

621
Packs

483
Boots

363
Tents

480
Bags

22 BEST
BUYS

BACKPACKER

THE OUTDOOR DOORSTEP®

2008 Gear Guide

269 Reviews +

BONUS!
GEAR LISTS
FOR EVERY
REGION

The Ultimate Fix-It Guide

55 QUICK REPAIRS
AND EASY UPGRADES

33 Secrets of the Pros

GEAR PICKS & SURVIVAL TIPS

TRAIL-TESTED BARGAINS!

20 BIG PERFORMERS WITH
SHOCKINGLY SMALL PRICES



MARCH 2008

\$4.99



EXCLUSIVE
GREEN GEAR
REPORT CARD

p.173

WWW.BACKPACKER.COM

MAKE YOUR GEAR LAST FOREVER

We should all hope to have camping equipment that requires regular TLC. It means we're hiking a lot, because even the very best gear gets worn—even broken—with hard use. To make your stuff go the extra mile, tear out our illustrated guide to the 55 most common repairs and maintenance musts. You'll get expert advice for preventive care, proper storage, and lots of inexpensive fixes. We guarantee you'll save money and upgrade well-loved gear—and you'll never have to abort a trip due to a balky stove or leaky tent.



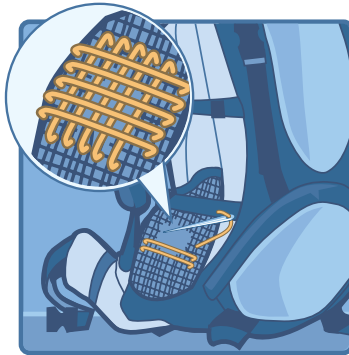
LOOK INSIDE ►

Packs

KEY
 Prevention Fix It Clean It Make It

Pamper your pack

Tossing your pack around like a gym bag will shorten its life-span. "Always lift it by the haul loop," says Eric Hamerschlag, a pack designer at Mountain Hardwear. If your pack is too heavy, prop it on a rock. Or lift it like this: Bend one leg into a shallow lunge; pick up the pack by the haul loop and place it on your thigh with the shoulder straps facing you. Holding the haul loop, twist your torso and slide one arm through the far shoulder strap; then bend forward to shift the weight onto your back and slide the other arm through the strap.



Broken plastic buckle

The small buckles that control a pack's suspension are often sewn into the webbing and aren't easy to fix in the field. Fortunately, a complete fracture is fairly rare, so there's no need to carry spares. (Hipbelt buckles are different; if one pops, rig a carabiner to tide you over.) If a small buckle breaks, here's a simple temporary solution:

- >>> Remove the damaged buckle from its webbing (1).
- >>> Find and unthread a buckle elsewhere on your pack that matches the orientation of the broken buckle. (If there is no match, resort to duct tape.)
- >>> Using a lighter or stove, heat a blade until it is hot enough to sever plastic. (2)
- >>> Press the blade into and through the base of the buckle at a 45-degree angle. Make the angled slot in the spot where the webbing will need to slide through to attach the buckle to the strap. (3)
- >>> Insert the new buckle in the webbing. (4)



Torn mesh side pocket

To fix ripped mesh or webbing, sew it back together with a large needle and #46 or #69 bonded nylon thread (dental floss and medical sutures also work). Use the first few stitches to close the tear; if it's large and the edges are frayed, run the stitches from the outer edges of the pocket, where thread will hold securely. Sew horizontally over the gap, then repeat with vertical stitching to create a grid-like patch.

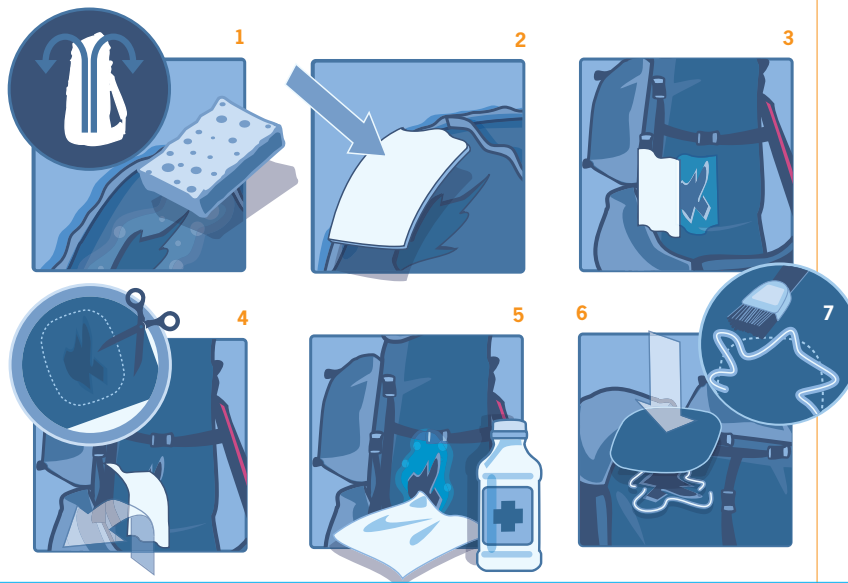
Remove duct tape residue

The gummy remains attract dirt and can complicate further repairs. Remove it with 3M Adhesive Cleaner or rubbing alcohol.

Ripped pack fabric

Self-adhesive ripstop nylon patches or repair tape (applied to both sides) will fix small tears and holes in low-stress areas that receive little abrasion. But in high-stress areas like the pack's bottom and sides, a dime-size hole will expand to quarter-size and larger if not patched promptly. Here's how to plug one using a combination of polyurethane and fabric patches.

- >>> In the field, empty the pack, remove the stays, and turn the entire bag inside out to wipe away any dirt. (1) Tape over both the inside and the outside of the hole with ripstop nylon repair tape. (2, 3)
- >>> Back home, buy a swatch of Cordura at a fabric store that is similar in color and weight to the damaged area. Cut out a patch that is about 15 percent (or an inch) wider and taller than the hole you need to cover. Remove the repair tape from the outside of the packbag (leaving the tape on the inside). (4)
- >>> With a clean cloth and rubbing alcohol, wipe away any dirt and tape residue. (5)
- >>> Place the pack on a hard, flat surface. Cover the underside of the patch with Seam Grip and press it onto the packbag, smoothing it from the center toward the edges. (6)
- >>> For extra waterproofing, paint the patch's edges with Seam Grip. (7)



{ Fact or Myth? }

Stuffing a tent is better than rolling. **Myth!**

"Stuffing is bad practice," insists Mountain Hardwear product manager Chris Hilliard. "Repeatedly cramming a tent into a stuffsack creates a lot of small-radius bends in the fabric. These tiny edges end up being subjected to far more abrasion and moisture than the coating would be if the tent were folded." The traditional argument against folding has been that permanent creases weaken the fabric, but Hilliard says this is preposterous. "It would be impossible to fold the tent in the exact same place every single time," he claims. MSR's Terry Breaux, a 20-year veteran of tent design and repair, agrees with Hilliard that rolling is the best option, because it eliminates micro-creases and segregates the dirty floor from the rest of the tent. Now make like the entire BACKPACKER staff and scurry to your gear closet to re-pack your tent.

Slashed tent fabric

Holes and tears more than several inches wide are too large for repair tape or pre-cut patches. Instead, create a waterproof polyurethane patch with Seam Grip.

- >>> In the field, cover both sides of the gash with McNett's Tenacious Tape or duct tape. (1)
- >>> When you get home, pull off the tape on one side (see tape removal tip on previous page).
- >>> Lay the tent on a hard surface and paint over the damaged area with Seam Grip. Spread the glue one-quarter inch wider than the hole. (2) If fabric is missing, buy a swatch of ripstop nylon from a fabric store and glue it on. Let it cure overnight, then remove the last tape. (3)
- >>> For siliconized nylon fabrics (used in many single-wall shelters), use SilNet adhesive.
- >>> Plug tiny holes—caused by embers from a campfire—with a dab of Seam Grip.



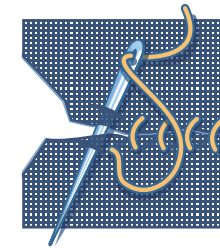
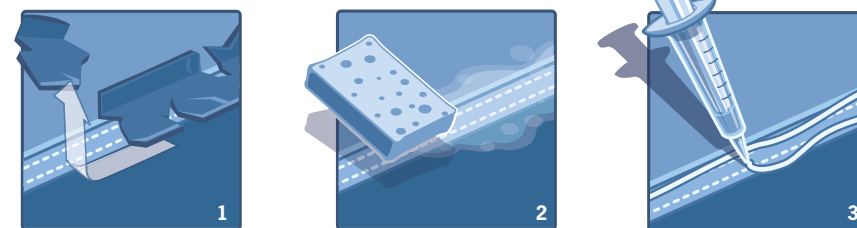
Wash a tent

Placing your tent in the washing machine will destroy its waterproofing. Instead, rinse the floor with warm water (soap can kill coatings), then scrub with a soft brush. Hose down muddy sidewalls, zippers, and the floor. Air-dry the tent before storing it in a pillowcase.

Ragged seam tape

Taped seams on well-used tents will eventually peel off. If the maker won't fix it (most will), here's what we've done:
 >>> Repair minor damage by applying Seam Grip to flaking tape and pressing it into place.

>>> For major damage, remove the peeling tape and clean the seams thoroughly with a cloth and rubbing alcohol. (1, 2)
 >>> Using an irrigation syringe, apply sealer to all exposed seams. (3) In effect, Seam Grip is replacing the factory-installed seam taping.



Mangled mosquito netting

For holes or tears smaller than 2 to 3 inches in diameter, an adhesive mesh patch (see "Products," page 168) provides a quick fix. Or put a swatch of adhesive nylon repair tape over the gash for a less aesthetic but equally quick, permanent repair. For larger rips up to 12 inches long, BACKPACKER field editors prefer to sew the mesh back together using nylon thread and apply adhesive tape reinforcements as needed. If the mesh shredded completely or separated at the seams, salvage what you can and return the tent to the manufacturer or a repair shop (see "Resources," p. 168).

No more mold

"Have you ever pulled a tent out of the stuff sack and it smells like vomit?" asks MSR product manager Terry Breaux. "That's the smell of moisture breaking down the waterproof coating." Even a few drops of condensation can cause mildew to grow, so never store a wet tent. Instead, hang the tent on a clothesline or shower rod. Once it's dry, store it in a cotton pillowcase or mesh storage sack. In the field, drape the fly over a tree and turn the floor into the sun during breakfast; a dry tent is both lighter and more livable.

Maintain a waterproof barrier

Invest in a footprint designed for your tent, or build your own using Tyvek or painter's plastic. Even a thin barrier will extend the life of the tent floor and prevent ground soaking if a puddle forms beneath you. Keep DEET-based bug repellents away from the tent fabric. Exposure to that powerful solvent will melt the nylon's waterproof coating.

Stuck zipper

Grimy build-up can cause zippers to snag. Clean teeth with water and a toothbrush. Don't apply lubricant to zippers; it will only attract more grit. Occasionally, the looped wires forming the tracks will separate. Bob Upton, owner of Rainy Pass Repair, suggests straightening the warped coils with a knife or needle.



Tents

Boots

Build a toe cap

Upgrade a leather boot's toe protection with a strong, clear polyurethane shield.

- >>> Clean the front rand and wipe it down with rubbing alcohol; let dry. (1)
- >>> Sand the leather on the toe with extra-fine (600-grit) sandpaper. (2)
- >>> Apply masking tape on the front of the boot to mark off the area for the cap. (3)
- >>> Buff the sanded area twice with a rag dipped in rubbing alcohol. Air-dry the boots in between the applications.
- >>> Paint the toe completely with McNett's Freesole, using a 0.5-inch paintbrush. (3)
- >>> Remove the tape after 45 minutes; let dry overnight. (4)



45 min.

Stay away from heat

Never dry wet boots next to a campfire, stove, or space heater, or use a hair dryer. High heat will crack and shrink the leather, and we've seen it melt and delaminate soles.

{ Fact or Myth? }

Mink oil is bad for leather boots. **Fact!**

Most hiking boots made in the last 20 years should only be treated with wax-, water-, or silicone-based waterproofing and leather conditioning products. Cobbler Dave Page says that oil-based treatments (including mink oil) over-soften chromium-tanned leather. Modern, glued-on boot soles can also peel when penetrated by certain oils.

Sole delaminates at the heel

Clean the heel of the boot with a damp cloth before brushing it with rubbing alcohol. Let the boot dry overnight. Peel back the sole and squeeze a quarter-size dab of Freesole into the split. Press down firmly and wipe away any excess. Place a filled water bottle upright in the boot to keep constant pressure on the re-glued joint; dry overnight.



Rand splits apart

Repair a peeling, chipped, or cracked rand—the boot's rubberized front bumper—using McNett's Freesole, a beefier version of Seam Grip. Do not substitute a "super glue" product like Liquid Nails that lacks Freesole's ability to flex. >>> Wipe away dirt with a damp cloth and brush; apply some rubbing alcohol

to improve adhesion. Let the boot dry completely before proceeding. (1)

- >>> Apply Freesole using a brush or squeezing directly from tube. Wipe away excess. (2)
- >>> Wrap the toe in Tenacious Tape or duct tape, inserting a pencil or pen under the tape to apply direct pressure to the rand. (3)
- >>> Leave the tape in place overnight.



Stink-free boots

The drier your boots, the less odor they will produce. At home, stuff them with newspaper to soak up moisture; repeat until dry. For odors that reach WMD levels, spray the interior with Lysol. If the smell persists, apply McNett's Mirazyme and put the insoles in a freezer overnight. This will chill-kill any lingering bacteria.

Suspend a sleeping bag



To optimize loft, hang sacks loosely in a dry location. Use a ceiling hook in your gear closet, or string a cable to hang multiple bags from separate carabiners. Make sure the bag doesn't touch the floor. If you lack hanging space, store it in a large, breathable cotton or mesh sack. Never leave a down or synthetic bag in its stuff sack for extended periods.



Stop the melt



Never leave sleeping bags or pads in your car on a hot summer day, when temps can exceed 160°F. That's hot enough to flatten a closed-cell foam pad. Self-inflating pads are more heat-tolerant, but extreme temps can delaminate glue around the seams.

Feather fight

If you see a quill poking through a sleeping bag shell, Chris Hilliard says push it back inside. Pulling it out will create a bigger hole in the fabric.

Prolong a bag's life



Preserve a bag's insulation by stuffing it uniformly. First, unzip it. Then grab the bottom and push it into the stuff sack, rotating the sack as you cram the rest of the bag in. Gain leverage by sitting cross-legged and holding the sack against your thigh.

Wash and dry a sleeping bag

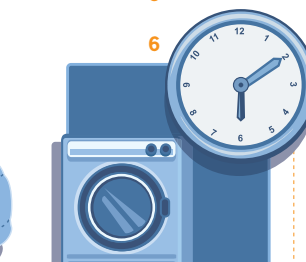
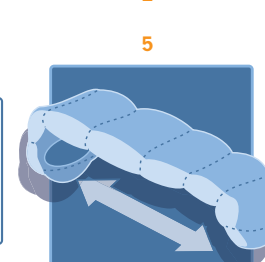
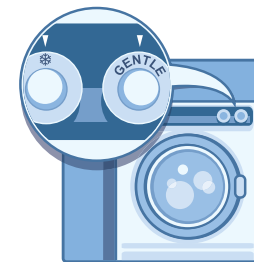
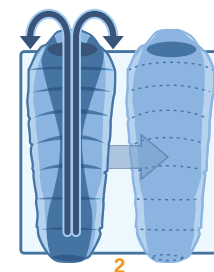
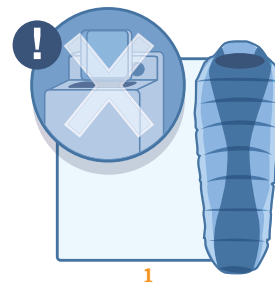


A simple wash can de-skunk a well-used bag and revitalize down insulation. Follow these steps to clean both down and synthetic bags.

- >>> Never wash a bag in a top-loading machine; the agitator will destroy the baffles. Use a front-loader and large dryer. (1)
- >>> Zip the bag completely, attach all Velcro tabs, and turn it inside out. (2)
- >>> Always avoid regular detergents and liquid soap. Use only mild powder soap (like Ivory Snow) or Nikwax Down Wash, a soap designed specifically for washing bags (see

"Products"). Use cold water and put the washing machine on the delicate setting. (3)

- >>> Run two rinse cycles to remove soap. (4)
- >>> Gently transport the wet bag from the washing machine to the dryer. Carry it draped over both arms to keep sodden insulation from ripping through baffles. (5)
- >>> Set the dryer on low, toss in two tennis balls, and curl up with a book—most bags take several hours to dry completely. (6)
- >>> Periodically check the bag to make sure it's not overheating and to smooth out clumps of insulation.



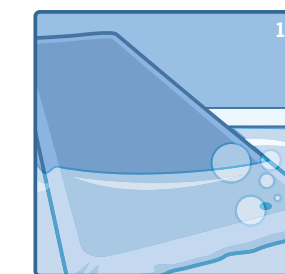
{ Fact or Myth? }

Tennis balls help a down bag dry more efficiently. **Fact!**

Experts we consulted agree that throwing several balls into the dryer with your bag helps separate the clumps of down that accumulate during washing. This speeds drying and distributes the feathers throughout the bag.



Patch a leaky pad



>>> Locate the hole by inflating the mat and submerging it in water. Look for the telltale stream of bubbles. If no standing water is available, spill water onto the pad, then watch and listen for the escaping air. (1)



>>> Circle the hole with a permanent marker. (2) Deflate the pad and let it dry. Apply an adhesive patch to larger holes, or fix pinprick holes with a small dab of Seam Grip. (3)

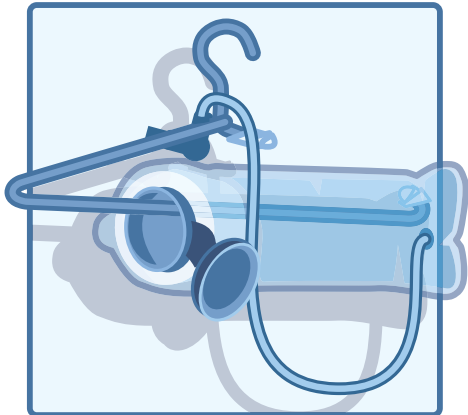


Bags

More!

Create a hydration hanger

Convert a plastic coat hanger into a device to dry hydration bladders. Saw off one arm and wrap the rough edges in duct tape. Feed the long end into the reservoir; drape the hose over the top and hang it to dry.



Leaky hydration system

You can glue busted seams and small punctures with Seam Grip, and cracked or dripping silicone bite valves with SilNet. Make sure the hydration system is empty and dry first, advises McNett's George Farkas, and give the glue 24 hours to cure so the adhesive is rendered inert and the reservoir is safe for drinking.

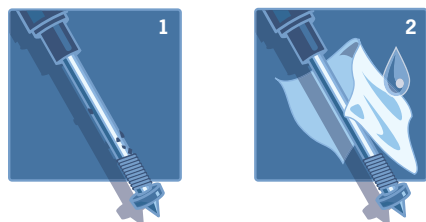
Defunk a hydration reservoir

A bleach solution can evict gunk and mildew from bladders and bottles. Pour in no more than a half-teaspoon of bleach with warm water, then shake. Loosen the cap to douse the threads; with bladders, squeeze the bite valve to flush the hose. Remove the bleach taste with a baking soda rinse (one teaspoon of baking soda per liter of water) and flush once more with water. Store your bladder in the freezer to stymie biotics.

Busted trekking pole twist lock

If your telescoping pole keeps collapsing, the interior expander nut could be loose or gummed up. Here's the fix:

- >>> Unscrew the bottom pole section past the "stop" mark to expose the expander nut. (1)
- >>> Wipe away any dirt, and inspect the nut. (2)
- >>> If it's loose, manually tighten. If it's damaged, get a replacement from a local retailer.



Tune up your stove

Whenever your white-gas stove exhibits a dip in performance, disassemble and clean the burner parts. Remove baked-on carbon residue with a scrubby pad. Grease O rings with a silicone lubricant, and replace cracked ones. Clean the fuel line by scouring it with the internal cable and wiping it clean. Then flush the fuel line (with the cable and jet removed) with a small spritz of pressurized fuel.

Stop a fuel leak

Worn O rings, gunked-up seals, and stuck pins can cause fuel to seep from a canister stove. Can you say fireball? Every couple of trips, check the O ring seal inside the stove's screw cap. Oil it, and replace any rings that appear old or cracked.

Poor cold-weather operation

The main drawback to canister stoves is their sputtering performance in temps below 40°F. Boost fuel efficiency by taping a handwarmer to the bottom of the canister or placing it in a pan with an inch of lukewarm water. In the winter, store canisters overnight in a stuff sack at the bottom of your sleeping bag.



Pressureless pumping

If you get little or no resistance when pumping, the pump cup has likely dried out. It may require replacement, but Coleman's George Wray says try this first: Pull the plunger out of the pump assembly and find the cup—a tiny circle of leather or neoprene. Moisten it with a dab of motor or vegetable oil, or even sweat.

PRODUCTS

CamelBak Cleaning Kit

Comes with two brushes, a drying hanger, and two non-chlorine tablets. \$20; camelbak.com

Granger's Fabric and Leather Waterproofing

Adds moisture repellency without changing the boot's appearance. Works on waterproof and non-waterproof materials. \$8; grangersusa.com

Granger's Footwear Cleaner

Nontoxic, water-based gel that removes dirt more effectively than soap and does not harm leather or waterproof liners. \$6

Granger's G-Wash Cleaner

Plus Concentrated, biodegradable liquid is a good option for washing very dirty raingear. \$9

Kenyon Nylon Repair Tape

This handy item comes in 3"x18" rolls in a variety of colors. \$3; campmor.com

McNett Freesole

This urethane-based glue is a must for shoe repairs. \$7; mcnett.com

McNett Gore-Tex Repair Kit

Contains two peel-and-stick patches made from Gore-Tex (round and rectangular). \$7

McNett Mirazyme Both biodegradable and hypoallergenic, this enzyme-based deodorizer eats bad smells without damaging fabric. \$8

McNett Seam Grip

Urethane formula seals tent seams, repairs rips, and sticks to anything except metal and ultralight siliconized fabrics. \$21.50

McNett SilNet

Ideal sealant for silicone-coated fabrics. \$7

McNett Tenacious Tape

It's transparent, easier to remove than duct tape, and leaves no

gooey residue. Works on fabric and plastic surfaces. \$3.50

McNett Tent Sure

Urethane sealant restores your floor's waterproofing. \$8.50

Mountain Hardwear Zipper Repair Clamp

Lightweight tool to replace worn sliders. Comes with two #5 and two #8 YKK sliders, instructions, and a practice zipper. \$6; mountain-hardwear.com

MSR Fabric Maintenance Kit:

Contains six adhesive nylon patches (2"x3") for general fabric repair. \$20; msrgear.com

MSR Micromesh Maintenance Kit

Contains six adhesive-backed micro-mesh patches (2"x3"). Will stick to any tent mesh. \$15

MSR Tent Maintenance Kit

Includes four adhesive mesh patches, six adhesive nylon patches, one side-release buckle with webbing and grommet, two #8 zipper sliders, and a 1-oz. tube of Seam Grip. \$30

Nikwax Aqueous Wax

Water-based treatment for waterproofing and conditioning full-grain leather or waterproof/breathable footwear without compromising breathability. \$7.75; nikwax.com

Nikwax Down Wash

Detergent-free liquid that won't reduce loft or strip natural down oils. \$8.75

Nikwax UV Proof

Water-based spray that prevents sun damage while adding water repellency. \$13.50

RESOURCES

Don't Forget the Duct Tape: Tips & Tricks for Repairing &

Maintaining Outdoor & Travel Gear

by BACKPACKER gear editor Kristin Hostetter. \$8; mountaineersbooks.org

Rainy Pass Repair

A Gore-Tex-authorized shop for paddling and backpacking gear. It does tents, packs, sleeping bags, and apparel. Also offers laundering and loft restoration of bags. rainypass.com; (888) 747-7867

Dave Page, Cobbler

The authorized repair facility for most major North American boot manufacturers, Page specializes in resoling and/or rebuilding your favorite outdoor footwear—from mountaineering boots to sandals. davepage-cobbler.com; (800) 252-1229

REPAIR KITS

Weekend

- > Nylon adhesive patches
- > Sleeping pad repair kit
- > Twist ties
- > Plastic zip ties
- > Tenacious Tape or duct tape
- > Safety pins
- > Sewing repair kit with heavy nylon thread
- > Parachute cord (12 feet)
- > Multitool (with pliers)
- > Large black trash bag

Expedition

- (add these items)
- > McNett Seam Grip
- > McNett Freesole
- > Tent repair kit: extra zipper slider and pull; pole repair sleeve
- > Spare buckles for pack hipbelt and shoulder suspension
- > Mountain Hardwear zipper repair clamp
- > Stove cleaning & repair kit

BONUS TIPS ONLINE

Check out more repair and prevention advice, plus additional product recommendations, at backpacker.com/fixit.