

Backpack Care

The old adage, *"Take care of your equipment and it will take care of you"* is an important truth to live by for campers, hikers and backpackers, and one that is very true when it comes to your backpack. Throughout a long day of hiking, you'll want your backpack to be well-fitted, comfortable and able to withstand the constant punishment of scraping tree branches, rubbing against rocks and enduring the elements, whether they are harsh sunlight, torrential rain or blinding snow. Follow the suggestions below and you'll have a backpack that will take care of you and give you years of service because you take care of it.

Pack Carefully

Don't throw things into your backpack at random. That hard corner of that science text book that you like to carry around to impress members of the opposite sex (We need to talk.) may rip a hole in the backpack's material. Making sure you pack those hard-edged and sharp items (such as a stove, cookware or tent stakes) carefully will avoid having them poke you in the back while wearing the pack, but will also keep them from poking into the backpack material and causing wear spots or, even worse, ripping holes in the backpack. Pack deliberately and carefully to ensure that weight is distributed properly. Distributing the load equitably will help your pack stay balanced, making it easier and more comfortable on your back as you are hiking.

Carry a Small Repair Kit

When NASA launches a space shuttle they have redundant back-up systems in place, just in case a primary or even secondary system should fail. As we trek out into the wild, it would behoove us to have at least some small ability to make repairs while in the great outdoors. Bring along a couple of extra clevis pins and split rings, a heavy duty sewing needle with upholstery thread, a small can of silicone spray and a roll of universal patching material, otherwise known as duct tape. Fix holes quickly. The smaller a hole is the easier it is to repair. A large hole, even properly patched and sewn shut, can reduce the structural stability of the pack. See the section below on repairing rips and tears.

Animal Damage

Packs are often damaged by furry creatures. These creatures are either going after any food kept inside of your pack, or the salt deposits that form on the pack exterior. With use, salt deposits will form on your backpack's shoulder straps and back panel. Animals, especially rodents, are attracted to salt, and will gnaw at the fabric, causing damage. To prevent animal damage, keep your food and your pack separate at night. Consider leaving your pack open and unzipped, so that animals are less inclined to chew through the fabric.

Clean Your Pack Properly

It can happen to the best of us; no matter how careful we try to be, we find food items spilling into the pack, or something melting and making a sticky mess when it escapes a badly sealed zip-lock bag. As soon as you discover such a problem, clean it immediately and as thoroughly as possible. Food particles or liquid stains can cause the pack fabric to wear prematurely. Almost as bad; if you set the backpack down and take an afternoon nap, you could awake to ants or worse crawling into and through your pack, enjoying the snack you left for them. When returning from a hike, empty the pack completely, shake all the loose items out. To preserve the integrity of

your pack's fabric coating, the interior should only be wiped down with a damp cloth to remove crumbs or stains.

Dirt and grime will abrade the fabric and wear it out. On the trail, be careful of tree sap, plants that secrete liquids or even the rare occurrence when your backpack becomes ground zero for bird droppings. At the first sign of any type of stain, use a damp cloth to clean off as much as possible to minimize damage to the pack fabric. Back home use a mild, non-detergent soap to thoroughly clean any stains, but be careful not to ruin the fabric's waterproof coating. When cleaning the entire pack, wash in a bathtub filled with cold water. Dry completely in a cool, airy place to avoid dampness causing mildew.

Never Do This

- Never machine wash or machine dry your pack.
- Never use hot water, bleach, dish-washing liquid, pre-soaking solutions, or spot removers. Always use a non-detergent soap.
- Never use solvents to clean your pack as solvents may irreparably damage the fabric, frame material, and water-resistance of the zippers.

Perform Regular Maintenance

Take care of problems while they are small and, preferably, while you're at home. Sew any small rips or tears, patch any worn areas of fabric and tape seams that may be loose. Check high-stress points such as the hip belt, suspension stabilizers and shoulder straps for wear or separation. Keep zippers clean and free of obstructions such as stray threads or items that could damage the teeth, and spray with silicone spray to keep them easy to zip and unzip.

Store The Backpack Properly Keep your backpack in a cool and dry storage area to keep mildew from forming and to extend the life of the waterproof coating on most packs. Do not stack heavy objects on top of your pack and, if possible, stuff with clothing or newspaper to help maintain its shape.

Zipper Maintenance

Maintain your zippers' longevity by keeping them clean, free of sand and grit, and out of the dirt. Most zippers fail due to wear and tear to the coating on the inside of the zipper slider (the metal toggle on your zipper). Once the coating wears off, the metal abrades rapidly, and the zipper slider no longer joins the plastic coils securely, causing the coils to separate from the slider. Hand wash your pack frequently to remove dirt and grime, and preserve the coating on your metal zipper slider. Keep loose threads trimmed.

How to Repair a Broken Zipper

A backpack with a broken zipper is unusable -- new or old, shabby or not. Instead of abandoning it, repair the zipper, or replace it with a new one.

Tools: needle, sewing scissors needle-nosed pliers, seam ripper, straight pins, sewing machine.

Materials: thread, small safety pin, old zipper of similar size; replacement zipper, if required.

Time: 5 to 15 minutes for repair; 1/2 to 1 hour for replacement.

Before you decide to replace a zipper, examine it carefully to see if you can repair it. If a tooth is missing in the upper two-thirds of the zipper's tracks, the zipper should be replaced. If a tooth is missing near the bottom of one of the tracks, zip up the zipper so that the slider is above the damage. Thread a needle and make several stitches around both rows of teeth, just above the missing tooth, to make a new stop for the slider. Stitch over the new stop several times to make sure it's firm.

If the problem is a missing pull tab, check to see whether the slider has a hole where the pull tab was attached. If so, slip a tiny safety pin or paper clip through the hole to serve as a substitute. If there is no hole, try to salvage a clamp-on pull tab from an old zipper of a similar size; put the tab onto the slider with a needle-nosed pliers.

If the slider is off the track on a metal zipper, carefully rip out the stitching around the lower ends of the zipper tapes. Pry off the metal stop at the bottom of the zipper, being careful not to tear the tapes. Remove the zipper foot entirely.

Guide the track tapes into the grooves of the slider, inserting them into the top and pushing them through the slider to the bottom; use a pin if necessary to work the track tapes through. Pull the tapes carefully so that the slider is evenly seated on the tracks.

When both tapes have been threaded through the slider, carefully pull the slider up until the locked track teeth appear at the bottom. Make sure the slider is evenly seated on the tracks, or the zipper won't close evenly at the top. Sew a new stop at the bottom of the tracks with needle and thread, and repair the stitching that holds the zipper in the garment.

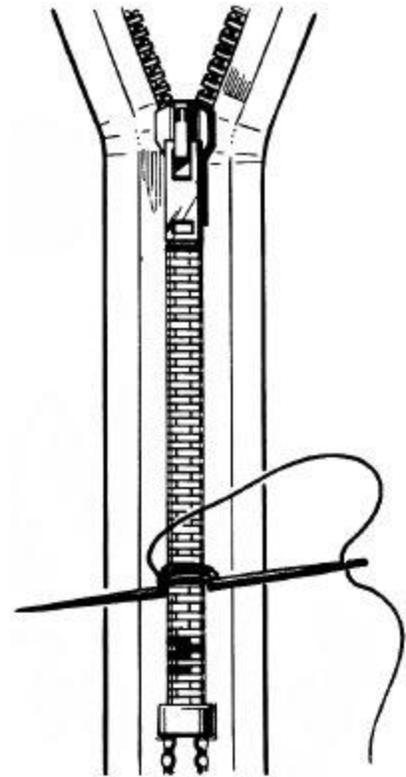
If the zipper is beyond repair, replace it with a new one of the same length. Buy a zipper in a matching color, and be sure it's the right weight and kind for the backpack.

With a seam ripper, carefully remove the stitching holding the old zipper in place. As you work, note how the old zipper was put in, and in what order the various lines of stitching were made. Remove the old zipper and pull out all loose thread ends.

Following the directions on the zipper package, pin the new zipper into place and stitch it the same way the old zipper was stitched; use a sewing machine with a zipper foot. Make the final topstitching on the outside of the garment, by hand or by machine.

How to Mend Rips and Tears

Small holes and tears to the backpack's fabric can be repaired in the field using a needle and thread, adhesive repair tape, or liquid urethane such as Mcnett Seam Grip). Once you return home a backpack can be saved from discard by a skillful mending job, and usually the job requires only a few minutes' work.



Tools: steam iron and ironing board, sharp scissors, sewing needles in a variety of sizes, sewing machine, tailors' chalk or pencil, sponge.

Materials: iron-on mending tape, thread in appropriate colors, patching materials, heavy brown paper, tissue paper.

Time: 15 minutes or more, depending on damage.

The mending technique you use should depend on whether it matters how much the mend shows, and whether the piece is worth spending much time on. The easiest and most effective method is making the repair with iron-on mending tape, or with a sewing machine's straight or zigzag stitch.

Most tears are either straight or L-shaped, because they tend to follow the grain of the fabric. Use mending tape. Cut a piece of tape about 1 inch wider and 1 inch longer than the tear, and round off the corners.

Lay the piece to be mended on an ironing board so that the torn portion faces up, wrong side up. If it's hard to lay out the item so that the edges of the tear stay together, make a large temporary patch of either fabric or heavy brown paper, and baste it lightly to the side of the fabric *opposite* the side where the mending tape will be attached. Be sure the basting threads are far enough from the tear so they won't be caught by the mending tape.

Lay the mending tape, adhesive side down, over the tear. Position it carefully; then use tailors' chalk or a pencil to mark around it at several points. Take it off temporarily and preheat the torn area by ironing it briefly.

Replace the mending tape over the tear inside your markings. Iron it down according to the directions on the mending tape package; make sure the tape is completely bonded to the fabric. Let the patch cool completely before moving the mended item. If you used a basted fabric or paper holding patch, remove it when the item is completely cool.

Sometimes the edges of a tear can't be brought together neatly because some of the fabric is missing or is so badly damaged it has to be cut away. When this happens, use iron-on or fabric patches, or hide the damage with decorative patches. Zigzag machine stitching is ideal for applying a patch.

To repair a straight or L-shaped tear by machine, set the machine for a straight stitch, with about 10 to 12 stitches to the inch. Lay the piece under the presser foot so that the tear runs crosswise in front of you and the left-hand end of it is 1/2 inch to the right of the presser foot. Put the needle and the presser foot down on the fabric and sew in a zigzag pattern back and forth across the tear, switching the machine from forward to reverse and back again, pull the fabric gently with your left hand to keep it moving slowly from right to left under the presser foot. The mended tear should be held together by even zigzag rows of straight stitching, making a very strong but usually conspicuous mend.

Where the mend can't be obvious, hand stitching can be made much less visible. Use a fine sewing needle (size 8 or 9) and fine thread; make tiny stitches back and forth across the tear. If the tear is very long or the fabric difficult to hold, you may need to keep the edges in place while you work by basting the fabric to a piece of white tissue paper. Work back-and-forth rows of stitching through both fabric and tissue; sponge the tissue lightly to soften it, if necessary. Then carefully tear the paper away and remove the basting thread.