeve shirt or light jacket, and long pants to protect their arms and legs during a long flight.

White or light-colored clothing tends to create a reflection inside the canopy. You may want to wear darker colors if this is a distraction. Of course, darker colors will cause you to be warmer. Experiment until you find a workable compromise.

Shoes

Sandals may be comfortable on the ground, but you might want to wear something more substantial in case you ever have to hike over rough terrain. While you don't need to carry snowshoes and hiking boots, do keep in mind the type of terrain you may have to walk over if you had to land out.

14.2 Food and Water

When you are flying, either taking lessons as a beginner or pursuing your 1000K diploma, you need to be operating at peak efficiency. Dehydration and low blood sugar levels can lead to poor pilot performance.

Water

You should carry and drink enough water on a long flight (or a long flight training session) to stay properly hydrated. Heat, the use of bottled oxygen, and stress, can increase your need for water. Drink small amounts periodically to keep yourself from ever getting thirsty.

Food

Just as it is good to drink water at regular intervals, it is also beneficial to eat small snacks regularly. If you go all day without eating anything, your blood sugar level can drop to a point where your brain cannot function optimally.

When deciding what type of food to carry with you, keep the following in mind. "Small" foods, like trail mix, nuts, or any type of food you eat by the handful rather than by taking bites of, can spill easily. There is nothing more inviting to a mouse or squirrel than your nice, cozy glider, especially when you provide the food!

Foods that melt or are messy or sticky should also be avoided (especially if you are flying a club or rented glider!).

"Energy bars", bagels, bread, or simple sandwiches are often good choices.

14.3 Parachutes

A parachute is required by the FAA when performing aerobatics. Most soaring contests also require participants to wear a parachute while competing. Many glider pilots choose to always wear a parachute for the extra security it provides.

The following discussion will cover the basics of parachute storage, preflight inspection, and use. However, the best way to learn about using a parachute is to spend some time with an FAA certified parachute rigger.

Parachute Storage

A parachute that doesn't work properly when needed is just an expensive seat cushion. To stay in working order, it must be stored properly. When not in use, it should be kept in its storage bag, in a dry, cool, well-ventilated area. It should not be exposed to oil, water, acids, or direct sunlight. If the parachute is ever exposed to unsafe conditions, it should immediately be inspected by a qualified rigger for damage.

Keeping the parachute away from rodents is a big challenge. A mouse or squirrel can make an expensive nest out of your parachute in a very short time. Keeping your parachute off the ground and in an airtight plastic storage container helps to minimize the risk from rodents.

Rubber bands are used on the parachute lines to keep them from tangling during packing. These rubber bands can damage the lines if left in place for more than a few months. If you are going to store your parachute for more than six months, you should remove the rubber bands. You must then have your parachute inspected and repacked when you are ready to put it back in service.

Parachute Preflight Inspection

You should establish a routine for the preflight inspection of your parachute just as you do for your glider. If available, you should follow the manufacturer's preflight inspection checklist. If you don't have the manual that came with your parachute, you should try to obtain one from the manufacturer. The following discussion covers the items included in a typical preflight parachute checklist.

First, inspect the packing data card. The card should be stored in a pocket somewhere on the parachute and lists the last date it was repacked and inspected, who performed the work, and the date it is due for the next repack and inspection. It is illegal to make a parachute available for emergency use unless it has been inspected and repacked within the preceding 180 days (60 days if any part of the parachute is made of natural materials). The inspection and repack must be performed by an FAA certified parachute rigger.

Inspect the storage bag or container for any signs of rodent or physical damage, and stains or mildew, which would indicate moisture damage. If you find stains or damage, the parachute should be inspected and repacked.

Now remove the parachute from its storage container. Inspect the ripcord. The handle should be held in place by elastic or Velcro, but should be easy to remove. Inspect the ripcord housing for dents or kinks. Gently move the rip cord back and forth in its housing. It should move freely.

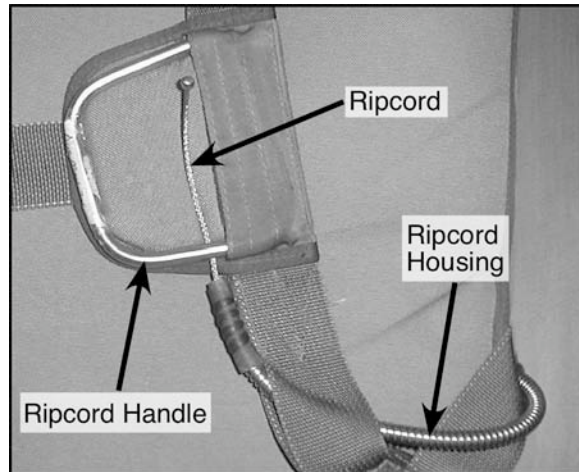


Figure 14.1 – Parachute rip chord

Turn the parachute over, and open the pin protector flap. Check that the pins extend 1/2 to 3/4 inches through the closing loops. Close the flap.

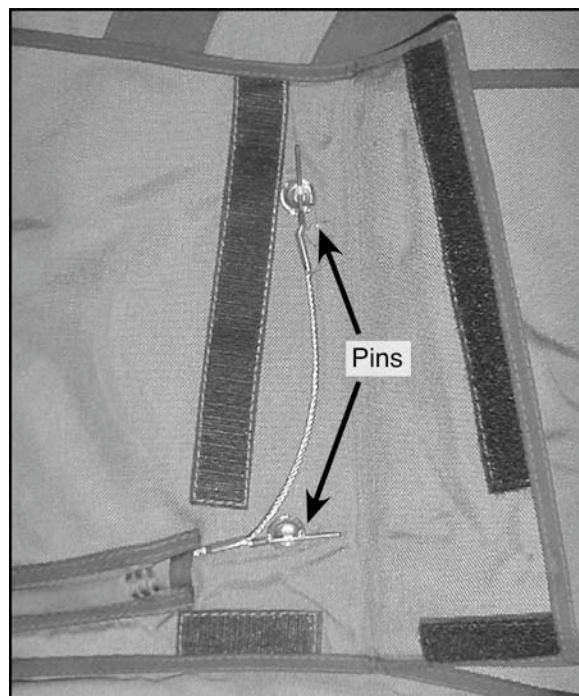


Figure 14.2 – Parachute pins

Inspect the snaps and buckles for corrosion or damage, and make sure they function properly.

Inspect the webbing for fraying or nicks. Inspect the stitching for broken or missing stitches.

Parachute Fitting

A properly fitted parachute should be tight in the leg straps and snug in the chest strap, with the vertical straps of the harness running in a straight line from the shoulders to the waist.

To put on the parachute, unbuckle the chest strap, if it has one. Then put on the parachute as you would a backpack.

Buckle the chest strap. It should be snug but not tight. The chest strap is not meant to take much load, but simply keep you from falling forward and out of the harness.

Next, disconnect the leg strap buckles. Thread them between your legs and re-buckle them, making sure they are not twisted. Tighten the leg straps so that they are tight when you are slightly bent over at the waist. As you try to straighten up, you should feel some pressure in your shoulders. Double-check that all of the buckles are correctly fastened and closed.

Bail-Out Procedure

A structural failure, a mid-air collision, or a problem with the controls are the main situations that would cause you to bail out of your glider. Clearly, if you are low, the decision must be made very quickly. If you are higher, you might have a bit more time to assess the situation. However, don't wait too long. Make sure your last option is still an option.

Jettison Canopy

Once you have made the decision to bail out, jettison the canopy. As you pull the canopy jettison lever, try to hold one arm in front of your face, in case the canopy blows back into you. This would not be a good time to be knocked unconscious!

Release Belts

Next, release your seat belts and get out of the glider. Keep in mind that you would probably not bail out of your glider if it were in straight and level flight. More likely, it would be wildly out of control. There may be strong G-forces, centrifugal forces, and wind to deal with. If the forces are so great that you can't get out of the cockpit, you might try different control positions. While you may not be able to get the glider back in control, you may be able to slow down a spin, or decrease the Gs to a level where you can lift or roll yourself out of the glider.

Pull Rip Cord

Once you are free of the glider, locate your ripcord handle. Look for the handle; don't just reach for it. It may have been pulled out of its pocket while you were climbing out of the glider. Hook both thumbs through the handle and punch forward as far and fast as you can. Repeat if necessary.