

In memory of

# Sheldon Brown

May you ride free in Heaven

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### ACKNOWLEDGEMENTS

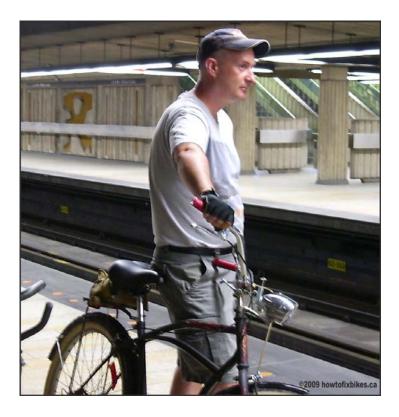
There are many things that made the existence of this book possible. My passion for bikes is of course at the source of it but if it wasn't for the support of my wife and kids, I would have never took the time to sit down to write.

Of course the source of all this knowledge sharing is my blog that was inspired by Sheldon Brown. How better to leave your mark on the world than by sharing what you know freely with the world. Information is power and the power is yours to give.

My cousin Sebastien was the one who introduced me to blogging and made me ask this now famous question inside this family unit: "What is a blog?"

Finally, to all the readers out there who read me, share with me and participate in the making of the blog, your contribution also made this book possible.

So again, a thousand thanks to all of you.



## DISCLAIMER AND LEGAL STUFF

This book is intended to provide information and it does not claim in any way to be the last word about bicycle maintenance or repair. If, during any stage of doing maintenance on your bicycle, you are unsure about anything or feel that you may put yourself or others in jeopardy by doing work on your bicycle, be smart and consult a professional bicycle mechanic at your local bike shop. I will not be held liable by any mistake done by you, the reader.

I am a certified bicycle mechanic and I have learned much of my craft by actually repairing thousands of bicycles. I have made mistakes before and I will make mistakes in the future. Keep this in mind, always double check your work and remember that you are ultimately responsible for your own safety.

Last words of caution, bikes are addictive and there is no known cure. Just ask my beloved wife. <sup>(2)</sup>

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### INTRODUCTION



This book is written for you, the average bicycle owner, who suddenly wants to do more than just ride around unconsciously on your store bought bike and wants to empower him or herself with some knowledge on how to keep the thing running without spending an arm and a leg, or at least for less than you actually spent on the bike.

Store bought bicycles are for the most part, steel-framed bikes that were built with low-end components. They are meant to be sold en masse and are oftentimes considered as disposable. With a few basic tools and

knowledge, these bikes can last a lifetime. This will give you a better return on your investment and might even propel you further into bicycle ownership. Who knows, you could start upgrading the components or even go as far as rebuilding the entire bike!

When attempted for the first time, bicycle repair is not easy, but it's not complicated either. Give yourself some time to learn and you will be comfortable with it soon enough. You already had the courage to pick up this book and look into it, so you have gone over the very first hurdle. Before you start on a particular process, take the time to go over the entire book first so that you can cross reference easily from one task to another.

The steps listed in this book are not limited to store-bought bikes, they apply to any bicycle. There are a lot of inexpensive bikes out there and often times they are tossed away when just a little maintenance could have prevented their untimely demise. So get your tools and prepare to get your hands dirty.

Gerry Lauzon

## BASIC TOOLS

Before we even get started, we need some tools. Here's a list of the basic stuff you'll need to get you going.



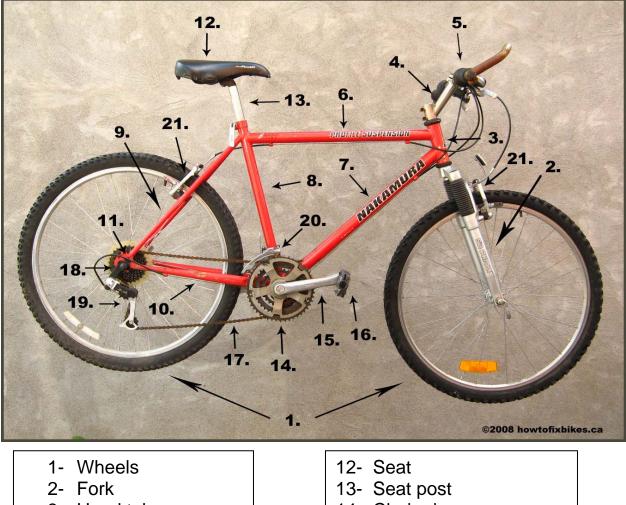
- 1. Floor pump with pressure gauge
- 2. Pliers
- 3. Wire Cutters (Those are not great. If you have the money, spend the \$30 for a bike specific one)
- 4. A set of hex keys
- 5. Tire spoons (Careful, metals ones have a tendency to pinch tubes.)
- 6. Chain breaker tool
- 7. Spoke wrench (This one is not the best but it has all possible sizes on it.)
- 8. Phillips head screwdriver
- 9. Flat head screwdriver
- 10. Open ended adjustable wrench
- 11. Open ended wrenches in 10mm and 15mm
- 12. Ratchet wrench and sockets in 9mm, 10mm, 13mm, 14mm, 15mm sizes

With this basic set, you'll be able to tackle almost any task on your ride. Of course there are mazes of other tools that you can get, but these are the basic ones to get you started.

## BICYCLE TERMS

In order for you to understand the terms that will be used in this book, please refer to the images below that list the main components of a bicycle.

For any future reference in this book, the right side of a bicycle refers to the side with the chain and drive train and the left, the one without.



- 3- Head tube
- 4- Stem/Gooseneck
- 5- Handle bar
- 6- Top tube
- 7- Down tube
- 8- Seat tube
- 9- Seat stays
- 10- Chain stays
- 11- Drop outs

- 14- Chain ring
- 15- Cranks
- 16- Pedals
- 17- Chain
- 18- Gear cogs
- 19- Rear derailleur
- 20- Front derailleur
- 21- Brake Caliper

# Chapter One

## WHEELS AND TIRES

Wheels and tires are the things that allow you to maintain contact with you and the road. Anything goes wrong here and you'll know right away. First things first, let's start by figuring out how to remove the wheels.

#### Wheel removal

#### Front wheel

If the bike is equipped with front brakes, disconnect them first so that the tire will clear the pads once you remove the wheel.

Simply unscrew the two (2) nuts on each side, pull the washers and remove the wheel.

When reinstalling the wheel, make sure that the axle is properly seated in the slots on both sides of the fork.

Once you are done, you can confirm this by eyeballing the middle of the tire thread and the top of the fork to see if everything is lined up straight.

Reinstalling a front wheel is always best done with the bike on the ground, so that the weight of it sits on the axle in the fork, allowing for a straight fit every time.

#### Rear wheel

With a derailleur-equipped bicycle, first you must shift the chain to the last gear, the one closest to the frame, that's the smallest one. This will make the job of removing it easier by getting tension off the chain and will simplify the reinstallation of the wheel later.

Disconnect the brake so that the pads will clear the tire.

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