

Tredyffrin Easttown Mountain Biking - Required Tools

In NICA races, riders are required to fix their own bikes if they have mechanical issues. We expect all team members to have the following bike repair skills come race day. The Team will hold a few classroom based practices to cover these topics.

Required skills for the most common mechanical issues:

1. Fix a flat tire
2. Remount a dropped chain
3. Fix a broken chain
4. Remove a bent Disc Brake rotor or release a brake on a bent wheel (1 only!!!)
5. Straighten off center handle bars

If you do not have these skills on race day and require a coach's help to fix your bike there is a Penalty applied by the Race Director to your race time. Here is rule from the NICA Rulebook:

RULE 4.6. PENALTY FOR OUTSIDE ASSISTANCE

*Student-athletes must repair their own flat tires and mechanical problems and carry their own tools, tubes, etc. If outside assistance, parts, or tools, are provided, **a five-minute penalty** will be assessed. The student must report such an occurrence of outside assistance before the end of the protest period that precedes the award ceremony. The student must report to a Scoring Official, Course Marshal, or other Race Official. **If a student does not self-report the penalty may be doubled.***

To handle all of the above common mechanical issues, these are the tools you are required to carry:

1. A trail specific Multi Tool with the following tools included:
 - a. chain tool
 - b. hex wrenches: #2, 2.5, 3, 4, 5, 6, 8
 - c. screwdrivers: phillips #2, flat #2
 - d. torx wrench: t-25
2. 2 Tire Irons (aka Tire Levers)
3. One Spare Tube
4. Small Bike Pump
5. Optional: CO2 Inflator for Faster Tire inflation



Here are a few examples of Tools and Bike Pumps:

Mountain Bike Specific Multi Tools:

- https://www.amazon.com/Crank-Brothers-15970-19-Function-Bicycle/dp/B010M4XI6Q/ref=sr_1_9?ie=UTF8&qid=1469544356&sr=8-9&keywords=Mountain+Bike+Trail+Multi+Tool
- https://www.amazon.com/Portable-Bicycle-Multitool-Screwdriver-Multifunction/dp/B01CZGZUPG/ref=sr_1_1?ie=UTF8&qid=1469544356&sr=8-1&keywords=Mountain+Bike+Trail+Multi+Tool
- https://www.amazon.com/MadWares-Multitool-screwdriver-lightweight-All-Metal/dp/B01F61WYHO/ref=sr_1_14?ie=UTF8&qid=1469544786&sr=8-14&keywords=Bike+Multi+tool

Small Bike Pumps you can carry in a Jersey Pocket or attach to your frame:

- https://www.amazon.com/Mini-Bike-Pump-4MyCycle-Lightweight/dp/B00DUUNRHK/ref=sr_1_10?ie=UTF8&qid=1469544931&sr=8-10&keywords=Small+Bike+Pump
- https://www.amazon.com/SKS-Germany-10367-Supershort-Mini-Pump/dp/B0030IC24Q/ref=sr_1_24?ie=UTF8&qid=1469545067&sr=8-24&keywords=Small+Bike+Pump+High+Volume
- https://www.amazon.com/Crank-Brothers-Sterling-Short-Silver/dp/B00AWBFVEW/ref=sr_1_2?s=sporting-goods&ie=UTF8&qid=1469545689&sr=1-2&keywords=crank+brothers+sterling

Additional Items to have on Long Rides

When you are not racing and just out for long rides the last thing you want is to have to be rescued. While the above list is good for racing it is not complete. The balance every rider has to figure out is how much is enough and how much is too much. The answer is different for everyone. Here are a few additional items you may want to carry on longer rides.

- 2nd Tube
- Spoke Wrench
- Tube Patch Kit
- Tape
- Spare Derailleur Hanger
- Small chain lube bottle

Note: Some riders like to use CO2 while riding to inflate a flat tire. This is a fast alternative to a trail pump but more technical in use. If you would like to learn more about CO2 tire inflation please ask your coaches.