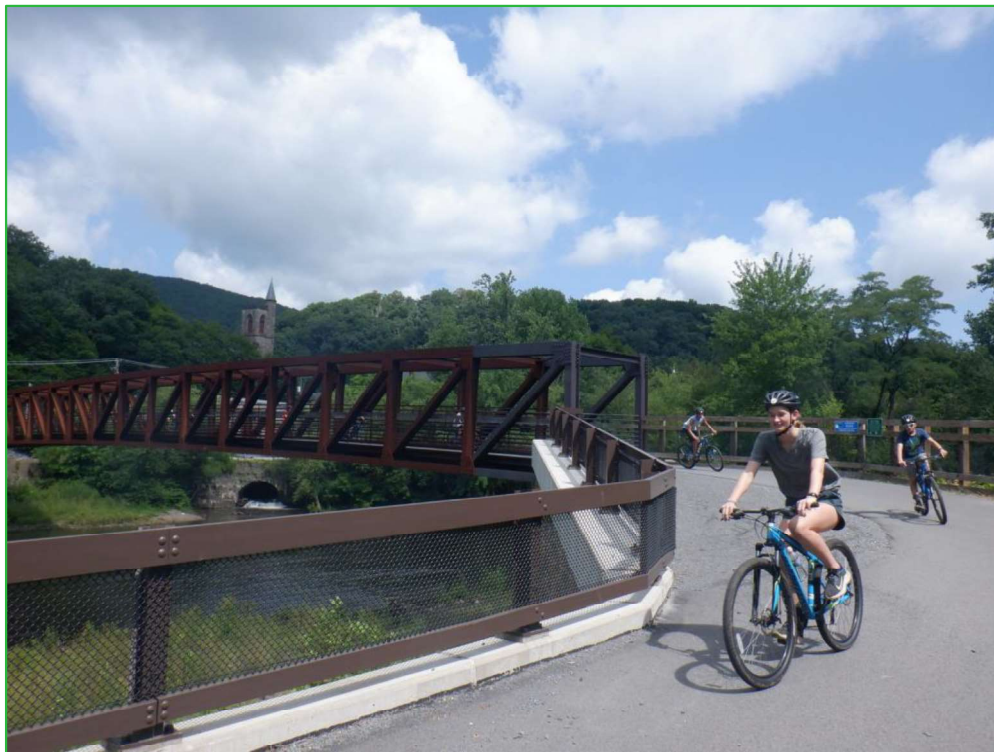


Section 08:

Mountain Biking Official Manual

Revised February 2024



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10 Quick Bike Repairs for Common Problems by U.M.
(ilovebicycling.com, 2014)

**Camp Fitch YMCA
Adventure Programs**



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Mountain Biking During Adventure Trips

During adventure trips, mountain biking is done on location through a local outfitter. Typically, the outfitter likes to size up participants before the activity takes place, either the day before (Jersey Journey) or by online registration (Grayson Highlands). Sometimes it is just show up and be fitted. (Northeast Beast).

Besides the renting of bikes, when mountain biking is ran on Camp Fitch YMCA property or if bikes are taken from camp to a nearby location in Pennsylvania or Ohio, follow all procedures detailed in this section.



Grayson Highlands, 2022

Renting Bikes

Make sure bikes are fitted to each individual and that helmets are issued to everyone on the trip. Trip Leaders are responsible for ensuring each participant is sized by the outfitter and can do their own safety check (listed below). The trip needs to follow all safety and operating procedures outlined by the outfitter who is providing the bikes.

Electronic Bikes

During some trips, electronic bikes will be used instead of regular bikes. In this case, participants should know how much battery they have left during the trip and how to use the throttle normally located below the handlebars.

Bicycle Safety Check

Before the group hits the trail or pathway, every participant needs to go through a simple safety check.

1. The tires are good (add air if needed).
2. Test brakes (back and front).
3. Adjust the seat, can they reach the pedals?
4. Shift gears while pedaling to see if the chain slips.
5. Bell rings.

On-the-Trail Riding Procedure

Every mountain biking trip needs to establish the same protocols as in hiking. There must be a lead and sweep with the Trip Leaders being aware of the F U break as well. It is best to take pictures during breaks. If a Trip Leader wants to get sport pictures of the campers riding, they should strategize biking ahead and tell them where to stop and wait for them to catch up.

When mountain biking, establish checkpoints. This is because participants may not ride as fast as others creating significant space between the lead and sweep. If there is only one Trip Leader, that person needs to be the lead and stop at more frequent checkpoints.

First Aid Kits

Trip Leaders need to carry a trip first aid kit as well as their personal kits. If the personal kit cannot be put in a backpack, try to use the bag that attaches to the bike. On mountain bike trips, CO2 cannisters should be carried with you in case of a flat tire.



Program Delivery

Setup

Before the program runs, the instructor should open the doors to the mountain bike shed and bring out eight to ten bikes ranging in different sizes for guests to use. During summer camp, you should know what bikes to bring out after the first day. For weekend retreats, the staff member needs to guess depending on the size and age of the group. During times when there are no guests, staff should work on broken bikes in public view to stimulate interest.

Sizing the Participant

When a guest arrives, size them up to the appropriate size bike, making sure the height of the bike is just right and that the seat is adjusted if needed. The participant should be able to touch the ground and have their butt barely touching the seat. The seat should be positioned to where their feet do not touch the ground when spinning the pedals and that their knee has a good range of motion. Riders must wear a helmet also and have it tightened in the back with the chin strap buckled.

Ground School

Before a staff member allows guests to enjoy the trails at Camp Fitch, they should help the guest or camper perform a brief safety check of the bike. This will make sure the bike has ample air in the tires, brakes work, bike is sized well, and the gears shift properly without the chain popping off. Guests and campers can ride in the field or pump track to get comfortable before heading out on the trails.

Pump Track

The goal of the pump track is to let guests and campers become comfortable with uphill climbs, downhill runs, and uneven terrain sometimes featuring rocks, roots and ruts. The pump track should be supervised when in use.

Supervision of the Trails

Once the class, group, or individual participants head out on the trails, supervision is needed in case there is a wreck or injury. If there is one staff member running the program, they need to stay at the shed to help welcome other guests and occasionally walk around to see how participants are doing.

If there are two staff available, one staff needs to be walking the trails while the other is at the shed waiting for participants to come back or welcome new riders.

In the case there are three or more staff, it is good for these extra staff to spread out and stand at strategic points on the trail that offer the most visibility. Using teachers or parent chaperones during outdoor education is ideal for this model.

It is possible to run/ facilitate mountain biking without ever having to physically ride a bike.

Program Types

There are four different ways to run mountain biking depending on the program or season.

Adventure Trips

If mountain biking is being done on an adventure trip, the two Trip Leaders form a camper sandwich through the lead and sweep policy. Taking checkpoints often at every key point or road crossing will keep the group together.

Family Camp & Weekend Retreats

On weekends, the mountain bike shed operates as a bike rental store. Guests can walk by anytime and choose to take a bike out for a ride. It is the facilitator's role to size the guests up, explain instructions, and inform them where it is acceptable to ride.

Outdoor Education

In the rare instance that a school chooses to run mountain biking, teachers are used as extra set of eyes to help supervise the trails. Teachers can walk the trails or simply sit at a designated curve. The facilitator running the class allows participants to ride only on the phase two trail after they have mastered the phase zero beginning loop. Phase one is skipped due to no benches or seating being established for teachers.



Jersey Journey, 2023

Summer Camp

During the summer camp season, facilitating the mountain bike rope or focus program can take on many forms. It mostly takes on the Outdoor Education format, allowing instructors the ability to teach without having to even get on a bike. If an instructor decides to ride, they must follow the adventure trip method.

Mountain biking is not run for option time or exploratory due to amount of time it takes to size participants up. In addition to riding the bike, summer campers look to gain knowledge through identifying bike parts, simple mechanical fixes, and trail building. Adventure staff may tailor the class to fit their teaching methods and comfortability.

Sample Summer Camp Program

- **Monday**
 - Size participants up and let them ride the bikes in the grass to get used to them.
 - Go over bike parts and conduct a ground school.
 - Ride phase zero.
 - Test out the pump track and practice going over features.
- **Tuesday**
 - Walk phase one and introduce participants to reading trail-blazes and how to shift gears when going uphill and downhill.
 - Allow participants to ride phase one.
 - Introduce participants to some common fixes
- **Wednesday**
 - Walk phase two.
 - Allow participants to ride phase two after proving they have mastered phase zero and one.
 - Assign a project for those looking to obtain proficiency or master for their paddle.
- **Thursday**
 - Participants help the instructors tackle a project on the trail. Participants learn how to maintain trails.
 - Once done, campers can ride any trail, phase zero-two and pump track, for the rest of the time.
- **Friday**
 - Free ride option or instructors take the class on a long ride on phase 3 or beyond. If taking a ride to Tasty Twist or Peggy Gray's, approval from the Summer Camp Director must be given the day before. On such a trip, follow the adventure trip format.

Trail Building

Here are a few simple ways to maintain the trails. It is always a good idea to wear long pants, good shoes, and long sleeve shirts due to increased exposure to ticks, poison ivy, and thorn bushes. Wearing a mask in addition to eye and ear protection is ideal when using the leaf blower or weed eater.

Step 01

Leaf blow where you want to go

Step 02

Pick up any large branches and report trees to be cut down with a chainsaw on Facility Dude (Brightly).

Step 03

Use a weed eater to cut down any tall grasses (when making a new trail) or to trim overgrown plants.

Step 04

Use a plastic rake to get all major debris out of the trail.

Step 05

Use a metal rake to dig deep and nicely comb the trail.

Step 06

Take a small cutting tool and cut away any overhanging branches causing a problem or roots that are exposed.

Step 07

Use a firefighting tool (Rhino) to make banks and burns and level out sloped areas.

Step 08

Leaf blow the trail again to get rid of any loose debris.

Step 09

If there is any standing water on a bothersome curve, bring rocks up from Lake Erie and use as a 'French Drain' by placing the rocks on the trail and then covering back up with dirt. Do this after you have dug a simple trench that allows the rainwater to escape on the downhill side of the trail. Using extra plastic piping is a bonus if maintenance has some. This allows the water to seep through the dirt and have an underground flow to the side of the trail.

Step 10

Observe participants riding on the section of trail recently maintained. Fix any new problems that arise.



Common Repairs

Every bike will eventually break down. Adventure staff should be trained to notice common wear and tear problems and if needed, try to fix them. The easiest way to help fix a bike is by prevention. Try not to send a bike out on the trail with a preexisting problem. If a bike is ever broken beyond a staff member's confidence or know-how to repair, it should be placed in the inner room of Skeggs for the Adventure Director to look at. This takes the bike out of the system until the main problem is fixed.

All repairs should be logged in the binder and later copied into the repair log spreadsheet. To help with some common repairs, listed below are ten simple ways you can help fix a mountain bike by [ilovebicycling.com's](https://ilovebicycling.com/10-quick-bike-repairs-common-problems/) article, *10 Quick Bike Repairs for Common Problems* (May 22, 2014) by U.M.

<https://ilovebicycling.com/10-quick-bike-repairs-common-problems/>



1. Fix a flat

A flat tire is something that all cyclists encounter, which is why a bike pump and a spare tube should always be readily on hand. Flats are an easy fix if the tire is simply low on air. If the tube has been punctured, however, you have a little more work ahead of you. [Watch this video on how to fix a flat tire.](#)

The first thing you'll have to do is remove the wheel from the frame. Most bikes are equipped with a quick release, but if you have an older bike, this might require some tools. Once the wheel has been removed, open the valve to let all the remaining air out, and then push the valve up into the tire. Remove the tire from the wheel rim and take out the inner tube. Check for any debris or what caused the puncture in the first place. Inflate the new tube just enough for it to hold shape and slip it back into the outer tire, then put the tire back onto the wheel rim and inflate it the rest of the way. The wheel is now ready to be placed back on the frame.

2. Recurring flat

If your tire keeps going flat, there's something going on other than just bad luck. When you pull the tube out to replace it, make a note of where the hole is. If the tube is repeatedly being punctured along the top, the culprit is most likely an object stuck in the tire. If the hole is repeatedly occurring on the bottom of the tube, your rim strip might be out of position and the spokes may be to blame.

3. Recurring pinch flat

A pinch flat, also known as a snake bite, occurs when the tube is pinched between the tire and the rim and becomes punctured. A pinch flat has a distinct appearance. When you pull the tube out, there will be two holes on it that look, essentially, like a snake bite. If you are repeatedly getting pinch flats, it means that your tire pressure is too low. To fix this, put more air in your tires.

4. Slipped chain

Repairing a chain that has slipped off the cogset or chainring is quick and doesn't require any tools. To put the chain back on, place it on the bottom groove of the rear cog, then slip it over the top of the front chainring. Turn the pedal forward carefully to pull the chain around the chainring and back onto the cogset.

5. Skipping chain

A chain that skips every so often is most likely harboring a tight link. You can find which link is causing the problem by backpedaling slowly while watching the rear derailleur. Once you find the skipping link, add some lube and gently work it back and forth until it's loosened up.

6. Chain falls off repeatedly

Check to make your limiter screws on your derailleurs are set properly. Follow the instructions in these videos for you [front derailleur](#) and your [rear derailleur](#).

If the limit screws do not fix the problem, then a chain that's too long will fall off and will therefore have to be shortened. To remove the extra links, you'll need a chain tool. Using the chain tool, push the pin out of one of the links, being careful not to push it all the way out. Count out how many links you need to extract and use the chain tool to remove them. To reassemble your chain, line the ends up and use the chain tool to push the pin back into the links. Flex the reattached links to loosen them up.



"I finally figured out how to get rid of that creaking sound on my bike. Earplugs!"

7. Stuck seat

To fix a stuck seat, loosen the seat post binder and soak the entire area in lube overnight. If the seat is still stuck and you're unable to twist it free, you can increase the torque using pliers or an adjustable wrench.

8. Squeaky brakes

A squeaking noise when you brake usually signifies debris trapped on the brake pad. Clean the brake pads and the wheel rim with a simple acetone solution. If this doesn't fix the situation, the debris may be embedded in the pad. You can attempt to clear it out by sanding the pads with 220-grit sandpaper, but if the squeaking continues, you might have to take the bike into the shop so they can test that the pads are toed-in.

9. Creaking wheels

Spokes are usually the cause of creaky wheels. It's likely that a spoke might have come loose or that two spokes are rubbing against each other. Loose spokes can be tightened with a spoke wrench, but this is better left to a professional. If the noise is being caused by spokes moving against each other, lubricating the junction should eliminate it.

10. Creaking pedals

Creaking pedals usually signify that the crankarm has come loose on the spindle. Remove the bolts on the crankarm and lubricate them, then tighten them to the recommended torque for your bike. Also remove your pedals and grease the threads.

