Recycle-a-Bike

When bicycles are donated to the Bozeman Bike Kitchen (BBK) they are looked over for quality and functionality by a staff member. If a bike is structurally flawed or of unfit quality to be rebuilt it will be stripped of all usable parts as well as all non-metal parts and sent to Bridger Steel for recycling. This is your task; prepare the bicycles for recycling!

1 Preparation and Inspection

As each step is completed mark the boxes (☐) with a Sharpie™.
If a question arises do not hesitate to ask a staff member.
Staff are here to help and are wearing name badges.
All tools in the red toolbox are labeled with their name.
Refer to the diagram in step 12 for the names of bicycle parts.

☐ The bicycles that have been selected for recycling are on the east side (to the right) of the building under the lean-to. Select one to recycle and move it to a clear work space in the driveway.
☐ Locate the red toolbox that is in the yellow gym-style locker inside the Bike Kitchen and take it to the chosen work space.
☐ Use the masking tape in the toolbox to tape this poster to the wall of the house.
☐ Give the bike a quick inspection paying close attention to the type of bike, frame welds and the function of all moving parts such as the bottom bracket, headset, pedals and derailleurs if the bike is equipped with them.
☐ If the bike looks like it should be rebuilt instead of stripped for recycling ask a BBK staff member for assistance.

2 Accessory Removal

Note - Unless specifically directed in these instructions save all parts for inspection and sorting by a BBK staff member before discarding.

☐ Inspect the bicycle and locate any accessories such as bar ends, water bottle cages, racks, baskets, mirrors, reflectors, bells, training wheels, kickstands, lights, bags and/or mounts for locks, computers or lights

☐ All of the accessories will be secured to the frame or components in a different manner but in general they can be easily removed with the allen wrench set, screwdriver or a box-end wrench.

☐ Loosen the bolt that secures the accessory and remove the accessory from the bike. Take care to save the securing bolts by using the roll of masking tape in the tool box to wrap them and tape them to the accessory.

☐ Save all accessories for parts sorting.

☐ **Place all training wheels in the trash!**

3 Cables and Cable Housing Removal

☐ Locate the shifters and brake levers (if the bike has them) and trace each cable to its other end. If there is a crimp nipple cut it off using a cable cutters.

☐ From the open end cut the cable just on the other side of the anchor bolt that secures the cable to each brake or derailleur.

☐ From the end just cut locate the next routing point back to the shifter or lever and pull the cable out of the cable housing until it is freed all the way to its molded end located inside each shifter or lever.

☐ By manipulating the shifter or lever the cables molded end can be freed by hand. If this is not possible then cut the cable as close to the shifter as possible using the cable cutters.

☐ Wrap all cables and cable housing into neat coils.

☐ Save the cable housing for parts sorting.

☐ **Place all cables in the metal recycling bin located just inside the door of the Bike Kitchen.**

4 Brake-pads and Wheels Removal

Remove Brake-pads

☐ Locate the brake-pads and select a properly sized box-end wrench (usually a 10mm) or allen wrench depending on the brake type and remove the nuts that secure the brake pads to the brake calipers.

☐ Slide the brake pad free from the caliper and re-secure the mounting nuts to the brake pad post.
☐ Repeat these steps for all four brake pads.

Remove Wheels

☐ Deflate the tires completely by pressing the needle inside the tire stem with the tip of a screwdriver until all of the air pressure has been released.

☐ Loosen the wheel's mounting bolt that secures the wheel to the frame by the axle in the center of each wheel. This will likely be a quick release bolt or a 15mm nut.

☐ With the tires deflated and the brake pads removed the tires should easily clear the brake calipers for removal. However it may be necessary to pinch the tire together to manipulate it past the brake calipers.
☐ Secure the nuts or quick release bolt onto the axle after wheel removal.

5 Tire Removal

☐ Using a tire lever insert the hooked end between the tire and the rim.

☐ With a firm grip on the wheel apply pressure to lift the tire from the rim while sliding the lever in one direction. This will remove one edge of the tire from the rim.

☐ The other side of the tire should now be able to be freed by hand. If it will not readily come free use the tire lever again in the same manner.

☐ Locate the tire stem from the inner tube and slide it free from the wheel.

☐ If the inner tube was initially holding air pressure tightly roll it and wrap it with a rubber band located in the red toolbox.

☐ The size of the inner tube will be located on the wall of the tire itself. Place inner tubes that were holding air pressure into the filing cabinet next to the yellow locker into their appropriate drawer by the inner tube size.

☐ If the tube was not holding air pressure place it in the 'tubes to be patched' bin located under the main work bench on the east (right) wall of the kitchen.

6 Grips Removal

☐ In some cases the grips will slip or tear right off of the handle bars. Start by pulling the grip toward the open end of the handlebar while twisting it left and right.

☐ If the grip does not remove easily in this manner use the air compressor located on the east (right) side of the building under the lean-to.

☐ Turn the switch on the wall above the air compressor to on and unravel the hose to enought to reach the bicycle.

☐ Use the nipple attachment for the air hose and slide the nipple between the grip and handlebar.

☐ Pull the trigger on the nipple to force air into the gap and pull the grip toward the open end of the handlebar.

☐ Repeat these steps for both grips.

☐ Save undamaged grips for parts sorting.

☐ **Place damaged grips in the trash.**

7 Pedal Removal

☐ Invert the bike so that it is supported by the handlebars and the seat. The fork should be pointing toward the sky.
☐ Locate the Pedal Wrench in the red toolbox and place it on the bolt between the pedal and the crank-arm. **Recruit someone to steady the bike as it will require some force to break the pedal loose.**
☐ For the right pedal start with the crank arm pointing down and the pedal wrench at a ninety degree angle to the crank arm with the wrench handle pointing to the left.
☐ Press down with a firm smooth pressure to break the pedal loose.
☐ If the pedal will not easily break free use a rubber mallet and smack the pedal wrench handle firmly toward the ground.
☐ Once the pedal is loose keep the pedal wrench on the pedal bolt and turn the crank arm clockwise just like the bike is being pedaled being sure to keep the pedal wrench in the same position. After a few revolutions the pedal will be completely free of the crank arm.
☐ Repeat this process for the left pedal but as the threads on this side are reversed, start with the pedal wrench handle pointing to the right and then turn the whole assembly counter clockwise to remove the pedal.
☐ Use a zip-tie or string from the red-toolbox to connect the pedals as a set.

8 Seat and Seat-post Removal

☐ Flip the bike upright.

☐ Use an appropriately sized wrench to loosen the seat post bolt if it is not equipped with a quick release bolt.

☐ Slide the seat post and seat free from the frame as one unit.

☐ Completely remove the bolt or quick release bolt if there is one being sure to save all parts by securing them back together.

☐ At this point contact a BBK staff member for parts inspection, parts sorting and parts disposal instruction.

☐ As the staff member directs you sort the tires, wheels, seat, brake pads and all other parts that were removed into a 'save' pile and a 'recycle' pile.

☐ Place all of the 'save' items into their proper bins on the parts storage shelves.

☐ Place the 'recycle' items into metal recycling if they are metal and into the trash if they are not.

9 Chain Removal

☐ If the chain is excessively corroded or worn cut it free with a bolt cutters located in the yellow locker.
☐ If the chain can be reused locate the chain removal tool in the red toolbox.

Note - This tool can be easily damaged by cross threading; use caution.

☐ Unscrew the pin-pusher on the chain removal tool just enough to place the chain in the groove making sure to align a pin of a chain link with the pin pusher of the tool.
☐ Tighten the pin-pusher until it is snug against the pin. At this point make sure that the chain is flush with the bottom of the chain tool and that the pin pusher is in direct alignment with the pin.
☐ If the alignment is good begin twisting the handle of the chain-tool a few rotations clockwise and re-inspect the alignment.
☐ The force required to tighten the pin-pusher will increase as the pin is pushed further through the chain. Be mindful so as not to push the pin completely through and free from the chain.
☐ The pin is through the chain enough when it is only secured by the outside link of the chain opposite the pin-pusher.
☐ Turn the handle of the pin-pusher counter clockwise until it is free from the chain and remove the chain from the bicycle.
☐ Store the chain in the back left of the bike kitchen with all of the other chains by hanging it from its end link on a nail in the wall.

10 Derailleur, Shifter and Brake Lever Removal

With all of the cables, cable housing and chain already removed from the bike the removal of derailleurs, shifters and brake levers should be quite simple. Much like the accessories, most of these items will be secured with a simple allen bolt, screw or standard bolt and nut. Some devices will require complete removal of the securing bolt and others will be able to be slid off after loosening the bolt only slightly

☐ Locate the derailleurs, shifters and brake levers on the bicycle and assess the manner in which they are mounted.

☐ Find the properly sized allen wrench, screwdriver or box-end wrench and loosen the mounting bolt until the derailleur, shifter or brake lever can be completely removed.

☐ Tighten the securing bolt back into its original location once the device is removed.

☐ If for some reason the securing bolt cannot be tightened into its original location then tape the bolts onto the device with the masking tape located in the red toolbox.

11 Handlebars and Stem Removal

Remove Handlebars

☐ The handlebars are almost always secured to the stem by a large allen bolt.

☐ Loosen the allen bolt with the properly sized allen wrench.

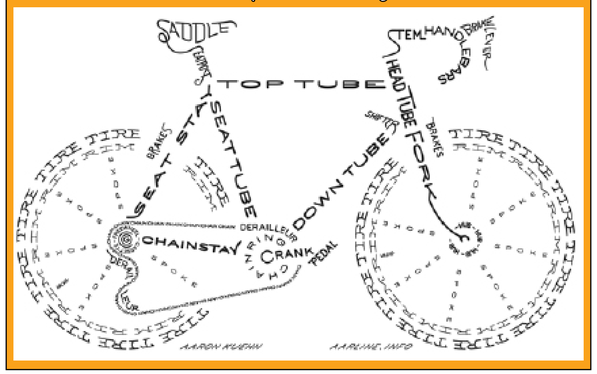
☐ With the shifters, brake levers and grips all removed the handlebars can simply be slid out of the stem.

Remove Handlebar Stem

☐ The handle bar stem is secured with a long allen bolt that reaches down inside the fork.
☐ Loosen the bolt with the proper sized allen wrench periodically checking to see if the stem will slide free of the fork.
☐ Once free grip the slide nut and tighten the allen bolt a few turns by hand to secure the bolt and nut assembly inside the stem.

☐ At this point contact a BBK staff member for parts inspection, parts sorting and parts disposal instruction.

☐ As directed place all items into their proper locations, the recycling bin or trash.

12 Start Again at Step 1

You are a valuable asset to the BBK and are on your way to earning your own bike! Thank you for volunteering!