GARY FISHER BICYCLES

The First Name in Mountain Biking

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For the 2002 model year, we are introducing something new to the bicycle industry- a frame material designed specifically for the manufacture of bicycles. We call it ZR9000.

Like some of our competitors, we can wax eloquent about various laboratory tests of strength and stiffness. Often, a new material is used as a reason to substantially raise the price of a bike. But as we've said before, the ride of a bicycle is the sum of its design, manufacture, and material, in that order. In other words, its not the material, but what we do with it that makes a bike ride better.

A great frame material should allow the designer to make a better bike. If a frame isn't lighter, better riding, and at a better value to you, where is the benefit from this new wonder material?

So the proof is in the finished product. Our models using ZR9000 are up to 190 grams (almost 1/2 pound) lighter than last year. At the same time, they are stronger, and have a fatigue life up to 5 times that of the comparable 2001 models. And we can deliver these awesome new bikes at approximately the same cost to you.

For some, knowing you are buying a lighter, stronger, longer lasting bike at the same cost is enough. But we know some of you want to know more about this technology. To explain in more detail, we've asked the developer of ZR9000 to say a few words:

A MATERIAL DESIGNED FOR BICYCLE FRAMES. by Gary Klein

Advertising Claims

I'll bet you are thinking: "Just what we need, another new bike frame material Isn't the field crowded and confusing enough as it is? Are all of the various frame materials really different? Do the differences really matter? How can every material be superior to every other one? Or are they just marketing hype?"

Which of the claims from which companies should you believe? Most of the advertised properties for different frame materials are the properties of a material in its highest temper state, made into little coupons and tested in laboratory machines; not the strength that the frame material is in after it has been made into frame tubes, and welded or brazed into a bicycle frame. The material may chemically be the same, but the advertised strength is not there.

In addition, and more to the point, the advertised strength is a bulk material property and does not reflect the engineering design of the bike, such as the diameters, wall thickness, and shapes of the tubing used. These have a huge influence on the overall strength of the finished frame, and at least as much influence on the way the bike rides. Please do not equate advertised material properties with frame durability, performance or low weight. If you want to compare the strength of one frame to another, you probably need to test them both. And if you want to compare the ride, instead of looking at charts you'll need to ride them!

Why Aluminum?

In the early 70's, when I lined up on my first starting line, the bikes around me weighed an average of about 22 pounds. My Fuji Finest was at least average in quality, yet the frame represented the heaviest part of the bicycle. Even so, I found that it was not stiff enough to keep the drive train in alignment during sprinting efforts.

At the time I was a student at MIT in Boston, Massachusetts. A professor, myself, and some other students started to look at what would make a better material for bicycle frames. The standard high-end bicycle frame was made of double-butted chrome molybdenum steel alloy tubing. Steel is easy to work with, but it is very dense, making even the thin tubes of my high-end steel racing bike into a heavy structure.

Our goal was to make the frame lighter, stronger and stiffer. To meet those goals, our first criteria was a material less dense than steel.

(Editor's note: Steel blke frames have come a long way since the early 70's, check out the LeMond 853 framesest for proof ot this!)

As lower density alternatives, we looked at Aluminum, Magnesium, Titanium, and Carbon fiber. While each of these looked like they might provide some benefits, we were also looking for an easy way to make a few bikes. We were hoping to find a material that we could obtain easily, and assemble into a strong and light frame.

Carbon fiber needs special molds for each size and geometry of frame to be produced. This would take time and cost a lot of money for prototypes.

Titanium was very expensive and the welding was difficult. The entire area being heated needed to be shielded from air. Even ignoring the cost, it was difficult to obtain in the tubing sizes we needed for bikes. Most available tubing was CP (Commercially Pure) titanium which did not provide much of a strength benefit.

Magnesium has the lowest density of the metals we looked at. Initially Magnesium looked good, with relatively high tensile strength per weight, but it does not have the ductility of aluminum, and does not weld as easily. Also the tubing sizes we needed were not readily available. Another problem was this was in the Boston area, where the streets are salted in the wintertime. We had seen what the salt does to a steel frame, and we knew that magnesium has an even lower resistance to corrosion. So it would need a real good protective coating.

After our research, we decided on aluminum as the material of choice. As we wanted the highest performance frame possible, we started looking at the highest strength aluminum alloys. Unfortunately, they were difficult to weld, to form, had corrosion problems, etc..

Materials that were strong, but not weldable, would create the need for special bonding lugs at each joint. These would have to be designed and machined individually for each frame design, a somewhat daunting task. So we looked for a material where we could create a high strength weld with normal welding methods.

Finally we settled on 6061 aluminum. It came the

closest to meeting all of our frame material goals. 6061 was the workhorse of the structural aluminum alloys, and it had most everything we desired. It is easily welded, machines easily, is formable at room temperature, and resists corrosion pretty well (it is used extensively for marine applications). As a real plus, 6061 was used extensively in aircraft, so thin wall tubing was readily available in various diameters.

Aluminum

Pure aluminum is very soft. The molecules align and interconnect such that in pure aluminum, molecular slippage easily occurs in all three directions (slip planes). As a result, it is not strong enough to make a good bicycle frame.

By adding various alloying agents to the aluminum, different characteristics can be obtained. These alloys of aluminum have a number which describe the alloying elements. 6061 aluminum has small amounts of magnesium, silicon, copper, and chromium added to the pure aluminum. This alloy obtains its strength from microscopic precipitates (magnesium silicide crystals) that mechanically stop the slip planes in the aluminum crystals from sliding when force is applied. As an analogy, they work like putting sand in a sliding bearing.

Aluminum alloys can also be strengthened by mechanical working. Cold-drawing the tubing is an example of mechanical working. This causes microscopic defects and strains in the aluminum crystal, which make it more difficult for the slip planes to move.

Welding aluminum

When welding 6061, and aluminum alloys in general, several undesirable things happen.

With changes in temperature, aluminum changes dimension more than steel. When a weld puddle cools down, it shrinks and pulls on the adjacent material. With aluminum alloys this means a weld distorts the material more and leaves the material under high residual stress after the weld is complete. This residual stress adversely affects yield strength and fatigue life.

If the tube had any strengthening due to mechanical working, this cold-work induced strength would be lost near the weld where the material was heated to high temperatures. Welding removes the strengthening effects of the T6 heat treatment.

The optimum distribution and size of magnesium silicide crystals are created by the T6 process, which involves a high temperature solution-quench followed by lower temperature artificial age. Exposing the material to the high temperatures of welding dissolves some of these fine crystals and make others grow large, weakening the material near the weld.

Heat treatment of aluminum

6061 loses so much strength after welding that we decided there was no alternative but to heat treat the entire frame after welding in order to obtain a high strength, long life, lightweight frame. By heat treating the entire frame to a T6 condition, the material is brought back to full strength throughout the frame structure. At 1000 degrees in the oven, part of the solution quench process, the aluminum is close to its melting temperature. All of the precipitates present at room temperature dissolve into the aluminum. This makes it so soft that all of the residual weld stresses

are relieved.

Of course we are not the only manufacturers to solution quench and artificially age the complete frame. Several other manufacturers of premium frames also typically do this on frames made of 6061 or other 6000 alloys.

Often the frames made from 7000 alloys are not heat treated after welding at all. In other cases they are only artificial aged after welding, which strengthens the material which was hot enough for long enough to dissolve the alloying elements, but does nothing for the rest of the frame material.

In these cases the alloy just got hot enough to partially dissolve the alloying elements, or just grow the strengthening crystals to a large size which weakens the material substantially. This is called over-aging. It is similar to what happens if you leave the material in the ageing oven for too long a time. Some of the crystals grow larger in size, while others shrink or disappear. The net result is that the weld is strengthened, but the tubing adjacent to the weld is weakened. So even though 7000 alloys claim a higher strength than 6061, it is probably less after welding.

Grain growth

In my opinion, the limiting factor for designing aluminum frames is the fatigue life. If we design a frame in 6061 T6 for the same fatigue strength as Chrome-Moly, the 6061 frame will have a much higher yield strength than the steel.

I wanted to make our frames even lighter, so in the early 80's I started looking for an aluminum alloy with a higher fatigue strength. There were a few alloys in the 6000 series that had slightly better test numbers.

The problem with the higher strength alloys is that the presence of the hardening elements causes the microscopic aluminum crystals (the grains) to grow when the alloy is at high temperatures or when it is under stress. Larger grains result in poor strength properties.

In making a Klein frame, we have multiple steps where we anneal the material with a high temperature oven cycle, in order to make it soft so we can perform some type of butting, swaging, forming or bending operation on it, after which we have to either solution quench and artificially age it to bring the strength back prior to the next operation, or we anneal it again to remove the work hardening effects of the last operation so we can perform further work to it.

I took a trip to the Alcoa Research center and talked to several of their material experts. They told me that I could not use the higher strength 6000 series alloys I was interested in because we would see uncontrolled grain growth in our process. 6061 uses a small amount of Chromium to help slow down this grain growth. That is what has made it work well for our early frames. So I did not find a good replacement for 6061 on the first try.

Developing a recipe for a better aluminum alloy

I am not a metallurgist, so I have worked with several metallurgists during development, who have helped a great deal. However, I knew our processes and I knew what was needed to make a better bike. So I knew what I was looking for and researched other alloys and their use.

Around 1990, I started looking at some Lithium Aluminum alloys. These are different than typical aluminum alloys in that they have significantly lower density, and increased modulus (that means higher stiffness). They are not perfect, and have some unique problems to overcome. The aircraft industry spent millions on their development, but these alloys have not seen a lot of use to date.

One of the interesting features of the particular lithium aluminum alloy I was working with was that it utilized Zirconium as the ingredient for grain control. From our testing, zirconium seemed like it was particularly effective. So when I decided to attempt to create an alloy specifically for making a bike frame, I decided to get rid of the Chromium used in 6061, and use Zirconium instead.

Since we use multiple heat treat cycles when we manufacture a frame, we needed a high response to the heat treatment. So I added more of the precipitation hardening ingredients Silicon and Magnesium.

I also increased the amount of Copper, as it has a strong strengthening effect, and the copper-based aluminum alloys show excellent fatigue properties. So I thought more Copper might help increase the fatigue strength of the alloy.

Another requirement we have is the ability to form the material substantially at room temperature when it is in the soft condition. The auto industry uses a couple of 6000 series alloys specifically designed for forming into complex auto body surfaces. These are 6009 and 6010, sheet forming alloys. The notable difference between these and other 6000 alloys is a significant Manganese addition. So I added a little Manganese to the alloy to improve the forming ability.

May I have a bit of alloy, please?

The barrier to testing a new "mix" is that you need a good foundry to make a batch for you. A single furnace load of material is 40,000 pounds, or 20 tons of aluminum. If the alloy does not work out well that could be a lot of scrap. So I made my best guess

at what the percentages should be, and had the first batch poured.

Great results

ZR9000 has worked out extremely well. It machines cleaner and with less tearing than 6061 tubing can be mitered with higher accuracy, and press fits (like headset bearings) are more precise. In the annealed condition, it forms very well which helps us make our sophisticated chainstays. It welds very nicely, with high strength and good cosmetic appeal. It has an excellent response to heat treatment, which adds to our frame alignment. So compared to 6061, it allows us to make the frame without any additional trouble.

In a completed structure, ZR9000 tests out very well. In tensile tests of identical complete frames, the yield strength is about 1/3rd higher than 6061. On our fatigue testing machines, the ZR9000 frames endure 5 times the number of stress cycles (at the same loading) as the 6061 frames before failure.

These results are as good as I could have hoped for. We have been able to use the higher properties of the new material to remove weight in places where it is beneficial and increase the fatigue life and dent resistance of the frame tubing.

This is the first material that I am aware of that has been designed expressly for the process by which we make a high performance bicycle frame and thus to optimize the frame's performance.

The Name ZR9000 was chosen because the small amount of Zirconium addition for controlling the grain size is the key that allowed us to increase the amounts of the other strengthening additives. The 9000 is because new or experimental alloys which have not been assigned industry numbers are designated in the 9000 series. So this is our Zirconium grain refined, experimental alloy developed specifically for making state of the art bicycle frames.

Even though I have been working on aluminum bike frames for 28 years, the pace and amount of innovation has kept it really fun. I'm sure you will enjoy using our new products based on this material innovation.

6061 and 7005 Aluminum Alloys

Is aluminum a new material?

It should be common knowledge that most modern aircraft use aluminum exclusively for their primary structures (internal frames and bulkheads) and 95% or better of their exterior surfaces, including load bearing skins. The aircraft industry has been using these alloys for several decades. The aircraft companies have picked aluminum because it offers the best combination of material properties and processing capability in order to create high performance, light weight, robust aircraft. So aluminum alloys have certainly proved their long term durability and high performance in the aircraft industry. The occasional failure that has occurred has typically been due to a design or manufacturing defect or improper maintenance.

What about fatigue?

Occasionally we hear fatigue failure erroneously described as similar to the result of bending a coat hanger back and forth. This example is not relevant to the durability or reliability of a bicycle frame. When you permanently deform the coat hanger you are yielding it. This has no relation to fatigue strength. Some of the highest fatigue strength materials (like carbon composite) will not take a significant permanent set, breaking instead at a high force level. So these extremely high fatigue strength fibers would rate near zero by the coat hanger test.

What are the benefits of aluminum in bike frame construction?

Aluminum is a great material to work with. It's light weight, or more accurately, low density. One cubic inch weighs one tenth of a pound. And the lighter weight positively affects the ride quality.

Aluminum provides a great ride, if you use it to its optimum. The low density and high formability of aluminum allows a designer to tailor the stiffness of each part of the frame through tubing and joint design. Tube shaping and butting can make more difference in the ride of the bike than the material itself.

Aluminum is very strong. It is possible to achieve significantly higher strength properties in the aluminum structure per weight than in steel. Part of this comes from the basic material properties. You can use more material, and more easily form the material, so you can put just the amount and shape needed into the bike.

But the largest contributor to high strength is engineering and design. The low density and high formability of aluminum allows tubing with increased wall thickness, complex shapes and larger sections where we want to achieve high strength properties in the overall structure.

Are all aluminum alloys basically the same?

Some of the highest strength aluminum alloys, particularly in the 7000 series, have low elongation, or toughness, or resistance to crack propagation. This is important for overall strength and fatigue resistance. With alloys exhibiting higher toughness less material is needed to resist fatigue, and this can result in a lighter bike. Like with any bike frame material, good design and manufacturing is much more important than a small difference in a single mechanical property.

Are all 6061 frames the same?

Whiel the choice of an alloy is important, a mor eimportant factor is what you do with that material. Our

Wisconsin built frames use the highest level of aluminum manufacturing technology in the industry. To start, all tubing is mitered with lasers so each tube is exactly the right length, each joint better fitting and stronger. Careful welding and full solution heat treatment is followed by precision alignment, so our frames ride straight and true. Without the costly attention to detail we apply to every frame, even the best geometry won't ride at its optimum.

What do the numbers mean?

When we discuss aluminum alloys, we refer to a four-digit number. This is the alloy name, based on the alloying materials in the aluminum. A metallurgy reference would explain precisely what elements are added to the aluminum in a specific percentage.

The second part of describing aluminum alloys is the heat treatment or other strength enhancements which have been applied to the alloy. With some alloys, special heat treatments or work hardening are essential to achieve their maximum strength. Other aluminum alloys attain their maximum strength by simply cooling at room temperature, also known as 'normalizing'.

Since heat treatment adds extra steps to manufacturing, it adds cost. An oven large enough to handle bike frames also adds cost. 6061 aluminum requires heat treatment. 7005 is usually normalized.

SERIES NOMENCLATURE EXPLAINED-

Silver Series

Proprietary Fisher aluminum tubing, using 7005 aluminum. These frames use special tubing diameters, wall thicknesses, and shapes, but are not butted. In some cases, Silver series frames are imported, then painted and assembled in Wisconsin.

Gold Series

Like the Silver series frames, Gold series is Fisher designed aluminum tubing. However, Gold series frames are built with 6061 T6 aluminum. T6 indicates the hardness of the aluminum, developed through a full heat treatment and ageing process. Gold series frames are all built and painted in Wisconsin. Due to the mechanical properties of 6061 T6 aluminum, Gold frames can be made lighter than Silver frames with the same strength.

Platinum Series

Platinum frames are also Fisher designed tubes of a combination of ZR9000 and 6061 T6. In addition, Platinum frames have butted tubing, which reduces their weight and further enhances their ride. The exact placement of these materials is determined by where each material will do the most good in achieving a light, strong, affordable, and long-lived bike. They are built and painted in Wisconsin.

LeMond Titanium

Titanium bikes have been around for almost 30 years. During this tenure they have earned a reputation for excellent ride and durability. While the reputation of titanium is generally well deserved, there is more to a great bike frame than simply the material its made from. The high cost of titanium is wasted without purposeful design and precision manufacturing.

Research and Development

Although Greg LeMond raced titanium frames way back in '92, we wanted to take a fresh look at the current titanium technology. As a starting point we consulted Gary Helfrich, the bike industry's recognized titanium guru. For those who don't know Gary, he was a founder of Merlin Cycles. Gary's experience with different tubing dimensions, titanium alloys, and manufacturing techniques were very illuminating. Our engineering staff followed this with our own extensive R&D. Armed with a clean design slate and fresh research, it was time to sit down at the computers and design a titanium road bike worthy of the LeMond label.

Which titanium?

There are many titanium alloys available for bicycle manufacture. These different alloys exhibit a wide range of mechanical properties (strength, hardness, etc.) which effect the final weight, stiffness, shock absorbency and overall ride of a bike. The physical properties of the metal also determine the available manufacturing techniques. The right material choices were essential to our ability to make a high quality, excellent riding titanium bike for a reasonable cost.

CP (Commercially Pure) titanium is available in a variety of grades listed numerically as CP1, CP2, CP3, and CP4. These different CP alloys are separated by the amount of trace elements in the alloy. These metals share some of the physical properties of the more popular titanium alloys. They are strong, tough (resistant to crack propagation), and resistant to oxidation. However, they are fairly hard so they are somewhat difficult to machine or cold work. In addition, CP alloys do not have the tensile strength enjoyed by some of the other titanium alloys.

3/2.5 titanium is an alloy with 3% aluminum and 2.5% vanadium. This alloy exhibits much greater tensile strength than CP grades. With higher tensile strength, the amount (and weight) of material can be reduced while retaining the same structural strength. Although its expensive to do so, 3/2.5 can be drawn or butted mechanically. This allowed us to achieve the tubing designs and manufacturing techniques our engineers wanted to pursue.

Another titanium alloy we considered was 6/4 titanium. 6/4 Ti is less likely to form a molecular bond (known as cold welding) when coupled with different metals because its very stable on a molecular level. This property makes 6/4 ideal for fasteners like water bottle screws. However, 6/4 exhibits extreme hardness making it less than ideal for building a bike frame. Machining, butting, or other metal working with 6/4 is very difficult and becomes prohibitively expensive. The only practical way to butt 6/4 titanium tubing is to roll it into a sheet and then weld it into a tube. Our engineers didn't see 6/4 as the right material to meet our goals.

Butting titanium

A bike frame has much higher stress loads near its joints than in the middle of the tube. Some of the joints see much higher loads than others, as exemplified by the extra high stress at the head tube/ down tube junction. To supply adequate strength, these high stress areas need a lot of material. However, in areas like the middle of the top tube there is much less stress. Where the stress is lower the tubing can be much thinner and thus lighter. To maximize strength and at the same time minimize weight, the frame tubing must have varying thickness, or butts (Fig. 6). Butted bicycle tubing is an advantage with any frame material, including titanium.

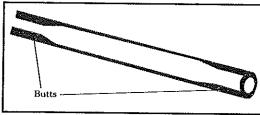


Fig. 6

Butted aluminum or steel tubes are made on a drawing bench. In this manufacturing process, extreme force is applied to a tube to force it through a die while a mandrel inside the tube controls the wall thickness. Precise control of wall thickness is provided, while the mechanical working of the material adds tensile strength. The strength increase occurs because the mechanical working alters the crystalline structure of the metal. Its a win/win situation with lighter, stronger tubing as the result. Similar techniques are used to create constant wall, tapered tubes. Examples include better grades of chain stays, seat stays, and fork blades.

Titanium alloys exhibit very high toughness and hardness, physical properties that make titanium difficult to butt or manipulate. Like aluminum or steel, cold working titanium orients its crystalline structure for a stronger tube that's more fatigue resistant. Also like aluminum or steel, this manipulation is expensive. Due to the exceptional hardness of titanium, the difference in cost is huge.

To reduce the cost of butting titanium, some manufacturers butt the tubes using a process called chemical milling. In chemical milling, the titanium is etched or removed with acids. Interior chemical milling of a tube must be carefully monitored for wall thickness, requiring small batches which adds to the expense. Exterior chemical milling is easier to monitor but decreases the outer diameter as well as the wall thickness. This reduces the stiffness and strength of the tube. Since the metal is not worked, chemical milling does not provide the benefit of altering the crystalline structure of the titanium.

Another lower-cost method for butting titanium is to use sheet titanium that has been chemically milled, and then roll the sheet and weld it into tubes. This method leaves a seam in the tube. With aluminum or steel, seams can be 'normalized' by further drawing and cold working the tube. Normalization is the process which restructures the molecules of the metal to reestablish

their original mechanical properties after being weakened by heat. Due to the hardness of titanium, cold working a welded seam isn't practical. To compensate for this weakness, a seamed tube has to have extra material making it heavier than a seamless tube.

A third cost-saving method for butting titanium is outer butting, where the tube is machined on the outside. As with exterior chemical milling, this method makes a tube with constant inner diameter but varied outer diameter, reduced in the middle. The reduced outer diameter means lower stiffness and strength.

LeMond titanium tubing-

Recent advances allow 3/2.5 titanium to be butted in the traditional way of steel tubing, on a drawing bench. Its expensive, but provides optimal tubing shapes and outer diameters, exacting precision, and works the crystalline structure of the tube to increase the tensile strength. The new LeMond titanium models take full advantage of this new technology throughout the frame. Although you can't see it, the main triangle is double

The same processes used to butt a constant outer

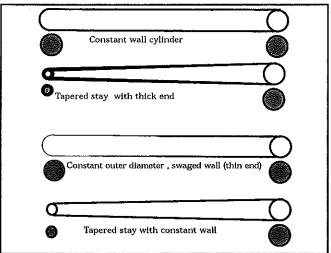


Fig. 7

diameter tube in the main triangle is used to create the constant wall, tapered stays (Fig 7).

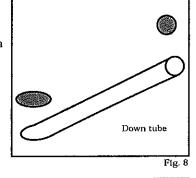
Most titanium bikes use constant diameter, constant thickness stays. This is the cheapest way of doing it. Compromises must be made between the stiffness needed at the bottom bracket and seat tube (defined by the outer diameter at those joints) and comfort (defined by the outer diameter at the dropouts).

A simple swage of a constant-wall cylinder results in tapered stays, but with thicker material at the dropouts. This would probably ride better, but the additional material makes the bike heavier.

It takes several steps to make the LeMond stays. First, a constant-wall cylinder is swaged so that the dropout end is much more thin-walled. Then the tube is tapered from the outside. All this metal manipulation is expensive, but the result is a constant-wall tapered stay. This makes for a lighter bike that rides better, and the stays blend in beautifully with the seat tube and custom

dropouts. But there's more than looks to these expensive stays. The shapes and wall thicknesses allow the stays to stiffen the bottom bracket without a weight penalty. Like on high end aluminum or steel bikes, the tapered stays put comfort into the rear end of a Ti bike, something that's been missing on Ti bikes trying to cut costs with ugly, constant outer diameter stays.

While we were maximizing the LeMond stays, we also dramatically shaped the tubes in the main triangle to accentuate their ride qualities (Fig. 8). The down tube has been formed (Fig. 8). The lower end is wider than tall. This provides increased lateral rigidity at the bottom bracket.



The stiffness of a tube in a given direction is determined by the length of the axis in the plane in which the force is applied (Fig. 9). By using an oval shape, the



tube gains stiffness in the plane where its wider, and the smaller axis across the oval has a decrease in stiffness This allows us to tune the ride. In addition, stiffness in a structure like a bike frame can also add to its strength, since stiffness is resistance to deflection, and you must deflect the frame before you can bend it.

In addition to the performance increase of our design, shaping the tubes has other benefits. Tubes shaped in this way provide a greater weld area, directly increasing the frame strength.

As a final detail, we matched the tubing diameters to create a consistent look throughout the LeMond line. This thoughtful design makes it easy for you to see the associated quality, both moving up in price as well as down. Even better, the titanium models fit the parts of the other LeMond models (except the custom LeMond headset). This makes it easier for dealers to stock the parts that work on LeMond models. After all, any race mechanic spending his nights prepping a fleet of team bikes will tell you a racing bike needs to be easy to service.

All these tubing details are expensive, but our research showed that when done right, the value of the extra work was appropriate considering the added performance. In other words, you really can feel our work in the ride of these bikes. We've taken LeMond performance to a new level.

FRAME DESIGN

Geometry

Once we determined the best tubes for our frames, it was time to create a design which used those materials to their advantage. Of course, we already knew what the geometry should be. Greg's geometry has a proven pedigree. The geometry of the new Ti frame is identical to the popular LeMond Zurich in angles and tube lengths.

FOR THE MECHANIC

Grease threads

Titanium alloys such as 3/2.5 have a tendency to create a permanent or semi-permanent bond known as cold welding when exposed to certain other metals. Its very important to adequately prepare fasteners used on titanium threads. A heavy grease will work, and Anti-Seize is even better.

"Drop-in" headset

Instead of pressing a cup into the head tube to hold the headset bearings, they sit inside the specially machined head tube. Supported directly by the head tube, the weight of the cups is eliminated. Without cups, the headset becomes almost a zero stack height, so the head tube can be taller. The taller head tube allows greater separation between the down tube and top tube for additional strength.

Reynolds Ouzo Pro fork

Reynolds Composites

Although they may be better known for over a century of steel fabrication, Reynolds now makes bicycle products from other cutting-edge technologies. As an example, Reynolds manufactures the Ouzo Pro fork found on the LeMond Tete de Course.

This carbon fiber composite fork is a prime example of the new technologies being developed by Reynolds. In addition to carbon fiber fork blades, the Ouzo Pro also incorporates a carbon crown and steerer.

Complimentary performance

The usage of carbon in place of parts traditionally built from steel or aluminum creates a very light weight structure. Careful design creates a fork with excellent road feel. Together, these features lend themselves very well to the titanium frame of the LeMond Tete de Course, making this an excellent riding bicycle.

Carbon forks require special care

With the replacement of the metal parts of the Ouzo Pro fork with carbon composite material, special care must be taken in normal installation and maintenance procedures. Failure to observe these special needs could cause a part to fail, resulting in loss of control of the bicycle.

Do not use a traditional star-fangled nut

Never use a star-fangled nut with the carbon steerer of the Ouzo Pro. Attempting to insert a star-fangled nut into the carbon steerer will cut fibers, weakening the steerer.

Instead, use the Compression Adjustment Plug supplied with the fork. Used properly, this device allows proper preload of the headset bearings without damage to the steerer.

Follow the instructions which came with the fork to install and adjust the Compression Adjustment Plug.

Use the correct number of spacers

When adjusting the stem height on the carbon steerer of the Ouzo Pro fork, use at least 2 spacers (10mm) and not more than 1 1/2" (40mm) spacers.

Use no grease

Do not use grease between the stem and steerer,

Only use stems with a circumferential clamp design

When clamping an Ahead-type stem to the steerer of the Ouzo Pro fork, only use "circumferential" type stems. This type of stem applies even pressure all the way around the steerer. Stems which use sliding wedges to clamp the steerer, or similar designs with moving parts, do not meet this requirement.

In addition, the stem clamp design should be such that the gap of the clamp should be radial, and the bolts should be perpendicular to the gap. In other words, the gap of the clamp should point exactly towards the center of the steerer, and the bolts should be perpendicular to the gap. Furthermore, the clamping bolts should be as close to the steerer as possible.

Consult your dealer

Your Ouzo Pro fork has been properly installed at the factory, and adjusted by your dealer. If you are not sure of the correct maintenance or adjustment of your fork, or would like to change stems but are unsure of which type of stem is acceptable, consult your dealer.

LeMond Reynolds 853

Steel is real

Steel is the traditional material of choice for bikes. This dates back to the early years of bicycling. The advantages of steel are many. Traditional steels are inexpensive to make, and inexpensive for the frame builder to work with it. Steel can be welded or brazed, both easy techniques (for a skilled craftsman) that allow a creative joining of material. In other words, steel allows a freedom of design, at an affordable cost. Last, steel has excellent strength, stiffness, and fatigue resistance, all important factors when making a lightweight efficient structure like a bicycle frame. These factors should explain why steel has been the traditional choice for frame building for the last century.

It's got the feel

Over the last century, a huge number of steel bikes have been built. The early ones were ordinarys, or high-wheelers. Some were fancy adult tricycles. Some were heavy paperboy specials. And some were exotic, super light racers.

The point here is that a lot of experimentation has been done with steel bike frames. Through science, or trial-and-error, steel bikes have been made of all sorts of shapes, sizes, tube diameters, and wall thicknesses. Because of the design and construction freedom of steel, lots of people have had the opportunity to experiment. Over the years, the parameters of steel bikes have become well defined. We know how light they can be made, and how to make them ride well.

Through the years, enough steel bikes have failed for us to understand what steel can and cannot be made to do. And enough designs have been ride-tested to know what rides well and what doesn't. Basically, the experience gained over the least 100 years makes the best steel bike a refined, quality machine that's as light as it can be and offers the best possible ride.

Not all steel is the same

Steel has a high modulus. In other words, it's pretty stiff. And that's true of all steel. There's hardly any difference in the stiffness of a high-end steel like Reynold's 853, and the 'tensile' steel found on a child's bike.

Likewise, 'tensile' steel and Reynolds 853 have the same density, or weight per unit volume. In other words, a cubic inch of Reynolds 853 is not any lighter than a cubic inch of tensile steel.

There is, however, a large difference in the tensile strength of the various steel alloys. This difference requires that to be equally durable, more low strength material is required to build a structure than would be needed of a high-strength material. This need for more material somewhat explains how a frame built from Reynolds 853 can be so much lighter than a tensile steel frame.

Mechanical properties vs. Finished goods

As we said earlier, steel can be joined in a number of ways. It can be bonded, riveted, welded, brazed, and more. Of these, the most popular in bike construction today is welding. Welding involves heating the materials until molten, and letting them cool into a single, solid piece. Sometimes additional material is added in the form of a welding rod.

As steel is brought to these high temperatures and cooled, the molecules in the steel undergo changes.

Depending on the temperatures, and the length of time at a given temperature, the molecules will reform into microscopic crystals of varying structures. There is a wide variety of crystalline structures possible, with an equally varied assortment of mechanical properties of the welded state. To simplify, we can say that welding changes the steel, and it's common for the steel to lose strength as a result of welding.

In bike frame design, a good engineer will compensate for the expected strength loss of welding. They will design the tubing to be a little thicker at the heat affected zone (HAZ) so that the end result provides the required strength.

Steel technology leader

The Reynolds company of Great Britain (not the American company that makes aluminum foil) has been a leader in steel bicycle tubing since they developed the butting process in 1898.

Since 1930, racing cyclists all over the world have ridden frames built from Reynolds 531. This proprietary manganese-molybdenum steel alloy offered a blend of strength and ease of manufacture that was ideal for lugged and brazed construction.

In 1975, Reynolds introduced a very high strength steel alloy tubeset, Reynolds 753. Thanks to the extra strength, this tubing was made very thin-walled, and this had the effect of reducing frame weight considerably. 753 was more heat sensitive than 531, requiring special low-temperature brazing techniques which required a builder to become certified by Reynolds before being allowed to purchase tubesets.

Reynolds' newest revolution of the bike tubing industry is a steel alloy dubbed 853.

New construction techniques

With the advent of mountain bikes, brazed frame construction fell out of fashion. Brazing usually requires lugs to reinforce the joints. These special sockets are formed to accept specific tubing diameters, and hold them at a specific angle. The new mountain bikes of the early 80's changed bike design, using different tube diameters and joint angles than previously used by road bikes. To allow the freedom of design they needed to explore these new bikes, manufacturers switched to TIG welding.

Welding weight

Although brazing steel requires that the tubes be brought to a glowing, cherry red heat, it does not approach the steel's melting point. By avoiding extreme heat, the steel maintains its strength. With TIG welding, the steel is melted and strength is lost. To compensate, thicker tubing is used at the weld site which weighs more, and doesn't ride as well. The steel available simply couldn't be butted radically enough to avoid this.

New steel technology

Reynolds now addresses the performance concerns of a welded frame by a different path. They have developed a new alloy that actually gets stronger after welding. Since the welded area is stronger, it can be thinner. Traditional butting can be used, so the new frames built with this material are actually lighter than a lugged frame. After all, there are no lugs. And the wonderful ride of tried-and-true steel is back.

Genesis geometry

Gary rides. A lot.

Gary Fisher does a lot of bike riding. He has for years. He holds the RePack record, and won the National Championship for Masters in 1997. Basically what we're saying is this; Gary has skills.

Inspiration doesn't always come easy

So one day this skilled rider is out for an epic ride on his fave bike. He's cruising down a hill, not terribly tricky or anything, when he gets one of those free flying lessons and as he's laying on the ground he's wondering "What happened?".

So he picks himself up off the ground only to find that he's broken his wrist. Not a big deal, but nothing he really wanted. During the next few weeks of recovery Gary has time to think about his little accident and the bike. And that's how Genesis was born.

Wha' happened?

Gary analyzed the accident. He had simply been too far forward and pitched over the front wheel. The pivot point of his flip was the front axle. If the axle were further forward, he might have stayed upright.

If we look back in time, we see that Gary had worked on geometry for years. Years ago, he even had a fully adjustable bike. It had adjustable dropouts so you could change the wheelbase, chain stays, or fork rake. It had an adjustable head tube to change the head angle. Basically, you could try any geometry you wanted as long as the top tube stayed the same length. Using that bike, Gary developed what we now call "classic NORBA geometry" with a 71 degree head angle and 73 degree seat angle.

Gary knew that changing the fork offset or head angle to move the front axle would make a bike handle poorly. The only way to get the front axle forward was to lengthen the top tube. But he didn't want to move the bars forward and change his position. He'd have to use a little short stem.

Gary defles convention

Common knowledge said that a short stem would handle weird. In a typical unconventional Gary Fisher way, he ignored common knowledge and built a prototype with a really long top tube. The genius here is that he didn't change his position on the bike, only the orientation of the bike's parts. Since he had moved the headset forward considerably, he had to use a 75mm stem to replace the 135mm stem he normally used. This setup added 60mm of top tube, moving the front axle 60mm forward, almost $2^{1/2}$ inches. And it worked

This first prototype was a revelation. But Gary knows the bike to be an organism, where everything affects everything else. He had developed enough frame designs to know that he had just scratched the surface and that every dimension on the bike, from chain stays to seat angle, could benefit from the increased front center. But instead of telling you that long story of test riding and prototypes, let's just skip to the finished Genesis frame and what defines it today.

Genesis features and what they do for you

The primary benefit of the long front/center (distance from the bottom bracket to the front axle) is stability. This certainly helps in conditions like those

that caused Gary to crash. But the long front/center makes the bike more stable all the time.

Short stems and their effect on steering

The shorter stem used with Genesis geometry puts your hands closer to the steering axis. Steering can be done with your arms instead of a sweeping sideways movement of your shoulders. Your hands can move faster than your shoulders, so technical steering is precise at high speed.

Centered between the wheels

On a bike with a long front-center the front wheel is pushed further ahead of you. Anytime you find yourself moving back on your bike, it's in response to your body wanting to flip over the front axle. This happens on steep downhills, and also any time the bike is moving at high speed in rough terrain. With the front axle moved forward, there is added resistance to over-thebars flight. You're more relaxed at speed, and since you're more in the saddle than behind it, you're in a better pedaling position to keep the power on.

How does it climb?

Common sense tells us that a longer front center places less weight on the front wheel. Intuition tells us that with less weight on the front wheel, the bike might not climb well. But geometry charts only tell part of the story, and Genesis bikes actually climb very well.

Here's two reasons why: with a shorter stem, your shoulders stay more over the centerline of the bike, even when turning. When your center of gravity stays over the frame centerline, the bike stays in better balance. With Genesis geometry, it's even easier to hold your line on steep, slow speed climbs. Secondly, when climbing hard in first gear any bike will respond to the pressure of pedaling. Imagine if the headset were placed in the middle of the bike, right below the saddle. The bike would hinge in the middle, between contact patches of the tires. With every pedal stroke the rear wheel would turn away from the pedaling force. As a result, the front wheel would turn toward the pedal side, and the bike would swim like a salmon heading upstream. But the further ahead you move the pivot (headset), and the closer to your hands, the straighter the bike will climb. With the shorter stem, you stay over the bike, and the bike tracks straighter, making it climb very well indeed.

Short chain stays

Genesis bikes use ultra-short chainstays. This positions the rear wheel more directly under your butt. With more weight on the rear wheel, you get better traction uphill, and the tire bites better when you apply the rear brake.

Short chainstays also moves the pivot point for doing wheelies. With a Genesis bike, you can easily lift the front wheel when it's time to bunny hop a water bar or climb over a small log.

Steep seat tube

Genesis bikes, like most Fisher models, have a steep seat tube angle. The duty, and the effect, of the seat angle is to place the saddle where you need it for support when seated pedaling. The seat angle also interacts with the top tube length to describe the position of the head tube relative to the bottom bracket. For every degree of seat angle, the top tube is compensated about 10mm. In other words, for every degree the seat tube is steepened, the top tube becomes about 10mm shorter. When comparing geometry charts, a bike with a steep seat tube may look like it has a shorter top tube than it actually does.

The function of the steep seat tube is to place the rear wheel more underneath you. This is useful when you transfer from a seated to a standing position. As you move from a seated to a standing position (or the opposite), you don't have to move as much to maintain traction. It becomes easier for you to 'attack' a climb.

Who's it for?

The features of Genesis geometry were originally dreamed up by Gary Fisher, for his own riding. As we point out in "Gary Fisher: A History", Gary has done a lot of racing. But the same benefits that get a racer around a course faster will also add pleasure to a leisurely ride on the weekend.

Genesis bikes are more stable, especially in more technical terrain or on steep downhills. Genesis bikes allow quick, precise steering. Genesis bikes climb really well, especially for those who like to stand out of the saddle.

With these features, Genesis bikes offer a superior ride to anyone looking for performance off the pavement.

LeMond Geometry

LeMond Geometry- A different perspective

LeMond geometry is different than many of the bikes on the market today. There are many explanations for this, some useful, some not so well thought out. We'd like to suggest a different perspective here.

What's different about the geometry?

First, let's talk about what the differences are. There are several key points which vary from some bikes on the market today. The differences may be small, but when combined the effect is definitely noticeable. Understanding how they work will help you explain the 'feel' to a potential customer and how it will benefit their riding.

· Reduced head angle.

By slightly reducing the frame's head angle, trail is increased. The steering is more stable and slightly slower.

Greg has said that when Pros are descending the Alps at 80kph, they need bikes that hold a line well, not steering that is quick and reactive. When descending fast, Pros use every inch of road width. They aggressively lay the bike into a corner knowing they can't change their line. With such a narrow margin of error, it's more important that a bike hold the line than be quick turning. Greg's geometry adds stability, especially when combined with other facets of the design.

The bottom bracket is slightly lower.

A lower bottom bracket lowers your body on the bike, and your center of gravity. When you are closer to the ground, the bike is more stable. It's true that this reduces pedal clearance, but at the extreme cornering angles and high speeds of a Pro road race the riders have their inside pedal up in the corners anyway. To Greg, feeling secure while eating or removing a rain jacket is more useful than extreme pedal clearance.

Longer chainstays

Increased wheelbase adds comfort and stability to a bike. For a road racer, this allows them to relax on the bike. If they expend less energy throughout the entire race, they will have more energy when the crunch comes. Shorter chainstays may add stiffness to a bike during a hard effort, but when sprinting for a stage win Greg found that feeling fresh was more useful than a stiff bike.

· Increased top tube length

If you only look at top tube numbers, Greg's geometry may look really long. However, under a more accurate analysis the front/center is actually comparable to other good road bikes. The difference is that the seat tube is laid back. When the seat angle is laid back, it's normal for the top tube to increase in length.

· Reduced seat angle

Some say this is to accommodate a long femur (thighbone), but good bike fit relies on more than bone length; it also considers the physics of riding.

Another theory is that pushing the saddle rearward allows you to "pedal early", or apply pedal pressure earlier in the pedal rotation as it goes from the top (12 o'clock) position.

While either of those theories may apply in some cases, an analysis of biomechanics indicates the primary benefit of the slack seat angle is more powerful climbing through hand opposition.

Examine the dynamics of a rider in the saddle on a tough Tour climb, say something 10km long and in excess of a 10% grade. When seated on the blke most climbers ride with their hands on the top of the handlebars. This allows comfort and good breathing. They don't need to be in the drops, because climbing speeds are low enough that aerodynamics do not have much effect.

As the grade increases the pedal force increases, assuming race pace at a constant cadence. As pedal force increases, so do the opposite forces lifting you off the saddle. The force stabilizing a seated rider is partially the friction created on the saddle by gravity, partially the position of the hands relative to the saddle. As pedal force increases, it takes more force to stabilize your body. Since gravity does not increase, it requires additional opposition from your hands to keep your body still in the saddle. Rather than move your hands (and handlebars) to oppose your feet, the saddle is moved back so that the bars are further away. This position improves the opposition of your hands to the force of your legs.

In order to allow the saddle to be moved back further, the seat angle must be more laid back. As an extra benefit, moving the seat back tends to flatten your back, so after you've crossed the col you can decrease your aerodynamic drag on the downhill.

Does it take a special body type to ride a LeMond bike?

From the previous discussion it should be apparent that unless you require a very forward saddle position, you should be able to ride a LeMond. Those who want to ride in a more forward attitude also have the option of using a zero-setback seatpost.

What about the 'LeMond position'?

It's true that Greg used a very long position from the saddle to the handlebars. If you move your center of gravity relative to the wheels, it changes the way the bike handles. Greg's long, laid out position allowed him to achieve good pedaling opposition yet maintain optimum weight distribution on the bike for handling those fast downhill corners. The resulting aerodynamic benefits were an added bonus.

LeMond Geometry Summary- Rider Benefits

The benefits of LeMond geometry are really three-fold. First, LeMond bikes are built to be comfortable so you expend less energy as you pedal. Second, they allow a more rearward position that adds climbing power. Last, they handle really well; when put into a corner they are solid and predictable at high speeds, and a synergy between you and your bike (some call it a feeling of 'one-ness' with the bike) means LeMond bikes don't require extra vigilance as you ride.

Women on Bikes

Most bikes are built for men

For years women have been riding bikes designed partly, if not totally, for men. If you were one of the lucky ones, your dealer substituted a few parts which made a men's bike work pretty well for you, especially if you are a taller woman.

Adaptation and adjustability

Fitting bikes is a combination of adjusting a bike and adapting the rider.

Larger bike are more adjustable, since their stem lengths are usually of average length and rise. Changing to a shorter stem reduced the reach to the bars, and changing stem angle on a mid-length or longer stem could significantly effect handlebar height. On a small bike, the stem is likely to be quite short to begin with. If an even shorter stem is desired, the right extension may not exist. Changing the rise angle of a very short stem has little effect on handlebar height so vertical adjustment is not readily available, either

When analyzing movement of a person, the range of motion is critical to efficiency and power. If you move a fit component on a bicycle a given amount, it will effect the range of motion of a person with shorter limbs more than a person with longer limbs. Simply put, when fitting a bike a shorter person has less adaptability than a taller person. Smaller bikes generally have less adjustability than big bikes, so it's more important that a small bike fit just right.

Smaller women rider smaller bikes. With less available adjustment on their bikes, and less adaptability of their bodies, small women have suffered fit problems that lead to performance gaps. Serious riding on the road is much more fun when your bike is comfortable and handles well. Off road, anything less can make cycling really unpleasant.

More than a dropped top tube

The new Gary Fisher Genesisters and LeMond women's bikes are spec'd with women's specific components, like saddles, bars, and crank lengths. The Genesisters mountain bikes have women's specific suspension forks with softer springs.

More importantly, these frames feature a geometry designed for women. So while most 'women's' bikes make due by just tweaking a men's bike with a few add-ons or maybe a dropped top tube, we completely redesigned these bikes to meet the needs of performance oriented smaller women.

Women sit on a bike differently

There are several major differences in how men and women sit on a bike. The most obvious and most discussed of these is the difference in pelvic structure. A woman's hips are wider, and the bony protuberances we all sit on, called ischial tuberosities, are also wider apart. This accounts for the popularity of women's saddles that are wider in the back than a man's.

A man's pelvic structure allows him to roll his pelvis forward on the saddle and lean forward aggressively. For most women, this hurts. The result is a woman sits on a bike seat with her pelvis in a more upright position. For the smaller woman on a man's machine, this means her lower back is curved and the handlebars are hard to reach.

Adjusting geometry to fit women

Fisher and LeMond engineers addressed these issues in several ways in the Genesisters and LeMond women's geometry. To support their wider pelvis, women appear to sit further back on the saddle. With a steeper seat tube, the seat can be positioned placing the legs over the cranks for optimal power, while her butt is on the most comfortable part of the saddle. To adjust the reach for a more upright angle to the back, a shorter top tube is used. The handlebars are placed higher by using a taller head tube, so her back and arms can be at a relaxed angle for steering control and shock absorption.

These adjustments put a woman in a more comfortable and powerful position. That makes hills easier and long rides less tiring. A common complaint among women riders is back pain, and the correct position goes a long way to alleviate this problem.

Some of the corrections Fisher made to these frames can be made to a men's frame with similar results, especially with a taller woman's bike where there is more adjustment. But any frame will handle its best with the weight distribution applied in a certain way, and a men's frame is designed to have a man's heavy shoulders pressed firmly onto the handlebars in a bent over position. When you put a woman, who already has lighter shoulders, in a more upright position, there is much less weight on the front wheel. The result is less steering stability and the bike becomes harder to control.

Steering and weight distribution

Steering stability on a bike is a combination of trail and centering force. Trail is the distance from the steering axis at the ground to the tire contact patch. But for trail to make a bike stable, there needs to be weight on the bars to apply a centering effect. The greater the weight on the bars the more stable a given bike will be. This is why a touring bike with front panniers is more stable than it would be with only rear panniers.

A smaller man on a small bike still applies plenty of centering force for good steering and handling. To achieve a similar amount of steering stability for a small woman in a more upright position, more trail is needed. Not only does stability lend confidence to the rider, it also means that less strength is required to hold the bike in a line. This again addresses an important difference between men and women, that of upper body strength. By decreasing the head angle of the women's bike, she will get similar handling with a similar 'feel' to that designed into a man's bike for a man.

Good fit defined

When you are pedaling a bicycle, you touch the bike in three places; pedals, saddle, and handlebars. For the bike to fit you properly, these three points must interface with your body in a comfortable and functional way. In other wards, if the saddle, pedals (and shoes), and handlebars (plus grips and controls) do not fit your feet, hands and seat, the bike won't work its best for you.

The three points of contact must be oriented correctly for you to benefit. Properly oriented, your muscles will work at their optimum. No muscles, ligaments, or tendons will be strained. Aerodynamic drag will be at a minimum.

In addition to the relatively simple task of accommodating your body for comfort, the bike should ride better. Your center of mass should be positioned over the bike to accentuate your pedaling power while also balancing you over the wheels for the best bike handling.

Put more simply, good fit results in your feeling completely relaxed on the bike over long periods of time. If your bike fits well, you should not feel like you need to squirm around, nor should you have excess tension in your shoulders, arms, or anywhere else. Basically, you should be comfortable, first and foremost.

How performance effects fit

The higher the performance level of your riding, the greater the forces applied to the bike, and thus to you. Forceful riders press harder on the pedals. They corner harder, and when riding off road their extra speed generates higher forces when they hit bumps. The forces applied to you on the bike are the result of a Newtonian law that states all actions have equal and opposite reactions. When you are riding, higher forces demand better fitting if comfort is to be maintained.

However, in some cases greater forces may be found when your are riding less forcefully. If you are not pressing firmly on the pedals, you're not lifted by the pedals. As a result, the casual rider often applies their entire body weight to the saddle.

Regardless of the level of your riding, our definition of good fit holds true. Every rider should use the least muscle energy possible to support themselves on the bike, to stabilize themselves on the saddle, and to apply power to the pedals. To be relaxed requires that you be as comfortable as possible.

Fit info in the Tech Manual

On the specifications page for each bike model, we have listed the Fit items for that model, including the lengths, angles, or widths of the handlebar, stem, crank, and seatpost.

RIDER HEIGHT

In addition to the measurements of the hard parts, we list Rider Height. This dimension is the median height of the average rider who might fit this bike in an average way, with its handlebars at their highest position. That's a lot of qualifiers, but the information can still be valuable in helping you quickly fit a given model. Some models do not include Rider Height,

either because that model offers too much fit adjustment to be defined, or simply because it's a one-sizefits-all. So here's all those qualifiers explained.

Median Height-

Different bikes offer different ranges of fit. Generally, the more bent over you are, the more noticeable a poor fit. Most bikes fit a range of heights. Different bikes will have a different range. We have not attempted to define how wide the fit spread is on a given model; the variables are too many. Instead, we have listed the median, or middle. In other words, if we say a bike fits someone 70" tall it may fit someone from 69 to 71", or with a wider range possibly from 67 to 73". As you consider this data, you're probably best off choosing the size closest to your height.

Average Riding Style-

When we design or spec a bike, we have a certain style of riding in mind. As an example, when we spec a Supercaliber, we're expecting that the bike will be either ridden by a racer, or someone who likes to ride like a racer. That doesn't mean you can't ride a Supercaliber on the bike path, but someone buying a Supercaliber exclusively for bike path riding isn't riding in an average way for that model, and will likely want to tune the fit to their purposes.

Average Fit-

We've studied a lot of riders over the years, and we can draw some conclusions about the way a bike fits the average person. But some folks aren't average. Those with specific preferences, injury, or other abnormalities may require or prefer a non-average fit. As examples, consider two people of the same height but different weight. At 6' tall, a 130 pound person will sit on a bike differently than someone also 6' tall who weighs 260. Incidentally, neither of these folks would fit our definition of average.

There are many factors which effect bike fit. Certainly bone lengths is one, but perhaps surprisingly, it's not always the most important. Other influential factors include flexibility (and thus to some extent your age), somatotype (your general body shape), overall conditioning (muscular strength and body mass distribution), gender, and riding style. If you are female, or in any way older, out of shape, over weight, or not accustomed to cycling, you will probably want to select the larger of two bike sizes that would fit you, simply to get the higher handlebar position that comes with a bigger frame. It's easy to put a shorter stem on to reduce the reach to the bars. It's not always easy to find a stem which can adequately raise the handlebars on a frame that is too small.

Highest handlebar position-

We made these fit estimations with the stem at its highest point. With Ahead stems, that means all the spacers were under the stem. With quill stems, the handlebars reach their maximum height with the stem pulled up to the minimum insertion line. With adjustable stems, it's calculated with the stem at a 35 degree angle. Lowering the bars, or changing the parts, changes the fit of the bike as well as its Rider Height.

Sugar = B*Link

When we introduced the Fisher Sugar in 2000, it set the suspension market on its ear. No bike before it offered the unique combination of Genesis handling and B*Link technology. The Sugar is a lightweight full suspension package that handles like a hardtall. It's a successful blend of several Fisher features; Genesis Geometry, Aluminum frame technology, and American manufacturing quality.

The Sugar has already proven itself to be a top level performer. Mary Grigson, on a Sugar, was one of the first riders to win a World Cup race on a full suspension bike. Clearly, the new Sugar is fast. With Genesis geometry, it's also an excellent handling machine. And it doesn't waste your energy. Everything a perfect full suspension bike should be, so even on an afternoon spin, the Sugar makes your riding more fun.

Genesis Geometry

The Sugar incorporates Fisher's Genesis Geometry. Gary's original concept was a bike that would be more stable in situations where the rider's center of gravity rolled them forward over the handlebars. While solving this problem, Gary also created a bike that better handles the higher speeds of Pro racers. A sneak peek with a tape measure into the pits at a NORBA National will reveal that many racers, on bikes with different brand names, are borrowing from Gary's geometry.

B*Link suspension design

The Sugar uses a special linkage to activate the rear shock, called the B*Link. The B*Link adds lateral rigidity to the frame, so the Sugar steers and handles like a hardtall. Likewise, the relatively short travel (by Fisher standards of the past) of 3" (75mm) gives a hardtall feel to the bike. However, the pivot location and resultant progressive suspension and compression ratio allows the Sugar to be plush on small stuff, yet not bottom on the big hits. The end result is an almost invisible suspension feel; it takes the edge off, but you don't really notice the suspension movement. Combined with low weight, these features make the Sugar the ultimate all-round and racing suspension bike.

Some designs offer more

While other suspension systems may offer some similar benefits to those of the Sugar, they have some things the B*Link design doesn't have. They have tiny little pivots crammed into the tight space by the rear dropouts. Those little pivots add weight to the bike, and at their attachment points the frame has to be designed with extra reinforcements that also add weight. As an added problem, if the pivots aren't perfectly aligned, they wear prematurely, so the extra alignment work adds cost to the bike.

Those dinky little pivots also have low torsional rigidity, allowing unwanted flex. As the suspension is activated on a bike with imperfect alignment and pivot flex, their little pivots will loosen up, which causes additional frame flex and squeaking.

Smart design

By carefully designing the pivot locations, swingarm, and links, Fisher engineers were able to create a suspension system that avoids those troublesome little pivots back by the dropouts. The key is finding the exact lengths and arcs to do this without undue stress on any frame members. Still, there is some flex of the frame as the suspension is activated. With each suspension stroke, there is a slight change in angle of the

chainstays and seatstays.

Without careful design, this tiny flexing could cause fatigue of the frame resulting in breakage. Fisher engineers used some of our vast array of materials and manufacturing technology to avoid welding in the flexed area. Instead of welding, we use bonding technology to join the stays and rear drops. By using a space age epoxy adhesive, we achieve incredibly strong frame joints that don't have the inherent stress (and stress risers) of welding. This clever design avoids fatigue stress.

B*Link benefits

Our smart B*Link design completely avoids the annoying little rear dropout pivots with a light, rigid design. All you give up with B*Link is the tiny pivots and the headaches. B*Link stills gives you what you need in a full suspension design. The tires follow the terrain for maximum traction, pedal interrupting bumps virtually disappear, and big hits are swallowed up without bottoming the springs.

Designed for an air shock

For a cross-country design like the Sugar, we wanted the lightest shock possible. By itself, just the spring of a coil/over shock can weigh more than an entire air shock.

Air shocks have progressive spring rates. For each increment an air shock is compressed, the rate of change of the spring rate goes up (gets stiffer).

However, air shocks can be too progressive. In this scenario, in order to have a bit of sag in the system, the progressive nature of an air shock can prevent you from getting all the travel the bike has to offer.

The shock actuation of the Sugar is a slightly falling rate. For each increment of swingarm travel, the actuation rate decreases (compresses less). This allows the Sugar to be set up with some sag, yet get full travel over big bumps. Basically, the Sugar design makes an air shock feel more linear.

The Sugar has a unique blend of a progressive shock combined with a low leverage ratio. This, coupled with a very specific pivot location, takes rear suspension performance to a level that is instantly distinguished over other designs. The results are greater efficiency in both terrain response and the transfer of your energy to the rear wheel, while being almost undetectable.

More durable pivots

One last concern of our engineers was pivot durability and maintenance. Although you may not appreciate it on a test ride, pivot durability plays an important role after you've owned the bike for a while. As suspension pivots wear, they become loose. This looseness translates into frame flex, or "wag", which can allow the two wheels to track independently. You don't want this. In addition, worn pivots tend to squeak. Nothing is more annoying than listening to your bike squeak with every pedal stroke. So Fisher engineers borrowed technology from the thousands of proven Fisher Joshua bikes on the trail; Teflon impregnated composite bearings.

In the Sugar design, the bearings ride on very wide axles. The distance between the bearings, on a given axle, is what helps lateral stiffness in a bike frame. If an axle is only a few millimeters long (like those crammed in by the dropouts), then it offers little resistance to lateral and torsional flexing. That's why the Sugar doesn't use this type of pivot at the dropouts.

Would you rather work on your bike than ride it? Even the ultimate suspension design makes for a lousy bike if it requires constant service. That's why the Sugar uses a totally sealed, non-metallic pivot bearing. Think about this; which wears faster, a suspension fork (with non-metallic bushings) or a headset (with ball bearings)? If you answered "headset", you're correct.

When you hit a bump with the rear wheel, the force is transmitted through the pivot (before it gets to the shock). With ball bearings in a pivot, the contact area of the bearings is extremely small, and metal to metal. It's inevitable that this contact point is going to wear fast. With the Sugar, the contact point is huge, and the bearings actually have a small amount of shock absorption capacity. This combination of features means you can ride a Sugar for thousands and thousands of miles without any maintenance, and without any noise or rear end wag.

Industrial strength

The original development of the Sugar pivot technology was for use in industrial quarrying, where huge machines work under monstrous loads in a dirty environment. Gosh, almost sounds like mountain bikingl

Bearing force threshold

If you take all the parts off a suspension bike and remove the rear shock, you'll find several things. First, it becomes much easier to see what the suspension does when the rider hits a bump.

Second, you will see that there are differences in the amount of force it takes to initiate suspension movement. Brands with ball bearings in their pivots point out that the Sugar, especially when brand new, takes some force to move. Generally, it take somewhere around 10 pounds of force at the rear axle to move a brand-new Sugar swingarm.

Is this force threshold interfering with the bike's performance?. As you ride your Sugar, the composite bearing deposits material onto the nickel-less anodized pivot axle. After break-in, the bearing surface becomes in effect Teflon against Teflon. Since the composite is much slipperier than the aluminum, the force required to activate the pivot becomes much less after break-in.

The other thing to consider is this- once you exceed the activation threshold, the 'stiction' of the bearing no longer effects the travel. You can feel this on the workstand. When you sit on the bike, you have applied way more force than ten pounds to the rear axle. The spring stores the energy from you compressing it, so when you get off, about the same force works to return the shock to its un-sagged length. So this 'test' of the bearing stiction has little to do with how the bike actually works.

Basically, we feel the huge bearing surface of our design, coupled with its low weight and totally sealed nature, make our pivot far superior to a ball bearing pivot.

NEW FOR 2002

New frame tubes = lighter weight and lateral rigidity
The 2002 Sugar uses our new frame material,

ZR9000. The key to this new material is that while the frame is now 15% stronger, it is at the same time 15% lighter, and way more fatigue resistant.

The 2002 Sugar gets a new downtube with a much greater diameter. This makes the frame laterally and torsionally stiffer. Combined with other new frame features, the 2002 Sugar is over 7% stiffer!

We also took advantage of our carbon fiber technology, with both carbon chainstays and carbon seatstays. We ended up with a frame that's 1/4 pound (over 100 grams) lighter!

Redesigned B*Link = lateral rigidity

The new B*Link is stiffer laterally than earlier versions. However, to achieve this improvement, it was necessary to redesign its attachment points. This means the new B*Link cannot be retro-fitted to previous Sugars. Likewise, it cannot be interchanged with the Sybil link on the Sugar+.

New swingarm without 'seatstay bridge' = tire clearance

By using very large diameter 'seatstays', we were able to remove the brake bridge. Normally the bridge is needed to stiffen the area around the brake bosses. With the super-large diameter tubes we designed, we were able to remove the bridge completely while maintaining adequate brake rigidity. The result is tons of tire clearance, now fitting even up to a 2.35 tire.

SUGAR SUSPENSION SETUP

Cane Creek shocks have two springs, a 'positive' and a 'negative'. The positive spring works to make the shock longer, while the negative spring works to make the shock shorter. The negative spring works only during the first part of the shock stroke, in effect helping small bumps to compress the shock. This makes the Sugar feel plush. After a small amount of shock compression, the negative spring ceases to have an effect, and just the positive spring resists large bumps.

With a Cane Creek rear shock, pump up the pressure to around 25-35 PSI less than your body weight in LBS (see chart below). With models that provide damping adjustment, try 2-3 turns in from fully fast. This is a good place to start. You should experiment in small increments to find what works best for your position, terrain, body weight, and riding speed.

| terra | un, body weignt, | and riding speed. | |
|--------|------------------|-------------------|----------|
| Body | /Preload | Body | /Preload |
| Weight | | Weight | |
| LBS | PSI | KG | ATM |
| 100 | 75 | 45 | 5.43 |
| 110 | 85 | 50 | 6.04 |
| 120 | 95 | 55 | 6.64 |
| 130 | 105 | 60 | 7.24 |
| 140 | 110 | 65 | 7.85 |
| 150 | 120 | 70 | 8.45 |
| 160 | 130 | 75 | 9.05 |
| 170 | 140 | 80 | 9.66 |
| 180 | 150 | 85 | 10.26 |
| 190 | 155 | 90 | 10.86 |
| 200 | 165 | 95 | 11.47 |
| 210 | 175 | 100 | 12.07 |
| 220 | 185 | 105 | 12.67 |
| 230 | 195 | 110 | 13.28 |
| 240 | 205 | | |
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Sugar + = Sybil link

The Sugar+ borrows heavily from the hugely successful Sugar design, but expands on that success to create a more versatile bike. By providing a way to adjust the suspension travel, the Sugar+ can exactly mimic the design of the Sugar, or go into long travel, adventure mode. And this magic act takes just about a minute. The only real downside is that the Sugar is lighter, but in reality one should expect that from a more expensive bike, anyway.

Adjustable Travel

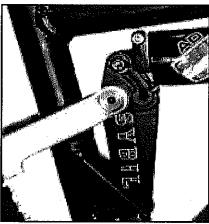
The Sugar+ allows you to choose from two configurations. In the short travel mode, the Sugar+ has the exact same geometry and travel as the Sugar (2.8" / 70mm). By moving the rear shock into its long-travel position, you increase the rear wheel travel to 4.1 inches (100mm). Then dial the fork to its 100mm travel position (some forks may offer even more travel). The only change in handling comes from a resultant 14mm increase in bottom bracket height. The sweet ride of Genesis geometry is still there. Even cooler, you don't have to change the pressure in the rear shock when you move it!

Genesis Geometry

The Sugar+ incorporates Fisher's Genesis Geometry. Gary's original concept was a bike that would be more stable in situations where the rider's center of gravity rolled them forward over the handlebars. While solving this problem, Gary also created a bike that better handles the higher speeds of Pro racers. A sneak peek with a tape measure into the pits at a NORBA National will reveal that many racers, on bikes with different brand names, are borrowing from Gary's geometry.

Sybil link suspension design

The Sugar+ uses a special linkage to activate the rear shock, called the Sybil link. The name "Sybil" was a taken from a famous case which profiled multiple personalities. The name Sybil can also be found in mythology, a seer who could predict the future. Either way, it's a good description of the capabilities of the Sugar+.



Like the Sugar's B*Link, the Sybil link adds lateral rigidity to the frame. The box construction with parallel through-axles at either end means that the link resists torsion applied by the terrain pressing against the rear wheel. What all this means is that the Sugar+ keeps the rear wheel in line over rough terrain, so your Sugar+ handles like a hardtail, but with the extra cush you want

in a long-travel suspension bike.

The pivot location and resultant progressive suspension and compression ratio allows the Sugar+ to be plush on small stuff, yet not bottom on the big hits. The end result is an almost invisible suspension feel; it takes the edge off, but you don't really notice the suspension movement.

Some designs offer more

While other suspension systems may offer some similar benefits to those of the Sugar+, they have some things the Sugar+ design doesn't have. They have tiny little pivots crammed into the tight space by the rear dropouts. Those little pivots add weight to the bike, and at their attachment points the frame has to be designed with extra reinforcements that also add weight. As an added problem, if the pivots aren't perfectly aligned, they wear prematurely, so the extra alignment work adds cost to the bike.

Those dinky little pivots also have low torsional rigidity, allowing unwanted flex. As the suspension is activated on a bike with imperfect alignment and pivot flex, their little pivots will loosen up, which causes additional frame flex and squeaking.

Smart design

By carefully designing the pivot locations, swingarm, and links, Fisher engineers were able to create a suspension system that avoids those troublesome little pivots back by the dropouts. The key is finding the exact lengths and arcs to do this without undue stress on any frame members. Still, there is some flex of the frame as the suspension is activated. With each suspension stroke, there is a slight change in angle of the chainstays and seatstays.

Without careful design, this tiny flexing could cause fatigue of the frame resulting in breakage. Fisher engineers used some of our vast array of materials and manufacturing technology to avoid welding in the flexed area. Instead of welding, we use bonding technology to join the stays and rear drops. By using a space age epoxy adhesive, we achieve incredibly strong frame joints that don't have the inherent stress (and stress risers) of welding. This clever design avoids fatigue stress.

More durable pivots

One last concern of our engineers was pivot durability and maintenance. Although you may not appreciate it on a test ride, pivot durability plays an important role after you've owned the bike for a while. As suspension pivots wear, they become loose. This looseness translates into frame flex, or "wag", which can allow the two wheels to track independently. You don't want this. In addition, worn pivots tend to squeak. Nothing is more annoying than listening to your bike squeak with every pedal stroke. So Fisher engineers borrowed technology from the thousands of proven Fisher Joshua bikes on the trail; Teflon impregnated composite bearings.

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Basically, we feel the huge bearing surface of our design, coupled with its low weight and totally sealed nature, make our pivot far superior to a ball bearing pivot.

it actually has many, many improvements.

New frame tubes = more lateral rigidity at the same weight

The 2002 Sugar uses our new frame material, ZR9000. The key to this new material is that while the frame is now 15% stronger, it is at the same time 15% lighter, and way more fatigue resistant.

The 2002 Sugar gets a new downtube with a much greater diameter. This makes the frame laterally and torsionally stiffer. Combined with other new frame features, the 2002 Sugar+ is over 7% stiffer!

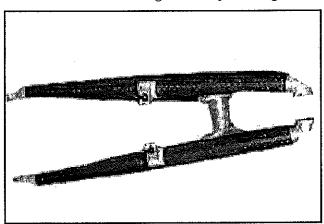
Careful design allows us to put all these features into a Sugar+, but at the same frame weight as last year's Sugar.

Sybil link = adjustability and lateral rigidity

The new Sybil link is stiffer laterally than earlier versions. However, to achieve this improvement, it was necessary to redesign its attachment points. This means the new Sybil link cannot be retro-fitted to Sugars, neither 2002 or earlier.

New swingarm without 'seatstay bridge' = tire clearance

By using very large diameter 'seatstays', we were able to remove the brake bridge. Normally the bridge is



needed to stiffen the area around the brake bosses. With the super-large diameter tubes we designed, we were able to remove the bridge completely while maintaining adequate brake rigidity. The result is tons of tire clearance, now fitting even up to a 2.35 tire (carbon fiber version from Sugar shown).

Genesisters model

The Sugar 3+ is now offered in Genesisters geometry, Gary's Genesis concept executed to fit women.

Other details

The Sugar+ frame accepts V-type or International mount disc brakes.

NEW FOR 2002

Although the Sugar+ may look like last year's Sugar,

SUGAR+ SUSPENSION SETUP

One of the cool features of the Sugar+ concept is that once you've adjusted the rear shock for its 'standard' travel mode, you don't have to change the preload. When you move to the long travel position on the Sybil link, the change in actuation ratio means the long travel adjustment will be appropriately softer.

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With a Cane Creek rear shock, in the short travel mode, pump up the pressure to around 25-35 PSI less than your body weight in LBS (see chart below). With models that provide damping adjustment, try 2-3 turns in from fully fast. This is a good place to start. You should experiment in small increments to find what works best for your position, terrain, body weight, and riding speed.

For the long travel mode, set up the shock in the short travel mode as explained above. Then, simply move the shock to its long travel position on the Sybil link. No further adjustments should be necessary.

| Body | /Preload | Body /Preload |
|--------|----------|---------------|
| Weight | | Weight |
| LBS | PSI | KG ATM |
| 100 | 75 | 45 5.43 |
| 110 | 85 | 50 6.04 |
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Sugar Parts Compatibility

The Sugar has been a very successful part of the Gary Fisher line since the 2000 model year. For 2002, we have made changes to the Sugar, and the new Sugar +, which improve its performance. In this way, change is good. However, with changes to the frame come changes to the parts.

2000/2001

The main frame, swingarm, shock, and pivot hardware from model years 2000 and 2001 are the same. All frame and shock parts are interchangeable between these two years. For instructions and a parts list, see "Sugar Pivot Service" at the back of this manual, or the 2001 Fisher/LeMond Technical Manual.

2002

The new year brings changes to the Sugar design, including a new adjustable-travel variation we call Sugar+. Both these models use a different frame, swingarm, B*Link, and shock size than the 2000/2001 Sugar. Some of the pivot hardware is interchangeable, some not. However, we recommend that if you are changing a pivot part, for instance and link axle, that you replace the bushings at the same time. This is becasue these parts are designed to wear at similar rates, and old parts can be contaminated such that they will accellerate the wear of the new parts.

Main frame

The main frame of the new designs are the same for the Sugar and Sugar+. However, they are different from the 2001 model in that they are designed for a longer rear shock. This design requires a different placement for the front shock mount.

Rear shock

Thje 2002 Sugar and Sugar+ use the same rear shock, a bolt-on type with an eye-to-eye dimension of 7 7/8". As such, the 2002 rear shock is not interchangeable with the 6 1/2" rear shock of the previous model years.

Swingarm

The swingarm of the 2000/2001 Sugar used a continuous axle through the swingarm and rear shock. The 2002 design uses a different link, with different spacing between the swingarm "ears". This means the 2000/2001 swingarm is not interhcangeable with the 2002 swingarm. In addition, the swingarms are not interchangeable between the Sugar and Sugar+. This difference is necessary to allow the additional travel of the sugar+ rear wheel without allowing the tire to contact the back of the seat tube.

Pivot bushings and hardware

Most of the hardware and bushings from model years 2000 through 2002 is the same. There are some differences, mostly having to do with shock mounting. The 2000/2001 Sugar used a shock with the pivot axle going through the rear shock eye. The 2002 Sugar and Sugar+ use a bolt mounted through the rear shock eye, but the same pivot axle is used to connect the link and the swingarm. This change allows the new B*Link and Sybil link to be thicker where they connect to the pivot axle, providing even greater lateral and torsional frame rigidity.

Part numbers

For a complete list of part numbers, refer to the Service section at the bake of this manual.

Tubeless Compatible Technology

Snakebite

One of the more common mechanical problems encountered on a mountain bike ride is the pinch flat. With your tire pressure set on the soft side to enhance traction, you run over a sharp object, like a rock. The soft tire is compressed between the rock and the rim, another hard spot. Caught in the middle of this squeeze play is the tire and the lowly inner tube, made of soft rubber. The tire can resist the compression because it is fairly thick, and has reinforcing threads running through it. The poor inner tube has nothing. Under pressure, the inner tube rubber separates and gets treated to the mountain bikers' nemesis: snakebite, denoted by a pair of matched holes in the inner tube.

A cure for snakebite

Until recently, the only cure for snakebite was to increase the air pressure in the tire. Unfortunately, this solution causes its own problem; reduced traction. To solve this problem, a consortium of rim and tire builders came up with a novel approach; why not eliminate the tube? Following this path they came up with a design using a dedicated tire to seal to a dedicated rim and hold air without a tube, dubbed UST.

The downside of UST

The UST 'solution' has a host of its own problems. First, it's very expensive. The key to UST is a rim without spoke holes through it's inner wall. This design requires a special method of rim manufacturing and spoke installation. Second, this special wheel doesn't use conventional spokes, so to get UST benefits you have to buy an entire wheel. Third, a UST rim will not work with a standard tire. And lastly, there is a very limited selection of tires and tread patterns that will fit this special rim.

A second opinion

We considered the pros and cons of UST tubeless technology and saw that there was room for improvement. By finding a different method of containing the air, we were able to use conventional wheel building practices. Not only does this make it less expensive to buy into the system, it also means the wheels are fully serviceable at your local dealer which is a real plus for you. Second, our rim design is compatible with standard mountain bike tires, given that you use an inner tube. With both UST and our Tubeless Compatible system, going tubeless requires a special tire that has a sealing layer on the inside of its casing to prevent the air from simply rushing out. Conventional tires don't have this air-sealing layer. But again, you can use a conventional tire on our tubeless compatible rims, you just have to use a tube. In addition, with our system you can use the UST tubeless tires.

How did we do it?

The key to our Tubeless Compatible system is a special rim and its mated rim strip. This rim strip is made of a thermoplastic rubber material, so it's impervious to air. Installed correctly in the special mated rim, it seals tightly to the tire to prevent air escaping through the spoke holes. The rim's hook allows greater contact with the tubeless tire's smooth, enlarged bead so these two surfaces also seal up tight. The inside of the tubeless tire has a special coating to prevent air from escaping through the tire casing. When these features are all in order, no tube is needed. Just install a special presta valve stem into the rim, and inflate.

Does the system absolutely eliminate air leakage?

Have you ever noticed that you occasionally have to pump up your tires (well, really it's your tubes), even if they don't have a puncture? In a similar fashion, a properly mounted tubeless tire can 'bleed' air. We expect that this will amount to about 4PSI per day.

For display purposes, 2002 complete bikes with tubeless tires will include an installed inner tube. Since inner tubes have a slower bleed rate, the store won't have lots of bikes sitting on the sales floor with soft tires.

What if I run over a nail with tubeless tires?

A tubeless tire functions like a tire with a tube in it. It's just that the tire holds the air, not the tube. So if you run over a large, sharp object that can penetrate the tire casing, it will probably flatten the tire just like with an inner tube.

Also like an inner tube, you can probably patch the hole (from the inside of the tire). The difficulty lies in determining where a tire is punctured. An inner tube is basically fully enclosed. A tubeless tire is not. If the source of the air leak is not immediately obvious, you may have a problem getting the tire inflated enough to locate the puncture. However, if you puncture while on the trail it's an easy matter to simply remove the special tubeless valve stem and install a tube.

That's not that bad. Anything else that could be considered a down side?

To inflate a tubeless tire, it must be in contact with the rim, tight enough to make full contact with the rim strip when at the bottom of the rim well. So the tires have to fit on the rim a little tighter. This makes them somewhat harder to install. The good side of this is that it does not take a compressor to initially seat the tire beads. A good hand pump will do. Or an air cartridge.

With a tire that fits this snug, you might not be able to install it barehanded. If you choose to use tire levers for installation or removal, it's important that you do not damage the rim or abrade the tire bead. If either surface is damaged, the roughened surface will likely allow a greater rate of air bleed from the mounted tire.

Tubeless Troubleshooting

If you are having trouble inflating a tire on a tubeless compatible rim, here are a few things to check.

Is the tire a tubeless tire? It should be clearly marked on the sidewall. Standard tires will not hold air without an inner tube.

Are the tire, rim, and rim strip clean and in good shape? Any puncture in the tire casing? Any dirt or abrasion at the critical sealing points can cause air to escape. Is the tubeless valve correctly installed? It should sit down in the channel of the rim, pressed firmly against the rim strip.

Are the beads seated in the rim? If a tubeless tire is only inflated to 30 or 40psi, the beads may not have properly 'locked in' to the rim strip. Try inflating the tire to around 50psi, and listen for the 'snap' as the beads lock. Then reduce pressure to your preference.

Bontrager Wheelsystems

Bontrager Wheelsystems wheels set a new standard in wheel performance. Bontrager Wheelsystems wheels are light, fast, and rock solid, with a unique set of application-specific features. Since different types of riding place different demands on wheels, Bontrager Wheelsystems applies the features to each wheelset which will optimize its performance for that use. In other words, each wheelset draws on the best specific set of the following possible features: paired spoking, OSB (Offset Spoke Bed), front-or-rear specific rims, top quality spokes (aero in some applications), and special hub designs.

Engineered wheels

Bontrager Wheelsystems wheels are highly engineered; every aspect of wheel performance has been considered, and redesigned when necessary. An extensive battery of tests has proven these to be truly outstanding products in aerodynamics, low moment of inertia, and durability. Since we proudly list the weights, it's easy to see the Bontrager advantage in this parameter. But with Keith Bontrager, durability is always a characteristic of paramount importance. These wheels are no exception. The battery of tests which every Bontrager wheel design must pass is truly astonishing.

As an example, one torture test involves placing 300 pounds on the axle of a wheel, and rolling over fixed wooden 2x4s at 30 MPH. Don't try this at home! This test regularly destroys many of our competitors wheels before they meet our minimum standards. At the same time, we insist that all Bontrager Wheelsystems wheels exceed them.

The key to durable wheels

The most important aspect of wheel building is achieving even spoke tension, within a range of acceptable tension. Certainly some of the responsibility here lies on the careful hand-finishing applied to all Bontrager Wheelsystems wheels. But even the best trained hands can't achieve consistent, even spoke tension if the wheel hasn't been designed properly.

Design review

When engineering wheels, every aspect of the wheel and its components must be considered as a group. Rim design effects lateral and radial stiffness, spoke bed strength, and in extreme cases impact resistance. Spokes must be selected with the right strength and elongation. Hub design must provide support for the spoke head, and flange width effects lateral stability. All the features must match up exactly to optimize the design's strength-to-weight ratio.

The missing factor

On any bike, the rear wheel sees more stress than the front wheel. The rear wheel supports a greater percentage of the rider's weight. The rear wheel must accommodate the freewheel or cassette, yet center the rim over the ends of the axle. And while the front wheel can rotate during side loading or deflection, the rear wheel is trapped between the rigid chainstays. In riding, this can greatly increase side-loading of the wheel.

Over the years, many approaches to increased rear wheel strength have been taken. Rather than attempt to review all those here, we'll simply present the goal of the Bontrager rear wheel; create the best possible balance of spoke tension from the drive side to the non-drive side of the rear wheel. Forget bracing angles, or distributing the pulling load over more spokes. As we said earlier, the greatest source of wheel failure is uneven spoke tensions. Since the inherent design of a multi-speed rear wheel creates a large difference in tension between left and right sides of the wheel, the best way to create a durable structure is to minimize this difference. Further, if a spoke is at lower tension than its neighbors, it can't effectively apply force to the rim.

Bontrager Wheelsystems rear wheels employ OSB (Offset Spoke Bed) rims and special hub designs with a more inboard left flange spacing. These features allow an increase in the left-side spoke tension. The higher left side tension allows the left spokes to apply torque transfer to the rim. They also provide increased strength through reduced lateral wheel flex. In other words, Bontrager Wheelsystems wheels are more efficient.

Bontrager wheels create a more evenly-tensioned structure, and thereby reduce the overall stress on the individual components. The result is that Bontrager Wheelsystems wheels offer unmatched strength and durability.

Bontrager Wheelsystems stay true longer

As your bike rolls down the road, your wheels are loaded with your body weight as they turn. As they do, the point at which the road resists the force of your body weight is moving on the wheel. This moving force creates a change in spoke tension such that every spoke on the wheel is seeing a loose-tight-loose-tight-loose-tight cycle. This cycle creates fatigue in the spokes, which will eventually cause them to fail. In some cases, fatigue can even cause a rim to fail. The greater the difference in spoke tension within the wheel, the larger the variations in tension through this cycle, and the greater the fatigue on the wheel.

More immediately, long before parts fail due to fatigue, the wheel may come out of true. As the tension is removed from a spoke, the nipple can more easily turn on its threads. This results in you spending more time working on your bike, or having it serviced. With Bontrager Wheelsystem wheels, the design creates more even tensioning. Maintenance is therefore at a minimum.

The keys to a perfect road wheel

As we said earlier, Bontrager Wheelsystems employ a set of specific features to achieve their high level of performance. All wheels benefit from low weight, durability, and low maintenance.

With road wheels, aerodynamics become very important due to the higher average speeds seen on pavement. One of the major influences on wheel aerodynamics is spokes. Many Bontrager road wheels use aero, or bladed, spokes to reduce wind drag. They also use reduced spoke counts, relying on Paired Spoke Technology to maintain

high wheel strength with fewer spokes.

On a bike, the front wheel sees the most wind resistance because it is the leading edge of the bike. The rear wheel is "drafting the seat tube", and is in much more turbulent air. For this reason, Bontrager road front wheels use a deeper, more aerodynamic rim than the rear wheel.

Mountain bike wheels have different needs

While road bikes benefit from improved aerodynamics, mountain bikes place a greater need on wheel durability and rigidity. They also sometimes require special configurations, like the ability to accept a disc brake rotor. Again, Bontrager Wheelsystems mountain bike wheels select those features which will best create the ultimate structure.

With disc-specific wheels, there is no need for a flat rim sidewall. This allows optimization of the rim shape to reduce weight. Placing a rotor on the front wheel creates an asymmetric spoke configuration that benefits from OSB (Offset Spoke Bed), thereby reducing the required dishing and providing more balanced spoke tension from left to right side of the wheel. Disc wheels also used crossed spokes, to efficiently transfer disc brake forces to the rim.

With rim brakes, Bontrager Wheelsystems incorporate tall sidewalls so that brake adjustment is easier, and pad wear has less effect on proper adjustment; taller sidewalls provide increased surface for the brake pad to mate to.

Like with Bontrager road wheels, Bontrager mountain wheels focus on balancing spoke tensions on the drive and non-drive side of the wheel. To do this, they employ OSB (Offset Spoke Bed) rims and special hub designs with modified flange spacing. These features greatly reduce the tension differentials from side to side, creating a stronger, more durable structure. The higher left side tensions allow more torque transfer to the left side drive spokes. They also provide increased strength through reduced lateral wheel flex. In other words, Bontrager Wheelsystems mountain wheels are stronger.

Truing Bontrager Wheelsystems wheels

Most Bontrager wheels employ standard, externally adjustable spoke nipples. The only exceptions are the Bontrager X-Lite Carbon Road wheels, and the Bontrager X-Lite Aero road wheels where a small aerodynamic benefit can make the difference between winning and losing a race.

Bontrager Road wheels use PST (Paired Spoke Technology) which require a slightly different technique to true. In many respects, truing Bontrager Wheelsystems wheels with PST is just like truing a conventionally spoked wheel. Each spoke has both a vertical and lateral component to its pulling force. As you tighten a spoke, it pulls radially in towards the hub, and laterally out towards the hub flange.

The difference is that on a Bontrager wheel with PST, the lateral force is directly opposed by its 'partner', the spoke adjacent to it. As the partner reacts to your tightening of a spoke, there is no further lateral force applied to the rim. Contrast that to a conventionally spoked wheel where each spoke has two 'partners'. As you tighten one spoke, it effects the tension, and thus the spatial position, of the two partners. This in turn effects the next outward

pair, and so on.

When truing Bontrager Wheelsystems road wheels, PST gives you more control over both vertical and lateral rim deviations. If the rim is slightly out of true but very round, you can loosen one partner and tighten the other. The rim moves laterally, but not up or down. And since no other spokes are directly affected, you're done.

Vertical deviations

With wheels built in our factory, the tolerance allowed for vertical deviation is 0.5mm. A 23c tire with 120 PSI will exhibit more out-of-roundness than this.

Our wheel builders use a vellum, a highly sensitive truing stand that uses dial indicators driven by wheels pressing on the rim. When 0.5mm passes by the indicators on the vellum, the needles move about an inch. What looks like a mountain on the vellum will be totally missed by the rider, even at high tire pressures on smooth pavement. With an egg-shaped wheel where 0.5mm height change occurs over 1/2 of the wheel rotation, the out-of-roundness may be invisible with a normal truing stand. If that same 0.5mm deviation occurs in a short rim section, it's very visible to the naked eye.

With Bontrager Wheelsystems, the same 0.5mm vertical tolerance is allowed, but instead of an egg shaped wheel it can show up over a very short section of the rim. In either case, the rider will not feel it, nor will it effect the ride of the bike. Consider the much greater magnitudes in the out-of-roundness of a wheel. The tire will be out of round by 1-2mm on a 23c tire, more as the casing gets bigger. A rider sitting on the bike with that same 23c tire at 110PSI will compress the tire by another 2-3mm. And unless your roads are a lot better than here in Wisconsin, the road surfaces often have 5, 10, and even 20mm variation.

A note about the "little marks" on the rims

On 2002 Bontrager rims there is a small spherical indentation in the braking surface of the rim. This isn't a blemish, it's a wear indicator. If the braking surface has worn so that the indicator is no longer visible, have your dealer replace the rim.

Technical Specifications

For detailed technical specifications, wheel building instructions, spoke lengths, tensions, and hub maintenance information, please refer to the Bontrager Wheel Building Manual, Bontrager Service Manual, or cybersurf to www.bontrager.com.

The 29" Wheel Story

The wheels of the bicycle have changed size throughout its development

Why are bicycle wheels the size they are? The first machine considered a true bicycle was called a Draislenne, after the Frenchman credited with inventing it. This embryonic bicycle allowed the rider to sit between two wheels, glide and steer. The propulsion was provided by pushing along the ground with one's feet. As such, the wheels were not overly large, and the rider sat near the ground. It set speed records, and was a highly efficient form of locomotion at the time.

For the purposes of this discussion, the next step in bicycle development was increasing its speed by attaching pedal cranks. The easiest method for attaching pedals was to put them directly on the front wheel axle, like modern tricycles. This put the pedals in front of the rider, for both comfort and ease of use. While pedaling increased the speed of the bike, it quickly became apparent that a larger drive wheel would make for further increases. As the front wheel grew, the rear wheel became smaller to reduce weight and maintain the handling characteristics of a shorter wheelbase. To maintain control over the bike, the rider had to sit near the steering axis, necessarily above the wheel. This new design was known as the penny-farthing, or Ordinary.

As the size of the drive wheel grew, bicycle speeds increased. Wheels got bigger and bigger. The riders on these bigger wheels got higher and higher off the ground. Crashes became common. Remember, paved roads were rare. Special handlebar designs were developed to make it easier to dismount as the rider flew over the front wheel.

Pivot
Ceriter of gravity in a fail-

Even with the many crashes, wheel size increased. The limit on wheel size was the rider's leg length. If the wheel was too big, the rider simply could not reach the pedals. Still, rider's wanted more speed. Several solutions were put forth, and the one that succeeded was a chain-driven rear wheel. With the introduction of chain drive, bicycles acquired gears and gear

ratios. By using cogs attached to the cranks and rear wheel, with different numbers of teeth, a single turn of the cranks could mean multiple turns of the rear wheel. This allowed a bicycle with smaller wheels to travel greater distances with a single revolution of the cranks. It also put the rider as close to the ground as pedal clearance would allow, and with two wheels of the same size. With the lowered center of gravity or these bikes, their riders weren't nearly as prone to pitching over the front wheel, and thus the new bikes became known as "Safety" bikes.

The wheels used on early Safety bikes were made of iron, steel or wood, which were then covered with a variety of materials. None of these cover materials was particularly shock absorptive, nor much help in achieving traction. However, they allowed a bike design to utilize whatever wheel size its creator desired. Wheel size varied a great deal, with much experimentation. Some bikes had similar wheel diameters, others had different front and rear wheel diameters. There wasn't

even agreement on which end of the bike got the bigger wheel.

One of the next significant development in bicycle technology was pneumatic tires. This truly was a revolution, allowing bikes to float over small bumps, maintain traction, and all with a great deal more comfort. Soon after their introduction, pneumatic tires became a requirement for any performance bicycle. Tires, then, are what finally settled the debate of wheel size. Wheels were thereafter made in the available tire sizes.

A brief review of the literature did not reveal any specific reason why specific sizes were selected. Instead, its probably a function of tires being made to fit an existing wheel. And that wheel size was determined to fit within the existing bicycle design parameters as they occurred at the time.

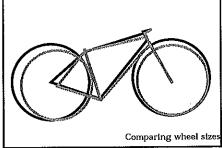
Later, a similar choice was made at the birth of the modern mountain bike. When pioneers like Gary Fisher were building their clunkers for the famous descent of Mt. Tam, the available thre size in a balloon thre was 26". Out of convenience, this became their standard. And as mountain bike thres evolved, they were made to fit these same rims. So the evolution of the mountain bike thre size was like that of wheel sizes; a selection made by what was available at the moment.

The limits to wheel size

The modern bicycle configuration places the rider's hands almost directly above the axle of the front wheel. Between these two points there resides the headset, or steering bearings, and the frame's head tube which holds those bearings. Attached above this is the stem. Below the steering bearings, the fork crown requires space, as does tire clearance for suspension fork travel. As wheel size increases, the room for the components decreases. If the wheel is too big, the immedi-

ate result is a handlebar that cannot be lowered to the desired position.

An overly large front wheel can also create problems with the front-center



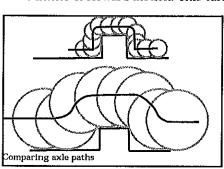
dimension, the distance from the bottom bracket to the front axle. Front-center effects steering quickness, handling, and stability. The tire contact patch is directly under the front axle, regardless of the wheel size. A longer front-center adds stability, but slows the steering response of the bike somewhat. A short front center does the opposite, and if paired with a large wheel may allow toe-clip overlap, where the rider's foot contacts the front wheel during a sharp, slow speed turn.

The diameter of the rear wheel dictates the chainstay length, important because chainstay length is a factor in bottom bracket rigidity. Also, the location of the rear tire contact patch, relative to the rider's center of gravity, effects traction on steep terrain.

As a result of 'crowding', larger wheels only work on larger bikes. On a smaller bike, the head tube would have to be shortened so much that the frame would lose torsional rigidity. Even worse, the rider's hands would be lifted such that they could not achieve the proper position. The good news is that smaller people already had a low center of gravity to begin with; its just those bicycling skyscrapers who were too far above their front axles.

Large wheels provide suspension for the rider through a smoother axle path

Imagine a skateboard wheel running over a series of 1" bumps. Since the skateboard wheel has a radius of only an inch, each time the wheel contacts a bump it has to move vertically 1 inch in just 1 inch of horizontal motion. This is an abrupt change with drastic effects on the rider's motion. With a 20" BMX wheel, that same 1 inch of vertical motion happens over about 4 inches of forward motion. This turns what was a



radical bump into a mild annoyance. Now ride over our bump on a 26" wheel, and you have almost 6" of horizontal distance to spread out the impact, and the bump is hardly noticeable. Not only does the bump disturb

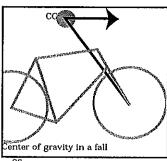
your riding less, but it also has less effect on your speed.

This effect is somewhat similar to that of a suspension fork, except that it happens on all bumps, regardless of suspension fork tuning. Tire pressure changes the effect somewhat, but with the same results regardless of tire size.

Since riding off road is normally on less than smooth surfaces, the effect of a larger wheel is constantly enhancing the ride. If both wheels are larger, the effect works on both ends of the bike.

On the Fisher 29ers you'll notice this effect in two ways; The bike will ride smoother and more comfortably. And the bike will be slightly faster, especially on broken or rough ground.

Larger wheels provide resistance to pitching over the bars (stability)

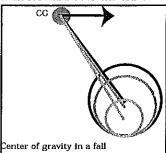


This last statement depends somewhat on the bike design. As an example, the high wheeler had a well-deserved reputation for being easy to pitch forward. The reason for this lies in the location of the rider's center of gravity relative to the pivot point when they pitch forward. Pitching over the bars is not limited to downhills,

but can occur any time the forces holding the rider behind the axle are less than the forces pushing them forward. So a sudden deceleration on the flats can make a rider pitch, much like flipping over the bars on a steep descent. Unless the front brake is locked up, the pivot point for the flip is the front axle.

In the case of the highwheeler, the rider sat well forward and quite high. Their center of mass was only just barely behind the front axle. With this position, it took little force to push them forward over the axle.

However, for this discussion we're talking about two modern mountain bikes that have only a slight change; a different wheel diameter. The bottom bracket is the same height from the ground on a 29er as on a bike with 26" wheels, so the rider's center of mass hasn't changed location.



The only real difference is the larger front wheel has a higher pivot. It takes more force to push the rider forward over this higher pivot. The larger front wheel makes it easier to descend, plus makes the bike more stable as it runs over small obstacles that cause a deceleration of the bike.

On the Fisher 29ers you'll notice this effect mostly on steeper downhills. You won't have to slide back in the saddle as much to feel stable. This also means you can stay in the 'power position' for effective pedaling, so it even helps on the uphilis!

Longer forks (from bigger wheels) make a bike more stable

Trail is the distance from the tire contact patch to the center of the steering axis where it meets the ground. If the head angle and fork offset remain constant, a larger wheel diameter increases trail.

Trail is what allows a bike to run in what we perceive as a 'straight' line. Its actually not straight at all, but instead a constant series of wiggles. These wiggles occur as the bike tries to maintain a state of equilibrium. Here's how it works. As a bike is tipped to the side, the front tire contact is moved to the side. You can try this; simply lean your bike to the side and watch what happens. The front wheel turns in the direction of the lean. With forward propulsion, the bike turns toward the lean and lifts the bike back into an upright state of equilibrium (not really balanced, but trying to balance).

The reason the bike steers into a lean is trail. As a bike is leaned, the contact patch is no longer in line with the steering axis, but to the side. This puts a torque about the steering axis, which turns the handlebars. The more trail there is, the further the contact patch is from the steering axis, and the stronger the steering effect as the bike is leaned. Consequently, the more trail there is, the more forceful the centering of the bike when its leaned, so the more stable it is.

On the Fisher 29ers you'll notice this effect mostly as a 'steady' feel as you head down the trail. The handlebars seem quiet, and as a result your hands and forearms can relax. Want to make the bike turn quickly? Just lean it over, engage some of the front tire's massive side knobs, and rail it through the turn!

Larger diameter means lower rolling resistance

Studies quoted in <u>Bicycling Science</u> state that for every 35% increase in wheel diameter, there is a 20% decrease in rolling resistance on a soft surface. A similar increase in tire width only decreases rolling resistance by 10%.

What's the final on this?

Like with any bicycle design, there are compromises. Larger wheels are not as stiff as smaller wheels. To maintain similar strength to their smaller counterparts, they are also somewhat heavier. Weight and rigidity are two ways to effect the overall efficiency of a bicycle. But they aren't the only two ways. Suspension, in the form of heavy, flexible suspension forks, has proven itself to be a compromise worth making. For many bigger riders, the smoother ride and increased stability of 29ers will also enhance their riding.

Throughout our development of this new wheel standard, we have made every effort to base our decisions on the best science. Gary himself did a long-running test where he compared his heart rate and times over the same course riding a 29er and his favorite 26" wheeled bike. He did this repeatedly, in a variety of conditions. Gary's best estimate is that the 29er was 3% faster for him. Whether you're comparing finish times, or you ride a little further on your Saturday ride, or you're less whipped after your next back country epic, we think 3% is a substantial difference

Creating an identical fit between a 29er and a stock 2002 $26^{\rm h}$ Fisher Genesis bike

Although there are some differences between the fit between a stock 29er and a 2002 Paragon, they are mostly due to our desire to provide the most possible adjustment. In other words, we use the same number of stem spacers on all these bikes.

The following chart shows how to match the sizes. It shows the frame model and size, the stem and spacer configuration (stock on the 26", modified for the 29er) and the exact relationship to the bottom bracket in millimeters in both vertical and horizontal measurements.

Your results may vary, especially since suspension fork adjustment effects bike fit. These are calculated using 80mm travel forks with 10mm sag. Also note that the stems used on these two models do not match in rise, which effects the final fit.

The three asterisks (*) denote the non-specified adjustments.

| Model | Size | Stem S | pacers | Vertical | Horizontal |
|--------------|------|--------|--------|----------|------------|
| Paragon | S | 75/5 | 25 | 653 | 522 |
| Supercaliber | ·S | 60/7* | 0* | 650 | 524 |
| | | | | | |
| Paragon | M | 90/5 | 25 | 674 | 549 |
| Supercaliber | · M | 90/7 | 10* | 674 | 553 |
| | | | | | |
| Paragon | L | 105/10 | 25 | 708 | 564 |
| Supercaliber | ·L | 105/7 | 25 | 706 | 568 |
| | | | | | |
| Paragon | XL | 105/10 | 25 | 722 | 564 |
| Supercaliber | · XL | 105/7 | 25 | 715 | 569 |

Note: 5mm is about 1/8°, and is not likely to be felt by even the most sensitive rider.

Gary Fisher: A History

A BRIEF HISTORY OF OFF-ROAD RID-ING (IN THE MODERN ERA)

1963

Gary Fisher was an active cyclist at a youthful age. At age 12, Gary started competing on both the road and track. The following year, he discovered cyclocross racing. He also finished 2nd in the Intermediate age group at the Northern California Road Championships.

1968

Several years later Gary was suspended from bike racing because his hair was too long. As an alternate outlet for his energy, he built a light show, and played major rock venues around San Francisco.

1972

The "long hair" rule was overturned, and Gary commenced road racing.

1973

Gary's finishes were good enough for him to become a Category 1 USCF road racer.

1974

It was for this busy time that Gary Fisher would become known as "The Father of Mountain Biking". He earned the title through a series of events.

Gary, his friends and their fat-tired bikes were attempting to ride in the hills near his house in Marin County, California. Due to the heavy-duty nature of their bikes (about 42 pounds of duty), they spent 20% of their time in the hills riding, and 80% pushing. Gary wanted to reverse the ratio. He put some wide range gearing and Tandem drum brakes, along with motorcycle levers, longer cranks, and a seatpost quick release, on an old 1930's newsboy bike fondly known as "The Clunker". Its wide gear range and heavy duty braking make it the first true off-road bike; ridable up mountains as well as down. A new sport was born.

1975

Gary was busy helping his roommate, Charlie Kelly, stage the Repack off-road downhill race series. To get even more involved in cycling, Gary began writing a monthly road test article for Bicycling Magazine.

1976

Gary's early road racing results were followed by bigger successes. Gary won the Tour of Klamath Lake, a 125 mile Olympic development race. He also placed 12th in the national road championships.

1977

Gary kept road racing. Gary finished fifth in the National Cyclocross championships and finished the Red Zinger stage race in Colorado.

Offroad, Gary set the Repack record of 4:22:14, a record that still stands.

1979

Gary started his own bike business. He did a "bad job" at trademarking the name "MountainBikes". His brand name rapidly became the generic term for the sport. That first year he made just 165 bikes, but at the time those few bikes comprised 85% of the market

share.

1980

Gary's business pushed out 1000 bikes. That's a pretty steep growth curve,

Gary coins the term "Bullmoose handlebar" which he did trademark. Gary is the first to use a Shimano freehub and "Bear Trap" pedals on a mountain bike.

Also in 1980 he won every cross-country mountain bike race held in California, including the Reseda to the Sea off-road race.

Gary and Charlie Kelly edit the bicycle section of the "Last Whole Earth Catalog".

1981

Gary wins the second Reseda to the Sea off-road race. Gary wins the first Rockhopper Off-Road Race and sets the stage for Fisher riders to claim the next six. Gary wins the Paradise Divide Criterium in Crested Butte, Colorado.

Fisher sponsors a women's team in the Coors Classic stage race.

1983

The National Off Road Biking Association better known as NORBA was born in the living room of Charlie Kelly at Jack Ingram's insistence. Gary was one of the founding members.

1984

Gary develops and names the Unicrown fork. Fisher has the first production bike with a brake under the chainstay. Gary introduces short chainstays and steeper seat angles to mountain bikes. Gary designs and builds the first mountain bike using Tange Prestige tubing. The Fisher Excalibur is the first production mountain bike with a Dura Ace freehub, toe clips and straps.

The first US National Championship for mountain bikes was held. Fisher fields a team for the Nationals, including Dale Stetina, Eric Heiden, Joe Murray, Tom Ritchey and John Loomis. Loomis is the top Fisher finisher in third place.

Fisher racer Dale Stetina wins the Paradise Divide Stage Race. Team Fisher riders win 70% of all off-road races held.

Gary goes to France to introduce the mountain bike, racing downhill in the La Plagne Alps.

1985

Fisher Team riders work with Shimano to develop indexed shifting. Gary develops "Standover height" and "Effective top tube length" measurements to better describe off-road frame fit.

1986

Fisher starts a grass roots racing team - the largest off-road racing team in the world. Gary sells the name "Marin Mountain Bikes" to Bob Buckley.

1987

Fisher bikes win a World Championship under team member Sara Ballantyne. The Fisher Procaliber is voted one of the "Top Ten All-Time Best Mountain Bikes" by Mountain Bike Action Magazine. Gary is named by Outside Magazine as one of "50 Who Left Their Mark" in the last ten years.

1988

The innovative Fisher CR-7 is introduced combining Gary's renowned frame design and Richard Cunningham's expertise at joining aluminum and chrome-moly. Bicycle Guide Magazine names the titanium Fisher Prometheus the "Best of 88". Gary is inducted at the inaugural Mountain Bike Hall of Fame in Crested Butte.

1989

Gary introduces the Evolution headset, tubing and seatpost, the first oversize component system for off-road bikes. Bicycle Guide magazine names the Fisher Gemini Tandem "Best of 89". Fisher produces its first hybrid bicycle.

Fisher rider Sara Ballantyne wins her third world championship.

1990

Gary's collaboration with Mert Lawwill on the RS-1 full suspension bike wins Bicycling Magazine's "Hot Bike" award. The Fisher Mt. Tam is the first production mountain bike with a front suspension fork (RockShox) and suspension ready geometry.

1991

Gary introduces 15.5" chainstays on the Montare.

Fisher starts it's international mountain bike team, including world champions Albert Iten and Walter Braendli of Switzerland and Paola Pezzo and Paolo Rusola of Italy.

1992

Gary develops the Alembic carbon fiber suspension bike with Toray of Japan.

1993

Trek Bicycle Corporation acquires the Gary Fisher Bicycle Company. The new Gary Fisher brand is launched in September with its most competitive range ever, including 10 models manufactured in the United States. Fisher rider Paola Pezzo of Italy wins the UCI World Mountain Bike Championship in France.

1994

Gary is named the "Founding Father of Mountain Bikes" by Smithsonian magazine. Gary receives a lifetime achievement award at the Korbel Night of Champions, cycling's Academy Awards.

1996

Fisher rider Paola Pezzo wins the gold medal for mountain bikes at the Atlanta Olympic Games. Gary designs the Joshua dual suspension bike, the Joshua later becomes the most copied design of the 90's, Gary develops "Genesis Geometry" the first significant geometry change in mountain biking since 1987. The Fisher brand is the fastest growing bicycle brand in the U.S.A.

1997

Fisher starts a BMX team and introduces 10 BMX models including a Joshua-inspired aluminum Pro Issue team frame. Paola Pezzo dominates the Women's XC field on her Genesis geometry bicycle by winning seven of nine Grundig World Cup races, including the overall championship and the World Championship

title. Gary himself has an incredible year in the racing scene, winning the Masters Cross Country category at the U.S. National Championships and earning a spot on the U.S. Masters team.

1998

Fisher shows the bike world that dramatic improvements to mountain bike frames are still possible by unveiling Genesis geometry and makes it available to consumers around the globe. Gary wins the Trans Alp 8 day off road stage race in Europe.

1999

Fisher rider Michael Rasmussen wins the men's Cross Country event at the World Championships.

2000

Fisher introduces the Sugar, the full-suspension platform that's light enough to be raced professionally. "Popular Mechanics" names Gary one of the century's top sports innovators. American rider Walker Fergerson, riding a Fisher, wins the Junior world championships. Fisher has the worlds top women's mountain bike team on the cross country circuit, crowned by Paola Pezzo's second Olympic gold win at the Sydney games.

2001

Fisher introduces Genesisters geometry on both hardtails and full suspension bikes to the applause of performance-oriented female mountain bikers worldwide.

Fisher riders have another excellent year on the mountain bike circuit with both female and male podium visits.

2002

Who knows what Gary will come up with next? As usual, he's spending a lot of time riding, racing, and just hanging out with riders around the world. Chances are, whatever it is, it will be very, very cool.

Gary met his wife Belle over 20 years ago, when she came to his house with her boyfriend to buy a part for a bike. They have two kids, Rachel (17) and Nick (15). When he's not on his bike or traveling the world to promote the sport, Gary's into collecting art; paintings, sculpture, modern and folk art.

The Greg LeMond Story

Greg LeMond is a visionary. In 1978 as a young high school student, Greg listed on a piece of paper his 4 goals in cycling, with dates:

Greg's List

- 1. 1979- Win Junior World Championship Road Race
 - 2. 1980- Win Olympic Road Race
- 3. By age 22- Win Professional World Championship Road Race
 - 4. By age 25- Win Tour de France

Greg changes American cycling

At the time, a prediction like this seemed brash. In 1978, the idea that an American could win an international race was almost laughable.

Today, an exceptional set of goals like Greg's has become completely believable. This complete change in our perception illustrates just how much Greg changed cycling in the U.S., if not the world.

As a high school student, a kid really, Greg could already see what it would take to reach his goals. He envisioned the experience that would teach him the moves and he could see the training which would give him the strength.

As a developing athlete, Greg identified the equipment which would give him an edge. He had an uncanny knack for equipment selection, always the first to spot a particular item which might give him an advantage. Some advantages were big, some were small. But in any race, seconds count. Consider that in 1989, Greg won the Tour de France by the closest margin in Tour history , just 9 seconds. Over the approximately 2000 miles of the Tour, how many small advantages does it take to make up 9 seconds?

Most of the items that Greg pioneered are considered standard equipment these days. Almost every bike racer depends on them to be competitive, without second thought to following Greg's lead. To name but a few, Greg was among the first to use clipless pedals, a heart monitor, special cycling eye wear, a cycle computer, thin-shell helmet, or race a titanium frame in the European peloton. Of course, our favorite competitive edge is a bike built with LeMond geometry, which we detail later. For now, back to Greg's career.

Checking off the list

Greg began checking off his goals in 1979 by winning the Junior World Championship Road Race in Buenos Aires, Argentina. For extra measure, he also won a silver in the Pursuit and a bronze in the Team Time Trial.

Winning three World Championship medals is a story in itself, but the road race stands out. As the finish neared, the pack was together. It looked like a big field sprint. With 10km to go, Greg attacked. Only one rider went with him, but this young Belgian opportunist refused to work. Greg put his head down and gave it his all. 4 Russians went to the chase, riding in TTT formation. With 2km to go these four riders had completely strung out the field, yet Greg was single-handedly holding them off. Surely the Belgian, fresh from sitting on Greg's wheel, had the Gold already?

As the finish neared, the Belgian Jumped off Greg's

wheel. Somehow, even after pulling the Belgian for almost 10km, Greg found the power to sprint. Greg was starting to come back around the Belgian! In a panic, the Belgian threw a vicious hook. Although he was forced into a pile of old tires used as a race barricade, Greg still stayed up. The hook was so obvious that the Belgian was relegated. LeMond had wonl

Greg's first year as a Senior

The next year, 1980, was Greg's first as a senior competitor. He had a phenomenal spring season competing in Europe, including winning the Circuit de la Sarthe. The French press was in an uproar. It was the first time an American had won a major French stage race. With almost no team support, Greg had managed a significant win against the major European national teams, and even some Pros. Everything pointed to achieving goal #2, a Gold in the 1980 Olympic Road Race.

Unfortunately, the U.S. chose to boycott the Moscow Olympics. Missing the Olympics was a let down for Greg. Although Greg had dreamed of Olympic glory, he had not been able to envision politics entering the sporting arena.

Greg was at a cross roads; wait four years for another Olympics, or turn Pro? Unlike today, Professional racers in 1980 were not allowed to compete in the Olympics. Greg's spring season had attracted an offer from Cyril Guimard, the Directeur Sportif of the Renault professional squad. An eager and determined Greg LeMond accepted.

Greg gave up his amateur status and quickly learned Pro racing under the tutelage of his new team mate, Bernard Hinault. Just three short years later, Greg won the 1983 World Championship Road Race in Zurich, Switzerland. On a tough, rainy circuit LeMond broke away with 20km to go. Again, only one rider went with him. However, this time Greg was able to get his breakaway companion to do some work. Greg used tactics in perfect fashion, using the rider to maintain his lead. Then when the time came Greg dropped him like a stone, riding in alone to beat the best road racers in the world. Goal #3 had been met, and Greg was just 22.

The Tour de France

The final goal, the Tour de France, was within his reach at just 24 years of age. But it was not to be. Here's the story. Greg was supporting Hinault as the team leader. Even working as a 'domestique', Greg had managed to place himself second in G.C. (General Classification). During the finish of one stage late in the race, Hinault had suffered a horrible crash. Suffering badly with a swollen face on the next day, in the mountains Hinault was dropped in an attack that Greg covered defensively. Sitting on the wheel of the attacker, Greg had opened a gap over Hinault sufficient to make Greg 'leader on the road'. Greg was feeling great and wanted to attack. He had the yellow jersey in his grasp. But the team's manager would not let Greg attack.

The next year Greg won the '85 Tour, meeting the goal set back in high school. This victory was an emotional event, with more trouble from Hinault, his own team mate, than the rest of the field.

A small setback for Greg

During the winter of 1986, Greg was shot in a hunting accident that nearly took his young life. Despite carrying 40 shotgun pellets in his chest, after a lengthy recovery he went on to race again.

The comeback

Surely one of the greatest moments in the sport was the final time trial of the 1989 Tour de France. Facing what was considered an insurmountable lead by French racer Fignon, Greg rode the fastest time trial in Tour history. In doing so, he beat Fignon and won the Tour by just 8 seconds. His victory was the closest time margin of any Tour on record.

In following seasons, Greg's performance eroded. Later it was determined that Greg had a rare cell disorder that could possibly be attributed to the lead in his body. If Greg hadn't had the hunting accident, who knows how many Tours he could have won?

Greg LeMond bicycles- The next page in Greg's history

Obviously, Greg was quite a bike racer. He had incredible talent, and an even more tremendous will to win. He also had a third advantage over his competitors. Greg knew how to use technology to his advantage.

As an example, when Greg beat Fignon in the final time trial of the '89 tour, Greg used his knowledge of equipment to his full advantage. While Fignon flew his ponytall in a show of French style, Greg strapped on a funny looking aero helmet and bolted on an odd-shaped aero handlebar. Most of the sport laughed at these so-called 'gimmicks'. Their laughter turned to awe as LeMond did the impossible, removing Fignon's 'insurmountable' 40 second lead.

Greg's Position

Along with learning about training from the best coaches and sports doctors in the world, Greg also studied the relationships of a rider's bicycle position. It should be obvious from his results that something was working for him.

To compliment what he learned about maximizing a cyclist's potential, he designed his own LeMond frame geometries (see page 11). At that time in the U.S., racing bicycle design focused on stiff, short wheel base models with ultra-quick steering.

Greg learned a lot about bikes when he was racing in Europe. He found that comfort and stability allow a bike rider to be fast. To execute a high speed turn in the Alps, a bike needs to have solid and predictable steering. Its not how quick a bike turns, but the rider's ability to control a line at speed. To provide the rider with leverage to powerfully push a big gear in the Alps, the seat must be rearward, requiring the seat tube to be laid back. Its not how stiff the bike is that gets a rider up a hill efficiently, but placing the rider so that they can economically exert the most pedaling force. And finally, to prevent fatigue on long stages a bike must be comfortable. Its not how soft the saddle is, but allowing the bike to absorb road shock while distributing the rider's weight correctly.

LeMond's experience helps every cyclist

You may be a recreational rider, or a national caliber competitor on the Saturn race team. You may race for a living, or ride for simple pleasure. Either way, your riding success has Greg's inspiration behind it.

Sugar

New for 2002

The Sugar frame gets a sharper, race-oriented focus and resulting major revamp. The elements of this change are a stiffer, more responsive frame and lower weight.

Now incorporating ZR9000 aluminum with carbon fiber stays, the frame lost another 1/2 pound (~220 grams)! Considering that last year's Sugar was arguably the lightest full suspension frame on the market, that's quite an accomplishment (although we've had challengers to the previous claim, none of those have passed our baseline testing).

Three things allowed the Sugar's weight-loss accomplishment. First, ZR9000 is stronger, so we need less of it to result in the same frame strength. Second, we redesigned the swingarm. Third, we use more carbon fiber, and its lighter than aluminum.

At the same time we were reducing the weight, we managed to increase the frame stiffness. This has three sources (this three reason thing is sort of a theme, eh?). We increased the diameter of the downtube to 2 inches (54mm). We greatly beefed up the 'seatstays'. And the new B*Link is also torsionally much more rigid.

While there are other, more subtle details we could discuss, we'll just point out that we added rear tire clearance. The new 2002 Sugar will even accept some 2.35" tires.

Geometry

The Sugar uses Fisher's race-proven Genesis Geometry. This design provides nimble handling, high speed stability, and allows you to stay centered over the bike so in rough terrain instead of sliding off the back of the saddle, you can apply pedal power.

Ride

The Sugar's frame offers outstanding pedaling efficiency. This exceptional frame rigidity also gives the Sugar its 'riding on rails' cornering ability.

The Sugar design feels like a hardtail much of the time, but without the jarring of rigid stays. It climbs well out of the saddle, it smoothens small bumps for comfort, and has incredible traction. The traction advantages are full-time, both climbing and braking hard. The combination of great feel and low weight makes the Sugar ideal for racing in technical terrain, or just having fun on a short ride after work. Its a great all-round riding bike. And since the weight penalty is less than a full water bottle, it makes riding a hard tail seem almost pointless for a lot of people.

Frame details

The Sugar uses Platinum series ZR9000 aluminum frame technology. A very oversize, butted and shaped down tube creates a rigid structure between the bottom bracket and head tube, for frame stiffness and strength. Speaking of frame strength, we even added a big butterfly gusset under the head tube.

The head tube is butted, with a thin mid-section for low weight, but heavy duty walls to support the headset cups.

Full top tube cable routing keeps the cables out of the muck for friction free shifting and braking.

The B*Link design of the Sugar adds rear end tor-

| Transaction in the second | | 1.7 | Y | 321 |
|--|------|------|------|------|
| , Frame sizes | S | M | L | XL |
| Head angle | 71.0 | 71.5 | 71.5 | 71.5 |
| Seat angle | 73.5 | 73.5 | 73.5 | 73.5 |
| S | | | | |
| Standover Seat tube Head tube Eff top tube Chainstays BR balkh | 691 | 703 | 714 | 724 |
| Seat tube | 396 | 446 | 484 | 535 |
| Head tube | 90 | 105 | 125 | 145 |
| Eff top tube | 582 | 608 | 628 | 647 |
| | 415 | 415 | 415 | 415 |
| ≥ BB height | 303 | 303 | 303 | 303 |
| Offset | 41.9 | 41.9 | 41.9 | 41.9 |
| Trail | 71 | 68 | 68 | 68 |
| Wheelbase | 1055 | 1077 | 1098 | 1117 |
| | | | | |
| Standover | 27.2 | 27.7 | 28.1 | 28.5 |
| អ្នៈ Seat tube | 15.6 | 17.6 | 19.1 | 21.1 |
| 日 Head tube | 3.5 | 4.1 | 4.9 | 5.7 |
| Seat tube Head tube Eff top tube | 22.9 | 23.9 | 24.7 | 25.5 |
| Chainstays | 16.3 | 16.3 | 16.3 | 16.3 |
| BB height | 11.9 | 11.9 | 11.9 | 11.9 |
| Offset | 1.6 | 1.6 | 1.6 | 1.6 |
| Trail | 2.8 | 2.7 | 2.7 | 2.7 |
| Wheelbase | 41.5 | 42.4 | 43.2 | 44.0 |
| | | | | |

sional and lateral rigidity. By keeping the connection between the frame and swingarm stiff, handling is better. So is pivot durability. Loose pivots allow a frame to flex, as well as squeak and wear.

The fittings, like dropouts and shock mounts, on the Sugar are almost all forged aluminum. Forging provides the highest structural integrity, while the low density of the aluminum keeps the bike light.

The Sugar uses a special dropout to accommodate a disc brake adapter. This adapter provides mounting for an International style rear disc brake.

All Sugar bikes have 2 water bottle mounts.

Special parts

| Disc brake adapter | 210648 |
|--------------------------------|--------|
| B*Link | |
| Pivot axle, link top or bottom | 200109 |
| Pivot axie, main | 200110 |
| Link bushing | 200092 |
| Main bushing "top hat" | 200093 |
| Main bushing "cylinder" | 200091 |
| Axle bolts | 990943 |
| Derailleur hanger | 980116 |
| | |

| | , Platinum series butted ZR906 | 00 | | | |
|---|--|--|--|---|-------------|
| STAYS | , Carbon composite | 1 | | | |
| | Frame weight | 4.1 lb (1.86 kg) | | | |
| FORK | , Manitou Mars Super | 80 | | | |
| | Travel, mm Axle-crown length, mm | 450.5 | | | |
| DE VD SHUCK | . Cane Creek Cloud Nine | 150.5 | | | |
| REAR SHOCK IIII | Stroke | 2 | | | |
| | Length | 7.875 | | | |
| | Width | 22.2mm | | | |
| | Eyes | 6mm | | | sone stemat |
| HEADSET | . Cane Creek S-6 Aheadset | 25 412 6 0/20 0 | j | The reason | is th |
| | Size Stack height, mm | 25.4/34.0/30.0 27.1 | | Rider: Rac | er |
| | Sale vega, ma See a max a com a la describir de la com- | Menselenias | 1 | Frameset | |
| ONTROLS | | SHERMAN TANKS | | B*Link | 9119 |
| HANDLEBAR | . Bontrager Race Lite | 25.4 | | _ | |
| CTEM | Clamp diameter, mm . Bontrager Race Lite | 2,17 | | Genesi | s ge |
| 3 LIVI | Steerer clamp height, mm | 39.5 | | Platinu | ım se |
| SHIFT LEVERS | . Shimano XTR RapidFire SL | 5.3 | | strong | |
| | . Integrated brake/shift | | | Wheelset | |
| GRIPS | . Serfas dual density | | | | |
| RIVETRAIN | | | | Race L | ite v |
| FT DERAILLEUR | | RAMAS IS GEORGIA POR CONSTRUM | | Tubele | ss co |
| FI DERMILLEON | Cable routing | Top pull | | lar tires | |
| | | 3/8", high clamp only | | Componen | += |
| RR DERAILLEUR | . Shimano XTR SGS | | | - | |
| CRANKSET | . Shimano XTR 46/34/24 | | | Profess | |
| | Bolt hole circle, mm | Splined/112/68 | | Manito | |
| BB | . Shimano XTR, cartridge | | | air fork v | with |
| | | 2.5, Splined, Shimano | | Cane | Cree |
| CHAIN | | 01 | | and with | a bu |
| | Chain type | 9 speed 108 | | Pontro | con ' |
| CASSETTE | Chain length (links) . Shimano Deore XT 11-34, 9sp | | | Bontra | iRei. |
| CHOOLITE | LEADER CARREST AND COLORS OF THE CARROLL COL | PARASERIA PER CENTRA | | | |
| VHEELSEL | | fight broken comment | | | |
| FRONT WHEEL | . Btrg Race Lite ATB, tubeless | compatible, 24° l | | | |
| FRONT WHEEL | . Btrg Race Lite ATB, tubeless E.R.D., mm | compatible, 24° | | | |
| FRONT WHEEL | . Btrg Race Lite AIB, tubeless | compatible, 24° 539 Tubeleu | | | |
| FRONT WHEEL | E.R.D., mm Rim strip . IRC Serac XC, tubeless | 539 Tubeless | | | |
| FRONT TIRE | E.R.D., mm Rim strip . IRC Serac XC, tubeless The size | 539 Tubeleu 26 x 2.1 | | | |
| FRONT TIRE | E.R.D., mm Rim strip . IRC Serac XC, tubeless The size . Btrg Race Lite ATB, tubeless | 539 Tubeleu 26 x 2.1 compatible, 28° | | | |
| FRONT TIRE | . Btrg Race Lite A1B, tubeless E.R.D., mm Rim strip . IRC Serac XC, tubeless The size . Btrg Race Lite ATB, tubeless E.R.D., mm | 539 Tubeles 26 x 2.1 compatible, 28° 542 | | | |
| FRONT TIRE REAR WHEEL | . Btrg Race Lite A1B, tubeless E.R.D., mm Rim strip . IRC Serac XC, tubeless The size . Btrg Race Lite ATB, tubeless E.R.D., mm Rim strip | 539 Tubeles 26 x 2.1 compatible, 28° 542 Tubeles | (APA)L | INC. | |
| FRONT TIRE REAR WHEEL | . Btrg Race Lite A1B, tubeless E.R.D., mm Rim strip . IRC Serac XC, tubeless The size . Btrg Race Lite ATB, tubeless E.R.D., mm Rim strip . IRC Serac XC, tubeless | 539 Tubeleu 26 x 2.1 compatible, 28° 542 Tubeleu | | ING | |
| FRONT TIRE REAR WHEEL REAR TIRE | . Btrg Race Lite ATB, tubeless E.R.D., mm Rim strip . IRC Serac XC, tubeless Tire size . Btrg Race Lite ATB, tubeless E.R.D., mm Rim strip . IRC Serac XC, tubeless Tire size | 539 Tubeles 26 x 2.1 compatible, 28° 542 Tubeles 26 x 2.1 | | 24 36 46 | |
| FRONT TIRE REAR WHEEL REAR TIRE | . Btrg Race Lite A1B, tubeless E.R.D., mm Rim strip . IRC Serac XC, tubeless The size . Btrg Race Lite ATB, tubeless E.R.D., mm Rim strip . IRC Serac XC, tubeless | 539 Tubeless 26 x 2.1 compatible, 28° 542 Tubeless 26 x 2.1 ipples | 11 | 24 36 46 57 86 110 | |
| FRONT TIRE REAR WHEEL REAR TIRE SPOKES | Btrg Race Lite A1B, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size Btrg Race Lite ATB, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size DT Revolution 14/17G, alloy n Front, mm Rear, mm | 539 Tubeless 26 x 2.1 compatible, 28° 542 Tubeless 26 x 2.1 lipples 250, Radial 2671263, 3x | 11 13 | 24 36 46 | |
| FRONT TIRE REAR WHEEL REAR TIRE SPOKES INNER TUBES | Btrg Race Lite A1B, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size Btrg Race Lite ATB, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size DT Revolution 14/17G, alloy n Front, mm Reat, mm Presta valve (for display) | 539 Tubeless 26 x 2.1 compatible, 28° 542 Tubeless 26 x 2.1 lipples 250, Radial 2671263, 3x | 11 13 | 24 36 46 57 86 110 | |
| FRONT TIRE REAR WHEEL REAR TIRE SPOKES INNER TUBES | Btrg Race Lite A1B, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size Btrg Race Lite ATB, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size DT Revolution 14/17G, alloy n Front, mm Rear, mm Presta valve (for display) | 539 Tubeles 26 × 2.1 compatible, 28° 542 Tubeles 26 × 2.1 ipples 250, Radial 267/263, 3× | 11 13 15 | 24 36 46 57 86 110 48 73 93 | |
| FRONT TIRE REAR WHEEL REAR TIRE SPOKES INNER TUBES OTHER | Btrg Race Lite A1B, tubeless ERD., mm Rim strip IRC Serac XC, tubeless Tire size Btrg Race Lite ATB, tubeless ERD., mm Rim strip IRC Serac XC, tubeless Tire size DT Revolution 14/17G, alloy n Front, mm Rear, mm Presta valve (for display) | 539 Tubeles 26 × 2.1 compatible, 28° 542 Tubeles 26 × 2.1 ipples 250, Radial 267/263, 3× | 11 13 15 17 | 24 36 46 57 86 110 48 73 93 42 63 80 37 56 71 | |
| FRONT TIRE REAR WHEEL REAR TIRE SPOKES INNER TUBES | Btrg Race Lite A1B, tubeless ERD., mm Rim strip IRC Serac XC, tubeless Tire size Btrg Race Lite ATB, tubeless ERD., mm Rim strip IRC Serac XC, tubeless Tire size DT Revolution 14/17G, alloy n Front, mm Rear, mm Presta valve (for display) | 539 Tubeles 26 × 2.1 compatible, 28° 542 Tubeles 26 × 2.1 ipples 250, Radial 267/263, 3× | 11 13 15 17 20 | 24 36 46 57 86 110 48 73 93 42 63 80 37 56 71 31 47 60 | |
| FRONT TIRE REAR WHEEL REAR TIRE SPOKES INNER TUBES OTHER SEATPOST | Btrg Race Lite A1B, tubeless ERD, mm Rim strip IRC Serac XC, tubeless Tire size Btrg Race Lite ATB, tubeless ERD, mm Rim strip IRC Serac XC, tubeless Tire size DT Revolution 14/17G, alloy n Front, mm Rear, mm Presta valve (for display) | 539 Tubeless 26 x 2.1 compatible, 28° 542 Tubeless 26 x 2.1 ipples 250, Radial 267/263, 3x | 11 13 15 17 20 23 | 24 36 46 57 86 110 48 73 93 42 63 80 37 56 71 31 47 60 27 41 52 | |
| FRONT TIRE REAR WHEEL REAR TIRE SPOKES INNER TUBES OTHER SEATPOST SADDLE | Btrg Race Lite A1B, tubeless ERD, mm Rim strip IRC Serac XC, tubeless Tire size Btrg Race Lite ATB, tubeless ERD, mm Rim strip IRC Serac XC, tubeless Tire size DT Revolution 14/17G, alloy n Front, mm Rear, mm Presta valve (for display) Bontrager Race Outer diameter, mm | 539 Tubeles 26 x 2.1 compatible, 28° 542 Tubeles 26 x 2.1 ipples 250, Radial 267/263, 3x | 11 13 15 17 20 23 | 24 36 46 57 86 110 48 73 93 42 63 80 37 56 71 31 47 60 27 41 52 24 36 46 | |
| FRONT TIRE REAR WHEEL REAR TIRE SPOKES INNER TUBES OTHER SEATPOST SADDLE | Btrg Race Lite A1B, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size Btrg Race Lite ATB, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size DT Revolution 14/17G, alloy n Front, mm Rear, mm Presta valve (for display) Bontrager Race Outer diameter, mm SSM Era, Ti/leather Avid Single Digit Ti, linear pu -not supplied- | 539 Tubeles 26 x 2.1 compatible, 28° 542 Tubeles 26 x 2.1 ipples 250, Radial 267/263, 3x 31.6 | 11 13 15 17 20 23 26 30 | 24 36 46 57 86 110 48 73 93 42 63 80 37 56 71 31 47 60 27 41 52 24 36 46 21 31 40 | |
| FRONT TIRE REAR WHEEL REAR TIRE SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS | Btrg Race Lite ATB, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size Btrg Race Lite ATB, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size DT Revolution 14/17G, alloy n Front, mm Rear, mm Presta valve (for display) Bontrager Race Outer diameter, mm SSM Era, Ti/leather Avid Single Digit Ti, linear punot supplied- Axie diameter | 539 Tubeles 26 x 2.1 compatible, 28° 542 Tubeles 26 x 2.1 ipples 250, Radial 267/263, 3x | 11 13 15 17 20 23 26 30 | 24 36 46 57 86 110 48 73 93 42 63 80 37 56 71 31 47 60 27 41 52 24 36 46 | |
| FRONT TIRE REAR WHEEL REAR TIRE SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS | Btrg Race Lite A1B, tubeless ERD, mm Rim strip IRC Serac XC, tubeless Tire size Btrg Race Lite ATB, tubeless ERD, mm Rim strip IRC Serac XC, tubeless Tire size DT Revolution 14/17G, alloy n Front, mm Rear, mm Presta valve (for display) Bontrager Race Outer diameter, mm SSM Era, Ti/leather Avid Single Digit Ti, linear pu | 539 Tubeless 26 x 2.1 compatible, 28° 542 Tubeless 26 x 2.1 ipples 250, Radial 267/263, 3x 31.6 | 11 13 15 17 20 23 26 30 34 | 24 36 46 57 86 110 48 73 93 42 63 80 37 56 71 31 47 60 27 41 52 24 36 46 21 31 40 19 28 35 | |
| FRONT TIRE REAR WHEEL REAR TIRE SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER | Btrg Race Lite A1B, tubeless ERD, mm Rim strip IRC Serac XC, tubeless Tire size Btrg Race Lite ATB, tubeless ERD, mm Rim strip IRC Serac XC, tubeless Tire size DT Revolution 14/17G, alloy n Front, mm Reat, mm Presta valve (for display) Bontrager Race Outer diameter, mm SSM Era, Ti/leather Avid Single Digit Ti, linear pu -not supplied- Axle diameter Alloy w/integral boit Inner diameter, mm | 539 Tubeles 26 x 2.1 compatible, 28° 542 Tubeles 26 x 2.1 lipples 250, Radial 2671263, 3x 31.6 | 11 13 15 17 20 23 26 30 34 | 24 36 46 57 86 110 48 73 93 42 63 80 37 56 71 31 47 60 27 41 52 24 36 46 21 31 40 19 28 35 | |
| FRONT TIRE FRONT TIRE REAR WHEEL REAR TIRE SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS | Btrg Race Lite A1B, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size Btrg Race Lite ATB, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size DT Revolution 14/17G, alloy n Front, mm Rear, mm Presta valve (for display) Bontrager Race Outer diameter, mm SSM Era, Ti/leather Avid Single Digit Ti, linear punot supplied- Axie diameter Alloy w/integral boit Inner diameter, mm 2 water bottle mounts (1 on s | 539 Tubeles 26 x 2.1 compatible, 28° 542 Tubeles 26 x 2.1 lipples 250, Radial 2671263, 3x 31.6 | 11 13 15 17 20 23 26 30 34 | 24 36 46 57 86 110 48 73 93 42 63 80 37 56 71 31 47 60 27 41 52 24 36 46 21 31 40 19 28 35 | Blue (|
| FRONT TIRE FRONT TIRE REAR WHEEL REAR TIRE SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER | Btrg Race Lite A1B, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size Btrg Race Lite ATB, tubeless E.R.D., mm Rim strip IRC Serac XC, tubeless Tire size DT Revolution 14/17G, alloy n Front, mm Rear, mm Presta valve (for display) Bontrager Race Outer diameter, mm SSM Era, Ti/leather Avid Single Digit Ti, linear punot supplied- Axie diameter Alloy w/integral boit Inner diameter, mm 2 water bottle mounts (1 on s | 539 Tubeles 26 x 2.1 compatible, 28° 542 Tubeles 26 x 2.1 lipples 250, Radial 2671263, 3x 31.6 | 11 13 15 17 20 23 26 30 34 | 24 36 46 57 86 110 48 73 93 42 63 80 37 56 71 31 47 60 27 41 52 24 36 46 21 31 40 19 28 35 | Blue (|

Sugar 1

Sweetness. Nickname for an especially dear friend

The reasons this Fisher rocks:

B*Link suspension- hardtail feel, 2.8" travel Genesis geometry- stable, fast

Platinum series ZR9000 aluminum- light, super strong

Race Lite wheels -super light for acceleration Tubeless compatible- fits both tubeless and regular tires

Professional level- XTR

Manitou Mars Super suspension fork-lightweight air fork with a torsionally rigid design

Cane Creek Cloud 9 rear shock- light, tunable, and with a button for motion control

Bontrager bar/stem, post-super strong

BIKE WEIGHT 23.6 lb. 10.71 kg.

LORS lue Metallic/Tinted Blue Clear • Yellow/Red decal • Deep Candy Red fork

| Frame | Size | S | M | L | XL | |
|--------------|------------|-------|----------------|-------|-------|--|
| Rider height | Inches | 66 | 6 9 | 72 | 74 | |
| • | Cm | 167 | 176 | 184 | 189 | |
| Handlebar | Width, mm | 600 | 600 | 600 | 600 | |
| Stem | Length, mm | 75 | 90 | 105 | 105 | |
| | Angle | 7 | 7 | 7 | 7 | |
| Crank | Length, mm | 170 | 175 | 175 | 175 | |
| Seatpost | Length, mm | 300 | 390 | 390 | 390 | |
| Steerer | Length, mm | 172.6 | 187.6 | 207.6 | 227.6 | |

| | ET . | 1. 功度等级数 | \$50.89B | 沙漠交流 | 1 | | | e |
|--|-------------------------|---|---|--|-------------------|--|--|--|
| MAIN TUBES | S Platir | num series but | ted ZR900 | 0 | | | | Sugar 2 |
| STAYS | Carbo | on composite | | | | | | • |
| i | | Frame weight | | 4.1 lb (1.86 kg |) | | Sweetness. Nickname f | or an especially dear friend |
| FORK | Manit | | | | | | | |
| | | Travel, mm | | 80 | 7 | | | |
| | | Axle-crown length, mi | 71 | 450,5 | 5 | | | |
| REAR SHOC | K Cane | | | | i | | | |
| | | troke | | 2 | | | | |
| | | Length Vidth | | 7.875 | | | | |
| | | eran Gyes | | 22.2mn 6mn | | | | |
| HEADSET | SAS أ | | | Omni | | | | |
| , member , | | iize | | 25.4/34.0/30.0 | ,[| | • | |
| | | itack height, mm | | 27.6 | | | | |
| CONTROLS | g galacida e e e | 语: Partition 144 | than a section | J2003 A 15-15 | | | | |
| | R Bontr | an e e e la | Dage 25mm | | | | | |
| HAMPLEDAN | | lamp diameter, nim | tace, Zonin | 11 115 e <i>25.4</i> | , | RATE TO THE RESIDENCE OF THE PARTY OF THE PA | | |
| STEM | Bontr | | | 23.4 | | The reaso | ns this Fisher rocks: | 10 10 10 10 10 10 10 10 10 10 10 10 10 1 |
| | | teerer clamp height, n | ин | 44.5 | | Rider: Ra | cer | |
| SHIFT LEVER | RS Shima | | | | | Frameset | | |
| BRAKE LEVE | ERS Integr | rated brake/shi | ft | - | | | | F1 0 08 4 |
| | Serfa | | • | | 1 | li i | k suspension- hardtail | |
| | IN S | | 158800000000000000000000000000000000000 | ON MARKS REPORTED | | Genes | sis geometry- stable, fas | st |
| | | | erande eta eta eta eta eta eta eta eta eta et | | | Platin | num series ZR9000 alun | ninum. Haht eunor |
| PIDERAILL | EUR Shima | | | | | strong | idili series zatocco aldi | midii- ngir, supei |
| | | able routing ttachment | 240 | Top pull | | ourong | | |
| RR DERAILL | EUR Shima | | 34.9 mmi 1 314 | 3", high clamp only | | Wheelset | | |
| | Bontr | | 12/22 | | | Race | Lite wheels -super light | t for acceleration |
| 0 | | alt hale circle, mm | J2, 22 | 64/104 | | | ess compatible- fits both | |
| ВВ | Bontr | ager Race, ISIS | solined | 07/107 | | lar tires | | ir tubeiess and regu- |
| | | hell x axle, mm | | 113, Splined, ISIS | | lai tites | • | |
| CHAIN | Shlma | | | 110, 47,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | Componer | nts | |
| | | hain type | | 9 speed | 1 | Race | level- XTR/XT | |
| | | hain length (links) | | 108 | | Monte | ou Mana Cuman ausaran | da 6 1 1 1 1 1 1 1 |
| | Shima | | | | | IVIAIIIC | ou Mars Super suspens | ion iork- lightweight |
| WHEELSET | | STATE OF THE STATE OF | STREET | PEROPER PARTY | | | with a torsionally rigid | • |
| | EL Bontra | | | | | Cane | Creek Cloud 9 rear sho | ock- light, tunable, |
| | | R.D., mm | | 539 | ĺ | and with | h a button for motion c | ontrol |
| | | im strip | | Tubeless | | Bontra | ager bar/stem, post- suj | ner strong |
| FRONT TIRE | IRC Se | erac XC, folding | 1 | | | 20 | ager sametem, post sal | per strong |
| | | ire size | | 26 x 2.1 | | | | |
| REAR WHEEL | L Bontra | iger Race ATB, i | tubeless cor | npatible, 28° | | <u> </u> | | |
| | | R.D., mm | | 539 | | | | |
| DEAD FIDE | | im strip | | Tubeless | 12/02/14/15/14/02 | Company and the second of the | , | |
| REAR TIRE . | IRC Se | | l | | GE/ | ARING | | |
| SDUKES | | ire size [150 buttad ata | Inlace -II | 26 x 2.1 | | 22 32 44 | | |
| 3FUNE3, | DT 14/ | | intess, allo) | | 11 | 52 76 105 | | |
| | _ | ont, mm dr, mm | | 251, Radial 265/267, 3x | 12 | 48 70 96 | | |
| INNER TUBES | S Presta | | | 2031207, 38 | | | | |
| CONTRACTOR OF STATE SERVICE AND THE RESIDENCE OF SERVICE | ********* | · valve Granding of the | 180171188888888 | SOUTH STATE OF THE | 14 | 41 60 82 | | |
| OTHER | | ererendo en en | 经的线路级 | 16%可以连续增 | 16 | 36 52 72 | | |
| SEATPOST . | Bontra | • | | | 18 | 32 47 64 | | |
| SADDLE | Oi Mari | uter diameter, mm | -ht"- | 31.6 | 21 | 27 40 55 | | |
| | WTB L | | | | 24 | 24 35 48 | | |
| | Avid S | | near puit | | | | | BIKE WEIGHT |
| FEDALS | Time A | | | A/1 /11 | 28 | 21 30 41 | | 25.4 lb. |
| SEAT BINDER | مر V Alloy ب Alloy ب | de diameter Wintegral holt | | 9/16" | 32 | 18 26 36 | | 11.53 kg. |
| J DINDLI | | ner diameter, mm | | 36.4 | (A) | ODE | | TO THE STATE OF TH |
| ADDITIONALS | S 2 wate | | s (1 on soal | 20.4 nost). | | ORS | eres studio de la Calle | |
| replaceable d | erailleur hanger | · Source mount | ~ (1 Oil 3@01 | | Go | a/finted Silver Cla | ear • Black/Silver decal • Sil | ver fork |
| | nonger | | | | | | | |
| | | An Managara desiration | Providentalistics | Zilinijaja (yana) indisele | - ARCHARD & STA | | TENYTON PROJECT CONTRACTOR AND | N. H 44-10-10-10-10-10-10-10-10-10-10-10-10-10- |
| | | | | | | | | |
| Frame | Size | S | M | L | Χl | | | |
| Rider height | Inches | 68 | 71 | 74 | 76 | | | 1 |
| 1 | Cm | 172 | 180 | 188 | 193 | | | |
| Handlebar | Width, mm | 630 | 630 | 630 | 63 | 7.3 | | |

Handlebar

Stem

Crank

Seatpost

Steerer

630

105 7 175

390

630

75

7

170

300

182.5

Width, mm Length, mm

Length, mm

Length, mm

Length, mm

Angle

630

90

7

175

390

197.5

630 105 7

175

390

217.5

New for 2002

The Sugar+ frame is an evolution of the 2001 Sugar, with an emphasis on the adventure rider. It also incorporates many of the features of the new 2002 Sugar frame technology.

The Sugar+ incorporates ZR9000 aluminum for reduced weight and increased strength. ZR9000 is stronger, so we need less of it to result in the same frame strength. To make it a great adventure bike, the new 2002 Sugar+ will even accept some 2.35" tires.

At the same time we were reducing the weight, we managed to increase the frame stiffness. We increased the diameter of the downtube to 2 inches (54mm). We greatly beefed up the 'seatstays'. And the new Sybil link is also torsionally much more rigid.

The key to the versatility of the Sugar+ is the Sybil link. This unique design allows you to change the performance of this bike from a tight and taught racing feel to the ground-hugging cush of a long travel adventure bike. By simply moving the bolt on the Sybil link and adjusting the fork travel, you completely change the feel of the bike. And an important note if you're looking at some other brand of adjustable suspension- when you change the Sugar+ there is no need to re-inflate the rear shock. And another point- when you readjust the sugar+, the sweet Genesis steering geometry remains the same (unless you decide to go really long with the fork adjustment- some of the forks we spec'd adjust out to 125mm of travell).

Geometry

The Sugar uses Fisher's race-proven Genesis Geometry. This design provides nimble handling, high speed stability, and allows you to stay centered over the bike so in rough terrain instead of sliding off the back of the saddle, you can apply pedal power.

Ride

The Sugar's frame offers outstanding pedaling efficiency. This exceptional frame rigidity also gives the Sugar its 'riding on rails' cornering ability.

The Sugar+ design, when in its short travel, 80mm mode, feels like a hardtail. It climbs well out of the saddle, it smoothens small bumps for comfort, and has incredible traction. When it its long travel, 4.1" (105mm) mode, the Sugar+ feels cushy and ultrasmooth. However, unlike bouncy bikes of the past the Sugar+ traction advantages are full-time, both climbing and braking hard. The combination of great feel and low weight makes the Sugar+ ideal in technical terrain, or just having fun on a short ride after work. Its our most versatile, all-round riding bike.

Frame details

The Sugar+ uses Platinum series ZR9000 aluminum frame technology. A very oversize, butted and shaped down tube creates a rigid structure between the bottom bracket and head tube, for frame stiffness and strength. Speaking of frame strength, we even added a big butterfly gusset under the head tube. The head tube is butted, with a thin mid-section for low weight, but heavy duty walls to support the headset cups. Full top tube cable routing keeps the cables out of the muck for friction free shifting and braking.

The Sybil link design of the Sugar+ adds rear end torsional and lateral rigidity. By keeping the connection

Sugar+

| Sugar+ | | | | |
|----------------------------------|------|------|------|------|
| Frame sizes | S | M | L | XL |
| Head angle | 71.0 | 71.5 | 71.5 | 71.5 |
| Seat angle | 73.5 | 73.5 | 73.5 | 73.5 |
| on the second second | | | | |
| X Standover Seat tube | 691 | 703 | 714 | 724 |
| ⊟ Seat tube | 396 | 446 | 484 | 535 |
| 号 Head tube | 90 | 105 | 125 | 145 |
| 日:Eff top tube | 582 | 608 | 628 | 647 |
| d Chainstays | 415 | 415 | 415 | 415 |
| ≥ BB height | 303 | 303 | 303 | 303 |
| Offset | 41.9 | 41.9 | 41.9 | 41.9 |
| Trail | 71 | 68 | 68 | 68 |
| Wheelbase | 1055 | 1077 | 1098 | 1117 |
| | | | | |
| Standover | 27.2 | 27.7 | 28.1 | 28.5 |
| Seat tube | 15.6 | 17.6 | 19.1 | 21.1 |
| 日 Head tube | 3.5 | 4.1 | 4.9 | 5.7 |
| Seat tube Head tube Eff top tube | 22.9 | 23.9 | 24.7 | 25.5 |
| □ Chainstays | 16.3 | 16.3 | 16.3 | 16.3 |
| i BB height | 11.9 | 11.9 | 11.9 | 11.9 |
| Offset | 1.6 | 1.6 | 1.6 | 1.6 |
| Trail | 2.8 | 2.7 | 2.7 | 2.7 |
| Wheelbase | 41.5 | 42.4 | 43.2 | 44.0 |
| | | | | |

between the frame and swingarm stiff, handling is better. So is pivot durability. Loose pivots allow a frame to flex, as well as squeak and wear.

The fittings, like dropouts and shock mounts, on the Sugar are almost all forged aluminum. Forging provides the highest structural integrity, while the low density of the aluminum keeps the bike light.

The Sugar uses a special dropout to accommodate a disc brake adapter..

All Sugar bikes have 2 water bottle mounts.

Sugar+ GS

| alian e establishering basia basia alian ba | | |
|---|------|------|
| Frame sizes | S | M |
| Head angle | 71.0 | 71.5 |
| Seat angle | 73.5 | 73.5 |
| o mandalatina | | |
| Standover Seat tube Head tube Fff top tube | 713 | 724 |
| Seat tube | 405 | 432 |
| Head tube | 90 | 105 |
| ☐: Eff top tube | 566 | 594 |
| ⊟ Chainstays | 420 | 420 |
| BB height | 312 | 312 |
| Offset | 38.0 | 38.0 |
| Trail | 74 | 71 |
| Wheelbase | 1045 | 1069 |
| | | |
| Standover | 28.1 | 28.5 |
| Seat tube | 15.9 | 17.0 |
| 田 Head tube | 3.5 | 4.1 |
| Eff top tube | 22.3 | 23.4 |
| Chainstays | 16.5 | 16.5 |
| BB height | 12.3 | 12.3 |
| Offset | 1.5 | 1.5 |
| Company of Trails | 2.9 | 2.8 |
| Wheelbase | 41.2 | 42.1 |
| Photography The Both | | |

Special parts

| opeciai parts | |
|--------------------------------|--------|
| Disc brake adapter | 210648 |
| Sybil | |
| Pivot axle, link top or bottom | 200109 |
| Pivot axle, main | |
| Link bushing | 200092 |
| Main bushing "top hat" | |
| Main bushing "cylinder" | |
| Axle bolts | |
| Derailleur hanger | |

| FRAMESET | the state of the s | | | | | | Sugar 2+ |
|--|--|--|-----------------------|---|---|------------------------|--|
| MAIN TUBES Platinum series butted ZR9000 STAYS Platinum series aluminum | | | | | 1 | | |
| FORK RockShox Psylo SL, U-Turn adjustable travel | | | | | | | Sweetness. Nickname for an especially dear friend |
| DEVE SHOCK | Axl Cane C | t-crown length, mn | : | 451 | | | |
| REAR SHOCK | Stro | | | 2 | | | |
| Í | Leng Wia | | | 7.875 22.2mm | | | |
| | Eyes | ı | | 22.2mm 6mm | | | |
| HEADSET | SAS Ah | | | 25.4/34.0/30.0 | | | · |
| | | k height, mm | | 27.0 | | | |
| | -830 \$25 25 25 50 SE 50 SAA 985 | 50000000000000000000000000000000000000 | 918#85507-070887 | isang methologistikowa | | | |
| HANDLEBAR | Bontrac | ier Crowbar F | lace. 25mr | n rise | | | |
| | Clas | mp diameter, mm | , | 25.4 | | WATER SPORTS | |
| STEM | Bontraç | jer Race rer clamp height, m | 1929 | 44.5 | | | risher rocks: venture rider |
| SHIFT LEVERS | S Shiman | | | | | Frameset | venture riger |
| | RS Integral | | t | | | | link suspension- adjustable rear wheel travel |
| GRIPS Serfas dual density DRIVETRAIN | | | | | | | 3 to 4.1 inches (80 to 105mm). |
| | JR Shiman | | MEGATINE PROPERTY | aredored artiful (1993) | | Genes | is geometry- stable, fast |
| | Cab | le routing | 240112 | Top pull | | | um series ZR9000 aluminum- light, super |
| RR DERAILLE | Ana UR Shiman | | ו אומות ע.בינ mmi 1 3 | 8", high clamp only | | strong | |
| | Bontrag | jer Race 44/3 | 12/22 | A11 1 | | Wheelset | |
| ВВ | Bontrag | <i>hole circle, mm</i> jer Race, ISIS | splined | 64/104 | | | wheels- light and strong |
| | Shel | l x axle, mm | • | 113, Splined, ISIS | | IRC Ba | ackcountry tires- big, 2.25 casing is extra |
| CHAIN | Shiman | n HG-72 in type | | 9 speed | | - ''' | |
| | Cha | in length (links) | 5 1 | 108 | | Componen Durab | le, yet light weight level- XTR, XT |
| CASSETTE Shimano HG70 11-32, 9spd | | | | | RockShox Psylo fork- adjustable U-Turn travel and | | |
| Fig. 6th A September 2000 and the Control of | L Bontrag | er Race ATB. | ubeless co | mpatible, 24° | | | stanchions for excellent steering control |
| | E.R. | D., mm | | 539 | | | Creek AD-12 shock- air/air system is light, |
| FRONT TIRE . | IRC Bac | <i>strip</i> :kcountry | | Tubeless | | easily tu | |
| | Tire | size | | 26 x 2.25 | | Bontra | ager bar/stem, post- super strong |
| REAR WHEEL | Bontrag <i>E.R.</i> | er Race Alb, i D., mm | upeless co | mpatible, 28° 539 | | | |
| DEAD TIDE | | strip | | Tubeless | | | |
| REAR TIRE | IRC Bac | size | | 26 x 2.25 | GEAR | ING | |
| SPOKES | DT 14/19 | | iniess, alio | | | 22 32 44 | |
| | | it, mm ; mm | | 251, Radial 265/267, 3x | 12 | 52 76 105 | |
| İ | Presta v | /alve | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | 48 70 96 41 60 82 | |
| | Size isovenosta) i | | a Grigalia | | | 36 52 72 | |
| | | er diameter, mm | | 31.6 | | 32 47 64 | |
| | WTB La | ser V Race, C | | | | 27 40 55 | |
| | Avid Sin | | near pull | | | 24 35 48 | BIKE WEIGHT |
| | Axle | diameter | | 9/16" | | 21 30 41 18 26 36 | 27.2 lb. 12.35 kg. |
| SEAT BINDER | Alloy w/ | 'integral bolt r diameter, mm | | 36.4 | | | |
| ADDITIONALS 2 water bottle mounts (1 on seatpost), replaceable derailleur hanger | | | | | | | k/White decal • Black fork |
| TM: | 新 考 有 图 第一页 | jiniste Mathale 10 | | a al delte asi | Santa Aria | | |
| Frame | Size | S | М | L | XL | en merkerenter besetzt | ennetweenstelen van Einstel Anton om der Steinstelen en van Hoof Philosophie VIII volk Heine Stein Klieber VII. I |
| | Inches Cm | 66 169 | 70 177 | 73 195 | 75 190 | | |
| E . | Width, mm | 630 | 630 | 185 630 | 630 | | |
| Stem | Length, mm | 75 | 90 | 105 | 105 | | |
| | Angle Length, mm | 7 170 | 7 175 | 7 175 | 7 175 | | Į |
| Seatpost | Length, mm | 300 | 390 | 390 | 390 | | |
| Steerer | Length, mm | 182.5 | 197.5 | 217.5 | 237.5 | | |

| FRAMESET | | | | 5.762 (4.25) | (CARSARV | | | | | Sugar 24 Disc |
|--|---|----------------------|-------------------------------|---------------------------------|---------------------------------------|--|----------|-------------|--------------|---|
| MAIN TUBES | * * * * * * * * * * | Platinum | series but | ted ZR9000 | | | | | | Sugar 2+ Disc |
| STAYS | | | | | | 1 | | | | • |
| FORK | | | | U-Turn adjus | | | | | | Sweetness. Nickname for an especially dear friend |
| | | Travel | - | | 80-125 | 1 | | | | |
| REAR SHOCK | , | | rown length, mi | 77) | 451 | | | | | |
| REAR SHOCK | · · · · · · · | . Cane Cre Stroke | | | 2 | | | | | |
| | | Lengti | | | 7.875 | | | | | |
| | | Widil | | | 22.2mm | 1 | | | | |
| | | Eyes | | | 6mm | 1 | | | | |
| HEADSET ,. | | SAS Áhe | adset, alloy | , | | 1 | | | | |
| | | Size | | | 25.4/34.0/30.0 | | | | | |
| | | Stack | height, mm | | 27.0 | ' | 777 | a despoyate | WALLE DO NOT | |
| to contact the pale to the conduction | Sween, Carridwas us | - ow too repain to | modernasio esti missistis | The second of the second of the | THE SERVE LIBERT BROWNINGS WE | | Satter. | lhy | this I | isher rocks: |
| CONTROLS | 的場所 | Editoria | 想情 認禁 | A SHARE | | | R | lde | r: Adv | enture rider |
| HANDLEBAR | | | | | | 1 | l E | ran | ieset | |
| | | | o diameter, mm | | 25.4 | Ί | 1 ^ | | | ink suspension- adjustable rear wheel travel |
| STEM | | | | | | | | | | to 4.1 inches (80 to 105mm). |
| CHIET LEVED | | | r clamp height, i | | 44.5 | 1 | 1 | | | · · · · · · · · · · · · · · · · · · · |
| SHIFT LEVER | | | | | | | Ī | | Genes | is geometry- stable, fast |
| BRAKE LEVE GRIPS | | | | to niake | | | ŀ | | Platin | um series ZR9000 aluminum- light, super |
| | | | | delikerinskaren | tgaggggata, sati an ce an no | | | | rong | • |
| DRIVETRAI | | | | alders villa | 的安徽的数数 | 1 | | | -1 | |
| FT DERAILLE | .UR | | | | ~ · | .1 | M | | elset | -d1- 11-1-41- e- |
| | | | routing | 260 / 1 ^ 1^ | Top puli | | | | Kace v | wheels- light and strong |
| RR DERAILLE | - IID | Attack | | 34.7 mm/ 1 3/8 | ", high clamp only | 1 | 1 | | IRC B | ackcountry tires- big, 2.25 casing is extra |
| CRANKSET . | | | | (32/22 | | | | | ірру | |
| CRANNSEI. | | | er Race 44/ ole circle, mm | 26/66 | 64/104 | d | 1 - | _ | | |
| BB | | | | Signed | 04101 | | ' | | ponen | |
| DD 11111111 | | | e axle, mm | | 113, Splined, ISIS | · | 1 | | Durab | le, yet light weight level- XTR, XT |
| CHAIN | | Shimano | HG-72 | | | 1 | l | | RockS | hox Psylo fork- adjustable U-Turn travel and |
| | | Chain | | | 9 speed | <u>'</u> | | m | assive | stanchions for excellent steering control |
| | | | length (links) | | 108 | 1 | | | | Creek AD-12 shock- air/air system is light, |
| CASSETTE . | | | HG70 11-32 | 2, 9spd | | i | | ea | sily tu | enable |
| WHEELSET | | | 黑太黑人 | | | | | | • | |
| FRONT WHEE | | | r Race Disc | c, 28° | | | | | Hayes | hydraulic disc brakes- extra control |
| | | E.R.D |)., <i>mm</i> | | 538 | <u>'</u> | L | | | |
| | | Rim s | | | Velox 22mm | · [| | | | |
| FRONT TIRE | | | | | | | | | | |
| DEAD WHEEL | | Tire n | | - 200 | 26 x 2.25 | 1 | | | | |
| REAR WHEEL | | |), mm | c, 20° | 538 | .[| | | | |
| | | Rim s | | | Velox 22mm | | | | | |
| REAR TIRE . | | | | | · · · · · · · · · · · · · · · · · · · | Proposition and Contract of the Contract of th | RIN | (S) | Military. | |
| | | Tire si | | | 26 x 2.25 | | 22 | | | |
| SPOKES | | DT 14/15 | G butted st | ainiess, alloy | | I., | | | | |
| | | Front, | | | 266-264, 3x | | | | 105 | |
| | | Rear, | | | 264/265, 3x | | 48 | | | |
| INNER TUBES | s | Presta va | alve | | | 14 | 41 | 60 | 82 | |
| OTHER | | 花摆老脚 | | 多屬特別 | w 2.00an | 16 | 36 | 52 | 72 | |
| SEATPOST . | | Bontrage | r Race | emakan water da Wi | | 18 | 32 | | | |
| | | Outer | diameter, mm | | 31.6 | | 27 | | | |
| SADDLE | | WTB Las | er V Race, | CrMo rails | | | | | | |
| BRAKES | | Hayes Ma | ag, full hydi | raulic disc | | 24 | 24 | | | BIKE WEIGHT |
| | | | tor diameter, 6. | 3 in. Bolt circi | le diameter, 44mm | 28 | | 30 | | 28.2 lb. |
| PEDALS | | | | | | 32 | 18 | 26 | 36 | 12.80 kg. |
| | _ | | liameter | - | 9/16 | | <u> </u> | 4622.0 | 1000 C | |
| SEAT BINDER | ₹ | | | t | _ | COL | | | xesin | |
| ABBITION | - | | diameter, mm | 1- /4 ' | 36.4 | Flipp | oing (| iree | n • Blac | k/White decal • Black fork |
| ADDITIONALS | | | oottie mour | nts (I on seat | post), | | | | | |
| replaceable d | erailleur | nanger | | | | | | | | |
| FYT | LUS 25/98/3 | WHAT IS AND | | | TO HER PERSON | | THE ME | | | |
| mineral contract of the contra | | | S | М | L | XL | | | | |
| Frame | Size | | 66 | 70 | 73 | 75 | | | | |
| Frame Rider height | | | | | 185 | 190 | | | | |
| | | | 169 | 177 | 103 | | | | | |
| | Inches | | | 177 630 | 630 | 630 | | | | |
| Rider height | Inches Cm | mm | 169 | | | 630 105 | | | | |
| Rider height Handlebar | Inches Cm Wldth, | mm | 169 630 | 630 | 630 | | | | | |
| Rider height Handlebar | Inches Cm Width, Length | mm , mm | 169 630 75 | 630 90 | 630 105 | 105 | | | | |
| Rider height Handlebar Stem | Inches Cm Wldth, Length Angle | mm , mm , mm | 169 630 75 7 | 630 90 7 | 630 105 7 | 105 7 | | | | |

| FRAMESE | | | | | | | | Sugar 3+ |
|---------------|--------------------------------|-------------------------|----------------------|---------------|-----------------------------------|----------------------|------------------|--|
| MAIN TUBES | | | | | 0 | | | Juyai J. |
| FORK | | | | | travel | | | Sweetness, Nickname for an especially dear friend |
| , okk | | | L mm | , aujustabie | 80-100 | , | | |
| [| | Axle-c | crown length, n | nni | 451 | | | |
| REAR SHOC | К | | | | | | | |
| [| | Stroke | | | 2 7.875 | 1 | | |
| | | Lengte Width | | | 22.2mm | | | |
| | | Eyes | • | | бит | | | |
| HEADSET | | SAS Ahe | adset, allo | у | | 1 | | |
| | | Size | | | 25.4/34.0/30.0 | | | |
| | | Stack | height, mm | | 27.0 | ' [| | |
| CONTROLS | GOOD SECURIOR | US SAME | Gardestall (48) | | hsennalbydvelpan | | | |
| HANDLEBAR | Erden in die Erde erde 1855 in | Rontrage | r Crowbar | Sport 25m | ım rico | 1 | | |
| IMMOLLEGAN | | | o diameter, mn | | 25.4 | 1 | TO ME STATE OF | Olahan da alka |
| STEM | | | | | | i | | Fisher rocks: |
| | | | r clamp height, | | 41.0 | | Rider: Adv | venture rider |
| SHIFT LEVER | | | | | | | Frameset | |
| BRAKE LEVE | | | | | | | | link suspension- adjustable rear wheel travel |
| GRIPS | | | | 19. sa 20.aa | to care keep above most to | | from 2.8 | 3 to 4.1 inches (80 to 105mm). |
| DRIVETRA | | | | | | 1 | Genes | is geometry- stable, fast |
| FT DERAILLE | _UR | | | | T | | | um series ZR9000 aluminum- light, super |
| | | Cabie Attach | routing ment | 34.9 mm/ 1 3 | Top pull 8", high clamp only | | strong | and so, too Divoso diaminiani light, super |
| RR DERAILLI | EUR | | | | - , aga sump omf | 1 | | |
| CRANKSET. | | Bontrage | r Comp 44 | 1/32/22 | | | Wheelset | |
| | | | ole circle, mm | | 64/104 | | | ager Select wheels- light and strong |
| BB | | | | | | | IRC B | ackcountry tires- big, 2.25 casing is extra |
| CHAIN | | | e axle, mm | | 73 × 113, Square | | grippy | |
| CHAIN | | Snimano <i>Chain</i> | | | 9 speed | | Componen | ats. |
| | | | length (links) | | 106 | | | le, yet light weight- XT, LX |
| CASSETTE . | | SRAM 7.0 |) 11-32, 9sr | | | | 1 | |
| WHEELSET | PEREN | | | | 等。安保和智慧 | | | ou Black fork- adjustable travel and massive ons for excellent steering control |
| FRONT WHE | | | | | r - English Kongada Telah da 1941 | | | <u> </u> |
| | | E.R.D. | | | 542 | | | Creek AD-5 shock- air/air system is light, |
| FROM TIRE | | Rimst | | | Velox 19mm | | easily to | 1 |
| FRONT TIRE | | IKC Back Tinesi | | | 26 x 2.25 | İ | Bontra | ager bar/stem, post- super strong |
| REAR WHEEL | L | | | TB. 28° | 20 x 2.25 | | | |
| | | E.R.D. | | , | 542 | | | |
| | | Rim st | | | Velox 22mm | ŀ | | |
| REAR TIRE . | • • • • • • • • | | | | 26.22 | CEAR | ING | |
| SPOKES | | Tire si: DT 14G et | | | 26 x 2.25 | ALDINIE PARTE CONTIN | 22 32 44 | |
| or ones | | Front, | | | 254, Radial | l | 52 76 105 | |
| | | Rear, 2 | | | 267/269, 3x | 12 | 48 70 96 | |
| INNER TUBES | | | | | | | 41 60 82 | |
| OTHER | : Thirdin | | A CONTRACT | 海流湖流 | A SA A A A A | | | |
| SEATPOST . | | Bontrage | r Sport | | and the second second | | 36 52 72 | |
| | | | diameter, mm | | 31.6 | | 32 47 64 | |
| SADDLE | | | | | | | 27 40 55 | |
| BRAKES | | | | | | | 24 35 48 | BIKE WEIGHT |
| PEDALS | | | SPU MS15, iameter | cupiess | 9/16". | | 21 30 41 | 27.6 lb. |
| SEAT BINDER | ₹ | | | ŧ | 3110 | 32 1 | 18 26 36 | 12,53 kg. |
| | | | diameter, mm | | 36.4 | COLO | r delawasia | |
| ADDITIONAL | | | ottle mou | nts (1 on sea | atpost), | | | /Sliver Metallic decal • Candy Chrome fork |
| replaceable d | lerailleur h | nanger | | | | Sine t | netanic • Winte/ | Shive metallic decal - Calluy Chrome lork |
| | | ., | | | | | | |
| FIT | | | 44 11 12 2 | | | 1 | | Physics in the property of the |
| Frame | Size | | S | M | L | XL | | İ |
| Rider height | Inches | | 66 16.0 | 70 177 | 73 196 | 75 101 | | |
| Handlebar | Cm Width, n | nm. | 168 620 | 177 620 | 186 620 | 191 620 | | |
| Stem | Length, | | 75 | 90 | 105 | 105 | | |
| | Angle | | 5 | 5 | 10 | 103 | | |
| Crank | Length, | mm | 170 | 175 | 175 | 175 | | |
| Seatpost | Length, | | 300 | 350 | 350 | 350 | | |
| Steerer | Length, | mm | 179.0 | 194.0 | 214.0 | 234.0 | | İ |
| | | | | | | | | |

| FRAMESET | | ness of the | | | | | |
|--|---|--|--------------------|----------|----------------|-----------------|--------|
| | Platinum series butted ZR9 | 000 | | | | | |
| | Platinum series aluminum | | | | | | |
| | Manitou Black Elite, adjustai | ble travel | | | | | |
| FORK | Travel, mm | 80-100 | | | | | |
| | Axle-crown length, mm | 451 | | | | | |
| REAR SHOCK | Cane Creek AD-5 | | | | | | |
| MEMIC ON CONT. | Stroke | 2 | | | | | |
| | Length | 7.875 | | | | | |
| | Width | 22.2mm | | | | | |
| | Eyes | быт | | | | | |
| HEADSET | SAS Áheadset, alloy | | | | | | |
| | Size | 25.4/34.0/30.0 | | | | | |
| | Stack height, mm | 27.0 | | | | | |
| CONTROLS | | | | | | | |
| | Bontrager Crowbar Sport, 2 | 5mm rise | | 800°T | 11 2 2 C 1 | | esci d |
| HANDLEDAK | Clamp diameter, mm | Jililli Hae | | No. | Vhy th | 118) F 1 | sh |
| CTCU | • | | | l R | ider: | Adve | nt |
| 51EM | Bontrager Comp | 41.0 | | | | | |
| CHIET LEVEDO | Steerer damp height, mm | | | F | rames | | |
| SHIFT LEVERS | Shimano Deore LX RapidFire | GT | ŀ | 1 | | bil lit | |
| BRAKE LEVERS | Hydraulic, attached to brake | • | | 1 | from | 2.8 | ю. |
| | Serfas dual density | A ALTONOMORPH CONTRACTOR OF THE CONTRACTOR OF TH | | | Ge | nesis | gr |
| DRIVETRAIN | | Anna Aller | | | | | _ |
| | Shimano Deore LX | | ŀ | | Pla | atinu | n. |
| . ,,, | Cable routing | Top pull | | | stro | ng | |
| | | l 1 3/8", high clamp only | | ١., | | 4 | |
| RR DERAILLEUR | Shimano Deore XT SGS | | | V | Vheels | | |
| | Bontrager Comp 44/32/22 | | | ı | Bo | ntrag | ger |
| CHARLET THEFT | Bolt hole circle, mm | 64/104 | | i i | TR: | C Ba | ·kc |
| RR | Shimano BB-UN52 | ***** | | 1 | | | .100 |
| DD | Shell x axle, mm | 73 x 113, Square | | 1 | grip | РУ | |
| CHAIN | | 75 a 215, agains | | 10 | ompo | nent | S |
| CHAIN | Chain type | 9 speed | ŀ | 1 ~ | _ | ırable | |
| | Chain type Chain length (links) |) speen 108 | | 1 | Du | II abid | , y |
| CACCETTE | SRAM 7.0 11-32, 9spd | 100 | | 1 | | anito | |
| CASSELLE | SKAN NO HIGE, 75pu serous es essero introduzante nestit test. | en al muscada property a statisticinos | | | stan | chior | s f |
| WHEELSET | | | | | Co | ne C | |
| FRONT WHEEL | Bontrager Race Disc, 28° | | l | | | | |
| | E.R.D., mm | 538 | l | | easn | y tur | lau |
| | Rim strip | Velox 22mm | | | Ha | iyes o | lise |
| FRONT TIRE | IRC Backcountry | | l | 1 | cont | | |
| | Tire size | 26 x 2.25 | l | <u> </u> | 00111 | | |
| REAR WHEEL | Bontrager Race Disc, 28° | | | | | | |
| | E.R.D., mm | 538 | l | | | | |
| | Rim strip | Velox 22mm | L | | | | |
| REAR TIRE | IRC Backcountry | | GEA | RIN | Contraction of | | |
| • | Tire size | 26 x 2.25 | | | 32 44 | | |
| SPOKES | DT 14/15G butted stainless, | alloy nippies | l., | | | | |
| | Front, mm | 266/264, 3x | 11 | | 76 10 | | |
| | Rear, mm | 264/265, 3x | 12 | 48 | 70 96 | 5 | |
| INNER TUBES | | , | 14 | 41 | 60 82 | 2 I | |
| TOTAL SANCE AND A CANADA CANADA CONTRACTOR OF THE CONTRACTOR OF TH | | | | | | | |
| OTHER | | | 16 | | 52 72 | | |
| SEATPOST | Bontrager Sport | | 18 | 32 | 47 64 | 4 | |
| | Outer diameter, mm | 31.6 | 21 | 27 | 40 59 | 5 I | |
| | WTB Laser V Race, CrMo ra | | 24 | | 35 48 | 1 | |
| | Hayes HFX Comp, full hydra | ulic disc | | | | | |
| | | olt circle diameter. 44mm | 28 | 21 | 30 41 | ' | |
| BRAKES | Rotor diameter, 6.3 in. Bo | | | | | . 1 | |
| BRAKES | | 5 | 32 | 18 | 26 36 | 5 I | |
| BRAKES | Rotor diameter, 6.3 in. Be | | | | | 5 | |
| PEDALS | Rotor diameter, 6.3 in. Bo | 5 | | | | 5 '/ | dia. |
| PEDALS | Rotor diameter, 6.3 in. Bo Shimano SPD M515, clipless Axle diameter | 5 | COL | ors | W | | ilv |
| PEDALS SEAT BINDER | Rotor diameter, 6.3 in. B Shimano SPD M515, clipless Axle diameter Alloy w/integral bolt Inner diameter, mm | 9/16" 36.4 | COL | ors | | | Silv |
| PEDALS SEAT BINDER ADDITIONALS | Rotor diameter, 6.3 in. B Shimano SPD M515, clipless Axle diameter Alloy w/integral bolt Inner diameter, mm 2 water bottle mounts (1 on | 9/16" 36.4 | COL | ors | W | | Silv |
| PEDALS SEAT BINDER | Rotor diameter, 6.3 in. B Shimano SPD M515, clipless Axle diameter Alloy w/integral bolt Inner diameter, mm 2 water bottle mounts (1 on | 9/16" 36.4 | COL | ors | W | | Silv |
| BRAKES PEDALS SEAT BINDER ADDITIONALS replaceable derails | Rotor diameter, 6.3 in. B Shimano SPD M515, clipless Axle diameter Alloy w/integral bolt Inner diameter, mm 2 water bottle mounts (1 on | 9/16" 36.4 | EOL Blue | ors | W | | Silve |
| PEDALS SEAT BINDER ADDITIONALS | Rotor diameter, 6.3 in. B Shimano SPD M515, clipless Axle diameter Alloy W/integral bolt Inner diameter, mm 2 water bottle mounts (1 oneur hanger | 9/16" 36.4 | COL | ors | W | | Silve |
| BRAKES PEDALS SEAT BINDER ADDITIONALS replaceable derails | Rotor diameter, 6.3 in. B Shimano SPD M515, clipless Axle diameter Alloy w/integral bolt Inner diameter, mm 2 water bottle mounts (1 oneur hanger S M | 36.4 seatpost), | EOL Blue | ors | W | | Silve |

Sugar 3+ Disc

Sweetness. Nickname for an especially dear friend

ier rocks:

ture rider

suspension- adjustable rear wheel travel 4.1 inches (80 to 105mm).

geometry- stable, fast

series ZR9000 aluminum- light, super

r Select wheels- light and strong country tires- big, 2.25 casing is extra

yet light weight- XT, LX

Black fork- adjustable travel and massive for excellent steering control

ek AD-5 shock- air/air system is light,

sc brakes- powerful stoppers for better

BIKE WEIGHT: 28.6 lb. 12.98 kg.

ver Metallic decal • Candy Chrome fork

| FIT | | egalta, egalter | | ich changar i | 2 (31 9 0 0 H) | |
|--------------|------------|-----------------|-------|---------------|----------------|--|
| Frame | Size | S | М | L | XL | 7733 Sala Baranda Naja da Mara Cassar Mara Cara Cara Sala Sala Sala Sala Mara Mara Mara Mara Sala Sala Sala Sa |
| Rider height | Inches | 66 | 70 | 73 | 75 | |
| • | Cm | 168 | 177 | 186 | 191 | |
| Handlebar | Width, mm | 620 | 620 | 620 | 620 | |
| Stem | Length, mm | 75 | 90 | 105 | 105 | |
| | Angle | 5 | 5 | 10 | 10 | |
| Crank | Length, mm | 170 | 175 | 175 | 175 | |
| Seatpost | Length, mm | 300 | 350 | 350 | 350 | |
| Steerer | Length, mm | 179.0 | 194.0 | 214.0 | 234.0 | |

| FRAMESET | | | 1 | | CHESK DA CC |
|--|---|--|------------------------|------------|---|
| MAIN TUBES | Platinum series butt | ed ZR9000 | | | Sugar 3+ GS |
| STAYS | Platinum series alun | ninum | | | • |
| FORK | | | | | Sweetness, Nickname for an especially dear friend |
| | Travel, mm | 80-100 | | | • |
| REAR SHOCK | Axle-crown length, mr. | n 45 i | ' | | |
| REAR SHOCK | Stroke | : | , | | |
| İ | Length | 7.875 | <u>.</u> | | |
| İ | Width | 22.2mn | | | |
| 1 | Eyes | 6mm | r I | | |
| HEADSET | • | | 1 | | |
| 1 | Size | 25.4/34.0/30.0 | | | |
| | Stack height, mm | 27.0 | Ί | | |
| CONTROLS | th the commence and the second | WEST TO THE PROPERTY OF | d | | |
| HANDLEBAR | | Sport 25mm rico | | | |
| HANDEEDAN | Clamp diameter, mm | 25.4 25111111 115 0 | | | |
| STEM | | 23.9 | | | |
| | Steerer clamp height, n | um 41.0 | | | |
| SHIFT LEVERS | Shimano Deore LX R | apidFire+ | | Why this | Fisher rocks: |
| BRAKE LEVERS | | man's reach | | Rider: Adv | venture rider |
| GRIPS | • | | 1 | Frameset | i |
| DRIVETRAIN | | | 1 | | link suspension- adjustable rear wheel travel |
| FT DERAILLEUR | Shimano Deore LX | | | | B to 4.1 inches (80 to 105mm). |
| | Cable routing | Top pull | · | li . | ` . ! |
| | | 34.9 mmt 1 3/8", high clamp only | · | | sisters geometry- stable, fast, made for a |
| RR DERAILLEUR | | | | woman | |
| CRANKSET | | | .] | Platin | um series ZR9000 aluminum- light, super |
| ВВ | Bolt hole circle, mm | 64/104 | | strong | |
| | Shell x axle, mm | 73 x 113, Square | | Wheelset | |
| CHAIN | | 75 H 115, 0gmm | | | ager Select wheels- light and strong |
| | Chain type | 9 speed | · | E. | |
| | Chain length (links) | 108 | | | ackcountry tires- big, 2.25 casing is extra |
| CASSETTE | | | | grippy | |
| WHEELSET | | | | Componen | nts |
| FRONT WHEEL | | 3, 24° | | Durab | le, yet light weight- XT, LX |
| | E.R.D., mm | 542 | 1 | i | ou Black fork- adjustable travel and massive |
| FRONT TIRE | Rim strip | Velox 19mm | | | ons for excellent steering control |
| I THOM TIME | Tire size | 26 x 2.25 | ļ | ſ | · · |
| REAR WHEEL | | | | | Creek AD-5 shock- air/air system is light, |
| } | E.R.D., mm | 542 | | easily tu | |
| | Rim strip | Velox 22mm | | Bontra | ager bar/stem, post- super strong |
| REAR TIRE | | | C EAT | RING | |
| SDONES : | Tire size | 26 x 2.25 | NAME OF TAXABLE PARTY. | 22 32 44 | |
| SPOKES | | 254, Radial | . | | |
| | Front, mm Rear, mm | 254, Radial 267/269, 3x | | 52 76 105 | |
| INNER TUBES | Presta valve | KC (CVAI)UA | 12 | 48 70 96 | |
| OTHER | **** | Parketica et anne attain | 14 | 41 60 82 | |
| SEATPOST | | With the Control of t | 16 | 36 52 72 | |
| | Outer diameter, mm | 31.6 | 18 | 32 47 64 | |
| SADDLE | | | | 27 40 55 | |
| BRAKES | Avid Single Digit 3, Il | near pull | | 24 35 48 | BIKE WEIGHT |
| PEDALS | Shimano SPD M515, d | clipiess | | 21 30 41 | 27.6 b, |
| | Axle diameter | 9/16" | | | 12.53 kg. |
| SEAT BINDER | • | | 32 | 18 26 36 | 12100 ng. |
| ADDITIONALS 2 | <i>Inner diameter, mm</i> 2 water hettle mount | 36.4 s (nlus sastnast | COL | DRS | |
| mount), replaceable der | | a thing seathost | | | Pearl• White/Light Blue decal • White fork |
| mounty replaceable der | amear nanger | | | | |
| THE STATE OF THE S | | | CCSC424724769 | | |
| Fig. | | | 计划型型键 | | |
| Frame Size Rider height Inches | S 65 | M 68 | | | |
| Cm | 166 | 172 | | | |
| Handlebar Width, m | | 600 | | | |
| Stem Length. | | 75 | | | |

Stem

Crank Seatpost

Steerer

Length, mm

Length, mm

Length, mm

Length, mm

Angle

75 5

175

350

194.0

75

5

170

300

| FRAMESET | NO PERSONAL PROPERTY OF THE | apidengini dinanggana | | | |
|----------------------|---|---|------|-----------------|-----------------|
| MAIN TUBES Pla | tinum series butte | d ZR9000 | | | |
| STAYS Pla | | | | | |
| FORK Mai | nitou Black Comp, | | | | |
| | Travel, mm | 80-100 | | | |
| | Axle-crown length, mm | 451 | | | |
| REAR SHOCK Car | Stroke | 2 | | | |
| | Length | 7.875 | | | |
| | Width | 22.2mm | | | |
| | Eyes | 6mm | | | |
| HEADSET STS | 5 Aheadset | | | | |
| | Size | 25.4/34.0/30.0 | | | |
| | Stack beight, mm | 23,2 | | | |
| | errore en en en en en en en en en en en en en | 拉口 医甲状体 医甲状腺 医甲状腺 | | Why thi | s F |
| CONTROLS | | | | Rider: A | |
| HANDLEBAR Boi | | 25.4 | | | |
| STEM Boi | Clamp diameter, mm | 23.4 | | Frames | |
| 31EM bos | ntrager Sport Steerer clamp height, mi | » 41.0 | | Syb | |
| SHIFT LEVERS Shi | | | | from | ۷.8 |
| BRAKE LEVERS Alle | | | | Gen | ıesi |
| GRIPS Ser | fas dual density | | | Plat | tini |
| DRIVETRAIN | | | | stron | |
| FT DERAILLEUR Shi | | Physical protection (Surface Construction - Avrance | | | _ |
| TI DERAILLEON TITTOM | Cable routing | Top pull | | Wheelse | |
| | Attachment 3 | 34.9 mm/ 1 3/8", high clamp only | | Bon | ıtra |
| RR DERAILLEUR Shi | imano Deore LX SC | SS | | IRC | M |
| CRANKSET Box | | 32/22 | | | , |
| | Bolt hole circle, mm | 64/104 | | Compon | |
| BB Shi | | 72 112 0 | | Dur | abl |
| Chi | Shell x axle, mm | 73 x 113, Square | | Mar | aite |
| CHAIN Shi | Chain type | 9 speed | | stanc | hio |
| | Chain length (links) | 108 | | Can | ne C |
| CASSETTE SR | | | | easily | |
| VHEELSET | | | | 1 | |
| FRONT WHEEL Bo | | 2.24° | | Bor | itra |
| PRONT WHEEL BO | E.R.D., mm | 542 | | | |
| | Rim strip | Velox 19mm | | | |
| FRONT TIRE IRC | | | | | |
| | Tire size | 26 x 2.1 | | | |
| REAR WHEEL Bo | | | | | |
| | E.R.D., mm | 542 | | | |
| DEAD TIPE | Rim strip | Velox 22mm | AT - | DUNG | 3777 |
| REAR TIRE IRC | I Mythos XC Tire size | 26 x 2.1 | GEA | RING | 球形 器 |
| SPOKESDT | | | l | 22 32 44 | |
| 3EALE3 | Front, mm | 254, Radial | 11 | 52 76 105 | , |
| | Rear, mm | 267/269, 3× | 12 | 48 70 96 | |
| INNER TUBES Pro | esta valve | | 14 | 41 60 82 | |
| OTHER | 4 (920) 450 m | | 16 | 36 52 72 | |
| SEATPOST Bo | 2,9.0420 | ハー・アンスでの女子の中でいる(はつ)という。これによりまじまでき | 18 | 32 47 64 | |
| CENTION THISTING | Outer diameter, mm | 31.6 | 21 | 27 40 55 | |
| SADDLE WT | B SST.X | | | | |
| BRAKES All | oy direct pull | | 24 | 24 35 48 | |
| PEDALS Pla | atform | | 28 | 21 30 41 | |
| | Axle diameter | 9/16" | 32 | 18 26 36 | |
| SEAT BINDER All | | | 2000 | A | (9 0170 |
| | Inner diameter, mm | 36.4 | | ORS | |
| ADDITIONALS1 w | ater bottle mount, | , replaceable derailleur | Blac | :k Metallic • W | /nite |
| hanger | | | | | |
| | | | | | |

Sugar 4+

Sweetness. Nickname for an especially dear friend

Fisher rocks: venture rider

link suspension- adjustable rear wheel travel 3 to 4.1 inches (80 to 105mm).

is geometry- stable, fast

um series ZR9000 aluminum- light, super

ager Superstock wheels- light and strong fythos XC tires- all-round treads

ıts

ole, yet light weight- Shimano LX

ou Black fork- adjustable travel and massive ons for excellent steering control

Creek AD-5 shock- air/air system is light, ınable

ager bar/stem, post- super strong

| GEA | RIN | G. | | ı |
|-----|-----|----|-----|---|
| | 22 | 32 | 44 | ĺ |
| 11 | 52 | 76 | 105 | l |
| 12 | 48 | 70 | 96 | l |
| 14 | 41 | 60 | 82 | l |
| 16 | 36 | 52 | 72 | l |
| 18 | 32 | 47 | 64 | l |
| 21 | 27 | 40 | 55 | l |
| 24 | 24 | 35 | 48 | l |
| 28 | 21 | 30 | 41 | l |
| 32 | 18 | 26 | 36 | |
| | | | | Ļ |

BIKE WEIGHT 28,9 lb. 13.12 kg.

te/Silver decal • Candy Chrome fork

| rin : | 21 /5 (8 PM) 2 (15 L 10 7 : | ravia antiga | PRAEMINION A | | PARTING A | |
|--------------|-----------------------------|--------------|--------------|-------|-----------|----|
| Frame | Size | S | М | L | XL | VA |
| Rider height | Inches | 66 | 70 | 73 | 75 | |
| • | Cm | 168 | 178 | 186 | 191 | |
| Handlebar | Width, mm | 620 | 620 | 620 | 620 | |
| Stem | Length, mm | 75 | 90 | 105 | 105 | |
| | Angle | 15 | 15 | 15 | 15 | |
| Crank | Length, mm | 170 | 175 | 175 | 175 | |
| Seatpost | Length, mm | 300 | 350 | 350 | 350 | |
| Steerer | Length, mm | 175.2 | 190.2 | 210.2 | 230.2 | |

RePack frameset

Professional Downhill Racing

For years now, Fisher has sponsored top downhill riders. Riding bikes that were largely custom one-offs, our Pros have consistently been among the top riders, and have stood on the very top of the podium. Through constant development and innovation, our Race Department has been on the cutting edge to support the needs of our riders.

Until now, only our Pros could ride these bikes. We simply did not make downhill bikes for any one else.

Downhill Thrills

The sport of downhilling today has changed. It is no longer the exclusive domain of high-paid pros, but has become the sport of choice of local riders. These folks crave the thrills and technical challenge of zooming their favorite trail at high speed (responsibly, pleasel). For those pushing the edge, a standard mountain bike just doesn't offer the performance needed.

The new Fisher Repack

For 2002, we have finally unleashed our awesome downhill frame for public consumption. Here's what the Repack has to offer-

- \bullet 8 inches of rear wheel travel, and designed for a 6-8" travel triple-clamp fork
- \bullet Extremely beefy construction- tubes, links, pivots, all are designed for the forces generated by our Pros
- Swappable, bolt-on rear dropouts. The bolt-on pattern allows you to change the length of the chainstays (and the bottom bracket elevation), or switch from standard quick-release wheels to a through-axle. This makes the ride tunable, and the frame is compatible with all popular downhill wheel types
- Patented chain tensioner- by allowing you to move the tensioner you get precise and powerful chain containment with any chainring size you choose to use (downhill bikes like to throw their chains off at inappropriate times). Even cooler, the location of the tensioner prevents inchworming of the suspension when pedaling.

The frame comes in two sizes, 14.5 and 16".

Colors: Blue

(not supplied with a fork)

Rear shock

| 8.75" |
|-------|
| 7/8" |
| 8mm |
| 2.75" |
| |

RePack DH

| Frame sizes | 14.5 | 16 |
|---|------|-------------|
| Head angle | 70.0 | 70.0 |
| Seat angle | 71.0 | 71.0 |
| | | |
| ខ្លួ Standover | 700 | 716 |
| 回。。Seat tube | 368 | 406 |
| <u>⊔</u> Head tube | 112 | 112 |
| Seat tube Head tube Eff top tube Chainstays | 570 | 592 |
| ≝ Chainstays | 420 | 420 |
| pp neight | 323 | 323 |
| Offset | 33.0 | 33.0 |
| Trail | 80 | 80 |
| Wheelbase | 1032 | 1054 |
| | | |
| Ståndover | 27.6 | 28.2 |
| Seat tube 岩 Head tube | 14.5 | 16.0 |
| | 4.4 | 4.4 |
| ≧ Eff top tube | 22.4 | 23.3 |
| Chainstays | 16.5 | 16.5 |
| BB height | 12.7 | 12.7 |
| Offset | 1.6 | 1.6 |
| Trail | 3.1 | 3.1 |
| - Wheelbase | 40.6 | 41.5 |
| Property of the second | | |

All new for 2002

This is a new frame platform for the 2002 model year, but it borrows heavily from proven Gary Fisher technology. Most importantly, this is Genesis geometry for a comfortable rider position and the stability and handling of a long front-center.

The 29er frames also use the new ZR9000 aluminum alloy for low frame weights and very high strength.

Last, the 29ers use the new, oversized wheel standard. Its a Genesis Supersizel

Geometry

The 29er uses Genesis geometry, adapted for the larger wheels.

Ride

The 29er is a great mountain bike for all types of riding, but really excels in soft conditions like sand or mud where its oversized wheels reduce rolling resistance. Lower resistance means either faster speeds, less work, or both. And the float of those big hoops enhances control in the same conditions.

Likewise, the larger wheels make for a smooth ride, which some people compare to suspension...only this is a hardtail, with all the benefits of lower frame weight and no suspension movement.

Frame details

The 29er uses Platinum series ZR9000 aluminum frame technology.

Full 'top tube' (actually, the side of the main frame) cable routing keeps the cables out of the muck for friction free shifting and braking.

Special parts

Derailleur hanger ..., 980116

| Frame sizes | S | M | L | XL |
|--|------|------|------|------|
| Head angle | 70.5 | 71.0 | 71.5 | 71.5 |
| Seat angle | 74.0 | 74.0 | 73.5 | 73.0 |
| io i | | | | |
| Standover Seat tube Head tube Eff top tube | 695 | 729 | 757 | 799 |
| Seat tube | 394 | 442 | 479 | 529 |
| Head tube | 80 | 80 | 90 | 105 |
| 耳。Eff top tube | 590 | 608 | 628 | 647 |
| | 440 | 440 | 440 | 440 |
| BB height | 292 | 292 | 292 | 297 |
| Offset | 42.0 | 42.0 | 42.0 | 42.0 |
| 7 Trail | 87 | 83 | 80 | 80 |
| Wheelbase | 1081 | 1094 | 1103 | 1119 |
| A CONTRACTOR | | | | |
| Standover | 27.3 | 28.7 | 29.8 | 31.5 |
| இ. Seat tube | 15.5 | 17.4 | 18.9 | 20.8 |
| 耳 Head tube | 3.1 | 3.1 | 3.5 | 4.1 |
| Seat tube Head tube Eff top tube | 23.2 | 23.9 | 24.7 | 25.5 |
| Chainstays | 17.3 | 17.3 | 17.3 | 17.3 |
| BB height | 11.5 | 11.5 | 11.5 | 11.7 |
| Offset | 1.7 | 1.7 | 1.7 | 1.7 |
| Trail | 3.4 | 3.3 | 3.1 | 3.1 |
| Wheelbase | 42.6 | 43.1 | 43.4 | 44.1 |
| 和哈拉拉拉克斯斯斯斯斯 医牙髓管 | | | | |

| MAIN TUBES | T S Platinu Platinu | ım series but | ted ZR9000 | | | | Supercaliber 29 |
|-----------------------|--------------------------------------|--|---|---|----------|----------------------------------|--|
| | Ax | ivel, mm le-crown length, mi | m | 80 479 | 1 | | Above any ranking. Beyond the professional |
| HEADSET . | Cane C Siz Sta | | eadset, alloy | 25.4/34.0/30.0 27.1 | • | | |
| | | | | | | | |
| CONTROLS HANDLEBAR | ₹ Bontra | | | | | | |
| STEM | Cla Bontra | <i>imp diameter, mm</i> nor Raco I ito | | 25.4 | 1 | 200 | TO A SECURE OF THE PROPERTY OF |
| | | erer clamp height, i | | 39.5 | | | Fisher rocks: |
| BRAKE LEVI | RS , Shimar ERS Integra Serfas | ted brake/shl | | | | Frameset | cer, or all-round hardtail rider is geometry- stable, fast |
| DRIVETRA | | 5. 阿伊斯里 | | | | 1 | um series ZR9000 aluminum- light, super |
| | EUR Shimar Cal | 10 Deore XT ble routing achmens | oweredween on folial for file | Top pull 34.9 mm/ 1 3/8" | | strong | am 35100 Macoo manimani ngin, supei |
| RR DERAILL | EUR Shimar | | | 34.9 mmi 1 3/6 | | | ager Race Lite- super light wheels for accel- |
| CRANKSET . | Bontra | | 44/32/22 | ~ a | | eration | 1 |
| BB | Bontra | l hole circle, mm ger Race, ISIS Il x axle, mm | | 64/104 113, Splined, ISIS | | 29"- sr Componen | mooth, fast, and with excellent handling |
| CHAIN | Shiman | | | • | | , , | evel- XTR, XT |
| | | iin type iin length (links) | | 9 speed 106 | | | cchi Marathon 29" fork- plush riding, and |
| | Shiman | o Deore XT 1 | | | | beefy for | r control |
| WHEELSET FRONT WHE | EL Bontrac | ger Race Lite | ATB 29", 24 | | | Bontra | ager bar/stem, post- super strong |
| | | l.D., mm 1 strip | | 600 Velox 22mm | | <u> </u> | |
| FRONT TIRE | IRC Not | tos XC, 127tpi esize | i, folding | 20 2.1 | | | |
| REAR WHEE | L Bontrad | | ATB 29", 28 | 29 x 2.1 3° 603 | | | |
| | Rin | ı strip | | Velox 22mm | | | |
| REAR TIRE . | IRC Not | tos XC, 127tpi <i>r size</i> | i, folding | 29 × 2.1 | GEAL | UNG | |
| SPOKES | DT Rev | | G, alloy nippl | | / | 22 32 44 | |
| | From | nt, mm | | 283, Radial | | 58 84 116 | |
| INNER TUBE | | r, mm Valve | | 299/301, 3x | 13 | 49 71 98 | |
| OTHER | | | | | | 43 62 85 | |
| SEATPOST . | Bontrac | | 14 - 25 - 40 - 15 (7 (17 (17 (7 3 5 5 X)) | A 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 | | 38 55 75 | _ |
| SADDLE | <i>Ои</i> SSM Er | <i>er diameter, mm</i> a, Ti/leather | | 31.6 | | 32 46 64 28 40 55 | • |
| BRAKES | Avld Sli | ngle Digit Ti, I | | | | 25 40 33 25 36 49 | BIKE WEIGHT |
| PEDALS | Tlme A` | TAC Carbon, c <i>diameter</i> | clipless | 9/16" | | 21 31 43 | 23.0 lb. |
| SEAT BINDE | R Alloy w | | | 9/16" 36,4 | 34 | 19 27 38 | 10.44 kg. |
| ADDITIONAL | S 2 water | | ts, rack mou | | |)RS Blue Metallic • Yo | ellow/Red decal • Apple Candy Red fork |
| PIT | | | 14 (0.00 Sv | to a constant | | 5.42.55 | |
| Frame Rider height | Size Inches | S 68 | M 71 | L 74 | XL 75 | | |
| maei neight | Cm | 174 | 180 | 74 188 | 190 | | |
| Handlebar | Width, mm | 600 | 600 | 600 | 600 | | |
| Stem | Length, mm Angle | 75 7 | 90 7 | 105 7 | 105 7 | | |
| Crank | Length, mm | 170 | 175 | 175 | 175 | | |
| Seatpost Steerer | Length, mm | 300 165.6 | 390 165.6 | 390 175.6 | 390 | | |
| Steerer | Length, mm | 165.6 | 165.6 | 175.6 | 190.6 | | |

| MAIN TUBES | Platinui Platinui | m series buti | | | | | | | | | Иt. | Ta | m. | 2 |) |
|------------------------|---------------------------|---------------------------------------|-----------------------|---|--------------|----------|-------------|-----------------|----------------------|--------------|------------------------|-----------|--------------|-------------------|----------------|
| | Marzoc | | | 80 479 | | | | (s | hort for To 27 | | s) The Bir mountain | | | | |
| HEADSET | SAS Ah Size Stac | | | 25.4/34.0/30.0 27.0 | | | | | | | | | | | |
| CONTROLS HANDLEBAR | Bontrac | | | 25.4 | | | | | | | | | | | |
| STEM | Bontrag | • | | 23.4 | | | | | | | | | | | The same |
| CHIET I EVED | <i>Stee</i> S Shiman | rer clamp height, i | | 44,5 | | | | | isher r | | | | | | |
| | RS Integral | | | • | | | | | er, or a | ili-rou | nd har | dtail rie | der | | |
| | Serfas | | | | | 1 | _ | neset Conoci | le goom | otru e | table fa | et | | | |
| DRIVETRALI | Ne da enev | a diasahinsi | | | | | | | is geome um serie | _ | | | liabt | eunar | |
| FIDERAILLE | UR Shiman <i>Cal</i> i | o Deore XT le routing | | Top pull | | | | Platint rong | um serie | es ZR9 | ooo atu | mmulli | ngn, | auper. | |
| | Ana | chment | | 34.9 mm/ 1 3/8" | İ | v | Vho | elset | | | | | | | |
| | UR Shiman Bontrag | | 32/22 | | | " | | | ager Rac | ce- sup | er light | wheels | for ac | celera- | |
| | Boli | hole circle, mm | | 64/104 | • | | | on | | • | _ | | | | |
| BB | Bontraç | jer Race, ISI: U <i>x axle, mm</i> | | 113, Splined, ISIS | | | | 29"- sn | nooth, f | ast, an | d with | exceller | it hand | lling | |
| CHAIN | Shiman | | 25. | 115, opinica, 1010 | İ | 0 | om | ponen | ts | | | | | | |
| | | in type in length (links) | | 9 speed 108 | | | | Race le | evel- XT | R, XT | | | | | |
| CASSETTE | Shiman | o HG70 11-32 | , 9spd | 100 | | | | | cchi MX | | 29" forl | t- plush | riding | , and | |
| WHEELSET FRONT WHEE | L Bontraç | jer Race ATE D., mm | 29", 24° | 600 | | | | | r contro ager bar | | post- s | uper str | ong | | |
| | Rim | strip | | Velox 22mm | | | | | | | | | | | |
| FRONT TIRE . | IRC Not | tos XC, 127tp : size | l, folding | 29 × 2.1 | | | | | | | | | | | |
| REAR WHEEL | Bontrag | ger Race ATE .D., mm | 29", 28° | 603 | | | | | | | | | | | |
| REAR TIRE | IRC Not | i <i>strip</i> tos XC, 127tp | i, folding | Velox 22mm | GEA | RIN | C. | | 1 | | | | | | |
| CDOVEC | | isize EC builted al | nininaa niia | 29 x 2.1 | | | ., | 44 | | | | | | | |
| SPURES | DT 14/1 Fro | og butted st n, mm | aille22, allo | y mppies 282, Radial | 11 | | - • | 116 | | | | | | | |
| INNED TUDES | | r, mm | | 296/299, 3x | | | | 106 | | | | | | | |
| OTHER | · · · · · Presta | valve Silve | | | 14 16 | | 66 | | | | | | | | |
| | Bontra | jer Race | TOWN ON THE | | 16 18 | | 58 52 | 80 71 | | | | | | | |
| | Out | er diameter, mm | Culto un!!- | 31.6 | 21 | | 44 | | | | | | | | |
| | WTB La Avid Si | | | | 24 | | | 53 | | | | BII | (E WE | ICHT' | QI. |
| | Time A | TAC, clipless | . , | | 28 | | | 46 | | | | , 25 | i.1 lb. | | |
| SEAT RINDED | Axi Alloy W | <i>diameter</i> /integral boli | | 9/16" | 32 | 20 | 29 | 40 | 1 | | | [11. | 40 kg. | | |
| | | er diameter, mm | | | COL O | | | /F ppinc | Green • | Silver/V | Vhite dec | al • Meta | iic Grev | fork | |
| , | | | - " | | | | | pp | , | 2 | | | | | |
| FIT | | livis ne enve | CHONE SAN | 3.00 M 18 USU | k ili elije | dii e ii | Ų. | | 16-55-0-35 | | elepties 4 | in Parasa | as as an | Andrews | |
| Frame | Size | S | интеления М | en and a second | XL | 94058 | रस्क्रहरोही | raturga (1946) | \$1635-141-5770-812 | overeta 1879 | | newskeet | ne:45:093:55 | CHANGE CONTRACTOR | 18589 18589 |
| Rider height | Inches | 69 | 71 | 74 | 75 101 | | | | | | | | | | |
| Handlebar - | Cm Width, mm | 174 600 | 181 600 | 188 600 | 191 600 | | | | | | | | | | |
| Stem | Length, mm | 75 | 90 | 105 | 105 | | | | | | | | | | |
| Crost | Angle | 7 | 7 | 7 | 7 175 | | | | | | | | | | |
| Crank Seatpost | Length, mm Length, mm | 170 300 | 175 390 | 175 390 | 175 390 | | | | | | | | | | |
| Steerer | Length, mm | 170.5 | 170.5 | 180.5 | 195.5 | i | | | | | | | | | |

Genesis Hardtails

New for 2002

The Genesis hardtails were introduced in the 1998 model year. The geometry is unchanged for 2002, but a new frame material on the Platinum series, called ZR9000, makes the new frames lighter and at the same time, stronger.

Geometry

The regular Genesis hardtails hardtail uses Gary Fisher's race-proven Genesis Geometry.

The Genesisters bikes use these same concepts, but adapted to fit and perform for a woman. The handlebar position, through frame and specs, reduce the stress on a woman's back when riding. The position balances her weight over the bottom bracket so she gets the most pedal power possible, and over the wheels for optimum handling. This is complimented by smart specs for an overall ergonomic fit for a woman.

Ride

The Genesis hardtail frame is one of the lightest racing hardtails ever produced. Of the bikes that can compete with this frame in weight, only the Fisher frame has Genesis geometry.

With their oversize aluminum tubes, high lateral frame rigidity and super-short chainstays, Genesis hardtails provide amazing rear wheel traction.

The Genesis geometry makes these bikes super handling, especially at racing speeds.

Frame details

The Genesis hardtails use our Platinum and Gold series frame technology. The head tube, is double butted to reduce weight and support the headset cups.

Full top tube cable routing with 'bullet' stops keeps the cables out of the muck for friction free shifting and braking. The bullet stops have a smooth junction with the frame, and rounded corners, so prevent things (like your clothes) from snagging.

The dropouts, brake yoke, and other details on the Genesis hardtails are forged aluminum. Forging provides the highest structural integrity, while the low density of the aluminum keeps the bike light.

The Genesis hardtail frame uses a special dropout to accommodate a disc brake adapter. This adapter provides mounting for an International style rear disc brake.

Genesis hardtail frames have 3 water bottle mounts.

Special Parts

| Disc brake adapter | 210648 |
|--------------------|--------|
| | 980116 |

Genesis hardtails

| CONTRACTOR CONTRACTOR AND AND AND AND AND | | | | | |
|---|------|------|------|------|------|
| Frame sizes | XS | S | M | L | XL |
| Head angle | 70.5 | 71.0 | 71.5 | 71.5 | 71.5 |
| Seat angle | 74.5 | 74.0 | 74.0 | 73.5 | 73.0 |
| S A trendictor a | | | | | |
| 齿间 : Ständover | 692 | 725 | 756 | 783 | 818 |
| ு Seat tube | 332 | 396 | 446 | 484 | 535 |
| ∑∴ Head tube | 90 | 90 | 105 | 125 | 145 |
| ☐. Eff top tube | 552 | 582 | 608 | 628 | 647 |
| Standover Seat tupe Head tube Eff top tube Chainstays | 413 | 413 | 413 | 413 | 413 |
| BB height | 287 | 292 | 292 | 292 | 297 |
| Offset | 41.9 | 41.9 | 41.9 | 41.9 | 41.9 |
| Trail | 74 | 71 | 68 | 68 | 68 |
| Wheelbase | 1031 | 1053 | 1075 | 1091 | 1107 |
| | | | | | |
| Standover | 27.2 | 28.5 | 29.8 | 30.8 | 32.2 |
| ន្ន Seat tube | 13.1 | 15.6 | 17.6 | 19.1 | 21.1 |
| 其。 Head tube | 3.5 | 3.5 | 4.1 | 4.9 | 5.7 |
| Seat tube Head tube Eff top tube | 21.7 | 22.9 | 23,9 | 24.7 | 25.5 |
| [™] Chainstays | 16.3 | 16.3 | 16.3 | 16.3 | 16.3 |
| BB/height | 11.3 | 11.5 | 11.5 | 11.5 | 11.7 |
| Offset | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| Trail | 2.9 | 2.8 | 2.7 | 2.7 | 2.7 |
| Wheelbase | 40.6 | 41.4 | 42.3 | 42.9 | 43.6 |
| COMMONSTALL WATER | | | | | |

Genesisters hardtails

| Frame sizes | XS | S | М |
|--------------------------|------|------|------|
| Head angle | 70.5 | 70.5 | 71.0 |
| Seat angle | 74.5 | 74.0 | 74.0 |
| Ο | Ì | | |
| ≝. Standover | 654 | 696 | 733 |
| Seat tube | 332 | 396 | 446 |
| Head tube | 90 | 90 | 105 |
| Eff top tube | 552 | 567 | 595 |
| ≝ Chainstays | 413 | 413 | 413 |
| BB height | | 292 | 292 |
| Offset | 41.9 | 41.9 | 41.9 |
| Trail | 74 | 74 | 71 |
| Wheelbase | 1031 | 1042 | 1066 |
| | 1001 | 1042 | 1000 |
| Standover | 25.7 | 27.4 | 28.9 |
| | | | |
| HARACE BOX SERVICE STATE | 13.1 | 15.6 | 17.6 |
| 円 Head tube | 3.5 | 3.5 | 4.1 |
| ≥ Eff top tube | 21.7 | 22.3 | 23.4 |
| □ Chainstays | 16.3 | 16.3 | 16.3 |
| BB height | 11.3 | 11.5 | 11.5 |
| Offset | 1.6 | 1.6 | 1.6 |
| Trail | 2.9 | 2.9 | 2.8 |
| Wheelbase | 40.6 | 41.0 | 42.0 |
| | | | |

| FRAMESET MAIN TUBES | Platin | um series butt | ed ZR9000 | | | | | | Paragon |
|----------------------------|----------------------------------|---------------------------------------|----------------------------|--|----------------------|-------------------|--------------|--|--|
| STAYS | F | rame weight | ninum | 3.1 lb (1.41 kg) | | | | | The lofty ideal. Perfection. |
| FORK | | ou mars Elite iavel, mm | | 80 | | | | | · |
| | | xle-crown length, mr. | n | 451 | | | | | |
| HEADSET | SAS A | headset, alloy | | | | | | | |
| | | ze | | 25.4/34.0/30.0 | | | | | |
| | Si | tack height, mm | | 27.0 | | | | | |
| CONTROLS HANDLEBAR | Bontr | | Race, 25mn | | | | | | |
| STEM | | lamp diameter, mm ager Comp | | 25.4 | | ×. | Vhv | this I | Fisher rocks: |
| 012 1111111 | | eerer clamp height, n | nm | 41.0 | | 41,000 | | 5 - 18 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - | venture rider or Racer |
| SHIFT LEVERS | | | | | | 1 | | | TOTAL AIGUS OF ERROCE |
| BRAKE LEVER | | | ft | | | 1 | | neset | to account atable foot |
| GRIPS | Serfas | dual density | | | | | | | is geometry- stable, fast |
| DRIVETRAIN FT DERAILLEU | V JR Shima | no Deore LX | | | | | | Platine rong | um series ZR9000 aluminum- light, super |
| | | able routing | | Top pull | | 1 1 | Vhe | elset | |
| DD DEDAULE | | ttachment | | 34.9 mm/ 1 3/8" | | | | | ager Superstock wheels- light, strong |
| RR DERAILLEU | | | 32/22 | | | | | | |
| CKANKSEI | | ayer Race 447. olt hole circle, mm | 32/22 | 64/104 | | | | IRC S | erac XC tires- fast, yet grippy |
| вв | | | splined | | | (| Com | ponen | ıts |
| | | hell x axle, mm | 73 x | : 113, Splined, ISIS | | | | Exper | t level- LX/XTR, Bontrager Race crankset |
| CHAIN | | | | | | | | Manite | ou fork- superb TPC damping and steering |
| | | hain type | | 9 speed | | 1 | | ntrol | or lost principals |
| CACCETTE | | hain length (links) | Qend | 106 | | | | | agan Crowban rican for comfort wide for |
| CASSETTE | | | | us des sus dos abros es dans de | | | | ontrol | ager Crowbar- riser for comfort, wide for |
| WHEELSET | | | Rest in the characters and | | | | CC | office Of | |
| FRONT WHEEL | | - | tubeless co | | | L | | | |
| | | R.D., mm im strip | | 539 Tubeleu | | | | | • |
| FRONT TIRE . | | | 9 | | | | | | |
| | | ire size | • | 26 x 2.1 | | | | | |
| REAR WHEEL | | ager Race ATB, .R.D., mm | tubeless co | 539 | | | | | |
| | | im strip | | Tubeless | - Carlotte Committee | VA. artisani (Na. | an anna tata | ~~~ | en |
| REAR TIRE | | | 9 | 26 21 | GEA | RIN | C | | |
| SPOKES | | ire size USC buttod et: | dalace alla | 26 x 2.1 | | 22 | 32 | 44 | |
| SPUKES | | ront, mm | anness, ano | y mppies 251, Radial | 11 | 52 | 76 | 105 | |
| | | ear, mm | | 265/267, 3x | 12 | 48 | 70 | 96 | |
| INNER TUBES | | • | | | 14 | | 60 | | |
| OTHER | STATECTIC SEAS | | | i wajowa wa wa wa | 16 | | 52 | | |
| SEATPOST | Bontr | ager Race | ke0455655555 | entanting desired | | | 47 | | |
| | | luter diameter, mm | | 31.6 | 18 | | | | |
| SADDLE | WTB (| aser V Race, 0 | CrMo rails | | 21 | | 40 | | |
| BRAKES | | | | | 24 | | 35 | | BIKE WEIGHT |
| PEDALS | | | clipless | | 28 | | 30 | | 23.1 lb. |
| CEAT DIVIDED | | xle diameter | | 9/16" | 32 | 18 | 26 | 36 | 10.49 kg. |
| SEAT BINDER ADDITIONALS | I. | mer diameter, mm | | 36.4 | COL | | | | |
| hanger | wat | er portie moun | ts, replaces | anie detaillegt | Red | Meta | illic/ | Metallic | c • Blue/White decal • Deep Candy Red fork |
| rij | | | ak series of | en de la companya de la companya de la companya de la companya de la companya de la companya de la companya de La companya de la companya de la companya de la companya de la companya de la companya de la companya de la co | | ANAL TAR | | | |
| Frame | Size | S | M | r F | XL | | | | |
| | Inches Cm | 68 174 | 72 192 | 75 190 | 76 194 | | | | |
| Rider height | L.M | 174 630 | 182 630 | 190 630 | 194 630 | | | | |
| | | | | | 105 | | | | |
| Handlebar | Width, mm | | QA. | 105 | | | | | |
| | Width, mm Length, mm | 75 | 90 5 | 105 10 | | | | | |
| Handlebar Stem | Width, mm Length, mm Angle | 75 5 | 5 | 105 10 175 | 103 10 175 | | | | |
| Handlebar | Width, mm Length, mm | 75 | | 10 | 10 | | | | |

| MAIN TURES | Platinum series butted Zi | |
|------------|----------------------------|------------------|
| | Platinum series aluminum | |
| 31A13 | | · · |
| | Frame weight | 3.5 lb (1.59 kg) |
| FORK | Manitou Black Elite, adjus | table travel |
| | Travel, mm | 80-100 |
| | Axle-crown length, mm | 451 |
| HEADSET | STR Aheadset | |
| | Size | 25.4/34.0/30,0 |
| | Stack height, mm | 23.0 |
| | 5 | _ |
| | | |

CONTROLS HANDLEBAR Bontrager Crowbar Sport, 25mm rise Clamp diameter, mm

DRIVETRAIN

Cable routing

Steerer clamp height, mm

STEM Bontrager Comp

BRAKE LEVERS Alloy, direct pull

FT DERAILLEUR Shimano Deore

GRIPS Serfas dual density

SHIFT LEVERS Shimano Deore LX RapidFire+

| | • | |
|--|---|--|
| | | |
| | | |

Town on the California coast just south of Monterey. Robert Louis Stevenson said this was the most beautiful place on Earth where land meets sea.

25.4

41.0

Why this Fisher rocks: Rider: Adventure rider or Racer

Frameset

Genesis geometry- stable, fast Platinum series ZR9000 aluminum- light, super strong

Wheelset

Bontrager Superstock wheels- light, strong IRC Mythos XC tires- great all-round treads

Components

Expert level- LX/XT, Bontrager Comp crankset Manitou Black fork- adjustable travel Bontrager Crowbar- riser for comfort, wide for control

| | Cubic Ivating | гор рин | | 1 - | , |
|--|------------------------------|---------------------------------------|------------------|--------------------------|---------------|
| | Attachment | 34.9 mm/ 1 3/8* | | Wheelse | ŕ |
| RR DERAILLEUR | Shimano Deore XT SGS | | | Bon | |
| CRANKSET | Bontrager Comp 44/32/22 | | | 1100 | uа |
| | Bolt hole circle, mm | 64/104 | | IRC | My |
| BB | Shimano BB-LP28 | | l | 1_ | |
| | Shell x axle, mm | 73 × 113, Square | ĺ | Compon | ent |
| CHAIN | Shimano HG-53 | • | | Exp | ert |
| | Chain type | 9 speed | | Man | dta |
| | Chain length (links) | 106 | | | |
| CASSETTE | SRAM 7.0 11-32, 9spd | | l | Bon | |
| WHEELSET | | ACCEPTAGE OF THE CO. | į | contro |)l |
| CONTRACTOR OF THE PROPERTY OF THE PARTY OF T | Bontrager Superstock, 24° | TELES BEEN AND TEM | ĺ | | |
| *************************************** | E.R.D., mm | 542 | İ | | |
| | Rim strip | Velox 19mm | i | <u> </u> | |
| FRONT TIRE | | · · · · · · · · · · · · · · · · · · · | İ | | |
| *************************************** | Tire size | 26 x 2.1 | İ | | |
| REAR WHEEL | Bontrager Superstock, 28° | 20.1.2.1 | İ | | |
| | E.R.D., mm | 542 | İ | | |
| | Rim strip | Velox 22mm | İ | | |
| REAR TIRE | | | | C-10.10.11 | |
| | Tire size | 26 x 2.1 | GEAL | RING | 瀫 |
| SPOKES | DT 14G stainless | | j | 22 32 44 | |
| | Front, mm | 254, Radial | 111 | 52 76 105 | 1 |
| | Rear, mm | 267/269, 3x | | | |
| INNER TUBES | Presta valve | | | 48 70 96 | |
| OTHER | verkererer i de verkererere | one was a single same and consider | 14 | 41 60 82 | |
| | | | 16 | 36 52 72 | ı |
| SEATPOST | | 2 | | 32 47 64 | 1 |
| SADDLE | Outer diameter, mm | 31.6 | | | - 1 |
| | | | | 27 40 55 | 1 |
| | Shimano M420, V type | | 24 | 24 35 48 | 1 |
| PEDALS | Shimano SPD M515, clipless | | 28 | 21 30 41 | |
| OF AT DIVIDED | Axle diameter | 9/16" | | 18 26 36 | |
| SEAT BINDER | | | 32 | 10 20 30 | ı |
| ADDITIONALG | Inner diameter, mm | 36.4 | COLC | NDS. | ga. |
| | 3 water bottle mounts, repla | ceable derail- | | Chrome/Blac | 46348 L 14 |
| leur hanger | | | Diack | Cirionne/ biac | N IV |
| | | | ĺ | | |
| EIII | | | 11 11 11 11 12 1 | :755 (S31) YES (STEASURE | 1999 |
| 新華書和ANAMANA (ANAMA) (ANAMA) (ANAMA) (ANAMA) (ANAMA) (ANAMA) (ANAMA) (ANAMA) (ANAMA) (ANAMA) (ANAMA) (ANAMA) (A | | valesiyelin saala | | 加加亚河南部 | 40 |

| 3.04 | *** | 對對國際政策 |
|------|---------|--------|
| | 22 32 4 | 14 |
| 11 | 52 76 1 | 05 |
| 12 | 48 70 9 | 6 |
| 14 | 41 60 8 | 32 |
| 16 | 36 52 7 | '2 |
| 18 | 32 47 6 | 4 |
| 21 | 27 40 5 | 55 |
| 24 | 24 35 4 | 8 |
| 28 | 21 30 4 | 11 |
| 32 | 18 26 3 | 6 |
| | | |

| | provide the state of the state |
|---|---|
| Ì | BIKE WEIGHT. |
| | 26.7 lb. |
| | 12.12 kg. |
| ł | |

OLORS

Black Chrome/Black Metallic • White/Black decal • Candy Chrome fork

| FIT | | | | AME IN THE | and the second | alesanda de la como de la como de la como de la como de la como de la como de la como de la como de la como de | The second second | randriganistra | |
|--------------|------------|-------|-------|------------|----------------|--|-------------------|----------------|---|
| Frame | Size | S | М | L | XL | | | | |
| Rider height | Inches | 68 | 71 | 75 | 76 | | | | |
| | Cm | 173 | 181 | 190 | 193 | | | | |
| Handlebar | Width, mm | 620 | 620 | 620 | 620 | | | | · |
| Stem | Length, mm | 75 | 90 | 105 | 105 | | | | |
| | Angle | 5 | 5 | 10 | 10 | | | | |
| Crank | Length, mm | 170 | 175 | 175 | 175 | | | | Ì |
| Seatpost | Length, mm | 300 | 350 | 350 | 350 | | | | |
| Steerer | Length, mm | 175.2 | 190.2 | 210.2 | 230.2 | | | | |

| FRAMESET | | | | | t where | | | Dia Cur Dica |
|-----------------------------------|--|---|---|---|-----------|--------------|----------|--|
| | | tinum series but tinum series alui | | 00 | | | | Big Sur Disc |
| SIAYS | | tinum series alui <i>Frame weight</i> | minum | 3.5 lb (1.59 kg) | | | | |
| FORK | Mar | nitou Black Elite, | adjustable | travel | 1 | | | |
| | | Travel, mm | | 80-100 | 1 | | | Town on the California coast just south of Monterey. |
| HEADSET | STE | Axle-crown length, m | m | 451 | | | | Robert Louis Stevenson said this was the most beautiful place on Earth where land meets sea. |
| MEADOL! !! | | Size | | 25.4/34.0/30.0 | | | | place of Earth where land theets sea. |
| | | Stack height, mm | | 23.2 | 1 | | | |
| | | | | | | | | |
| MAXIFF OF O | negration et al state et la con- | o (Baldetonio) (Baltonio) | university to the second | territa de Polita de Colo | | | | |
| CONTROLS HANDLEBAR | and the second of the second | trager Crowbar | | | | | | |
| STEM | Bon | | | 25.4 | | | | |
| SHIFT I EVED | os shir | . <i>Steerer clamp height,</i> mano Deore LX I | mm DanidEiro≠ | 41.0 | l | Wh | this | Fisher rocks: |
| | | raulic, attached | | | | | | venture rider or Racer |
| | | as dual density | | | | | meset | venture river of graces |
| DRIVETRAI | | | | | | rra | | ils geometry- stable, fast |
| FT DERAILLE | UR Shir | nano Deore | 26 91997, 11.7 | e in errena (fil wisse) | i I | | | |
| | | Cable routing | | Top pull | 1 1 | _ | | um series ZR9000 aluminum- light, super |
| DO DEDAULT | ::UD | Attachment | | 34.9 mm/ 1 3/8" | | | trong | |
| | | nano Deore XT S trager Comp 44 | | | | Who | eelset | _ |
| | | Bolt hole circle, mm | 104144 | 64/104 | | | Bontr | ager Superstock wheels- light, strong |
| BB | Shir | nano BB-LP27 | | - 3.200 | | | IRC M | fythos XC tires- great all-round treads |
| | | Shell x axle, mm | | 73 x 113, Square | 1 1 | Can | iponer | nte . |
| CHAIN | Shir | | | 0 . / | 1 | COII | | t level- LX/XT, Bontrager Comp crankset |
| | | Chain type Chain length (links) | | 9 speed 106 | | | - | |
| CASSETTE | SRA | M 7.0 11-32, 9sp | d | 100 | | | | ou Black fork- adjustable travel |
| WHEELSET | rangan da | | | | | C | Bontrol | ager Crowbar- riser for comfort, wide for |
| TRON! WILL | .L, 50N | E.R.D., mm | LK DISC, 28 | 542 | | | Hayes | disc brakes- great control |
| FRONT TIRE | IRC | • | | Velox 22mm | | | | |
| DEAD WHEE | | Tire size | | 26 x 2.1 | 1 | | | |
| KEAK WHEEL | | trager Superstoe <i>E.R.D., mm</i> | ck Disc, 28 | o 542 | | | | • |
| | | Rim strip | | Velox 22mm | ĺ | | | |
| REAR TIRE | IRC | Mythos XC | | | GEAR | NG: | en el co | |
| CDOVEC | a | Tire size | | 26 x 2.1 | | 2 32 | | |
| SPOKES | DT 1 | 4G stainless Front, mm | | 267/267, 3x | | | 105 | |
| | | Rear, mm | | 26/1267, 3x 267/267, 3x | | 8 70 | | |
| INNER TUBES | Pres | | | , | | 1 60 | | |
| | arteste a | | geria de la compa | | | 6 52 | | |
| SEATPOST | | | 16 20 16 16 18 28 28 28 16 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18 | o o energia de la compaño de la compaño de la compaño de la compaño de la compaño de la compaño de la compaño La compaño de la compaño de la compaño de la compaño de la compaño de la compaño de la compaño de la compaño d | | 0 JZ 2 47 | | |
| CADDI = | | Outer diameter, mm | | 31.6 | | 7 40 | | |
| SADDLE | | 3 SST.X es HFX Comp, fu | II hudeaut | disc | | 4 35 | | BW/F WEV/SV- |
| העאעכס | наус | | | : GISC rele diameter, 44mm | | 4 33 1 30 | | BIKE WEIGHT 27.1 lb. |
| PEDALS | Shin | nano SPD M515, | | vanneng TIMII) | | 3 26 | | 27.1 lb. 12.30 kg. |
| SEAT BINDER | Allo | Axle diameter y w/Integral QR | | 9/16" | COLOR | | | |
| ADDITIONALS hanger | | <i>Inner diameter, mm</i> iter bottle moun | ts, replace | 36.4 able derallieur | | | | Metallic • White/Black decal • Candy Chrome fork |
| FIT | | | | ne serentemen | | (A) | a minis | |
| | Size | S | M | L | . XL | eres de la | | one and the control of the control o |
| Frame | Inches | 68 | 71 | 75 | 76 | | | |
| Frame Rider helght | 17101100 | 173 | 181 | 190 | 193 | | | |
| Rider height | Cm | | | 620 | 620 | | | |
| Rider height Handlebar | Cm Width, mm | 620 | 620 | 620 | | | | |
| Rider height | Cm Width, mm Length, mm | 620 75 | 90 | 105 | 105 | | | |
| Rider height Handlebar Stem | Cm Width, mm Length, mm Angle | 620 75 5 | 90 5 | 105 10 | 105 10 | | | |
| Rider height Handlebar | Cm Width, mm Length, mm | 620 75 5 170 | 90 | 105 | 105 | | | |

| MAIN TUBES | Platinum series butted Z | R9000 |
|------------|-----------------------------|------------------|
| | Platinum series aluminur | |
| Í | Frame weight | 3.5 lb (1.59 kg) |
| FORK | Manitou Black Elite Diva, a | |
| 1 | Travel, mm | 80-100 |
| ı | Axle-crown length, mm | 451 |
| HEADSET | STR Aheadset | |
| | Size | 25.4/34.0/30.0 |
| | Stack height, mm | 23.0 |
| | - | - |

Big Sur GS

Town on the California coast just south of Monterey. Robert Louis Stevenson said this was the most beautiful place on Earth where land meets sea.

| CONTROLS | | EPATRICAL SE |
|---|-------------------------------|-----------------------------|
| HANDLEBAR | . Bontrager Crowbar Sport | 25mm rise |
| | Clamp diameter, mm | 25.4 |
| STEM | | -3.7 |
| | Steerer clamp height, mm | 41.0 |
| SHIFT LEVERS | . Shimano Deore LX RapidF | lre+ |
| | . Alloy, direct pull, woman's | |
| GRIPS | | |
| DRIVETRAIN | | escherenterature |
| FT DERAILLEUR | Shimana Daora | Managara Carata And |
| I DENVILLEON | Cable routing | T |
| | Attachment | Top pull 34.9 mm/ 1 3/8" |
| RR DERAILLEUR | , Shimano Deore XT SGS | J 1.7 min 1 510 |
| | . Bontrager Comp 44/32/2 | , |
| | Bolt hole circle, mm | 64/104 |
| BB | , Shimano BB-LP28 | 01/101 |
| | Shell x axle, mm | 73 x 113, Square |
| CHAIN | . Shimano HG-53 | |
| | Chaîn type | 9 speed |
| | Chain length (links) | 106 |
| CASSETTE | . SRAM 7.0 11-32, 9spd | |
| WHEELSET | PARTERINATION OF THE CASE | SPERIOR PRESENTS |
| No. 1845年 1845年 1945年 1 | . Bontrager Superstock, 24 | |
| | E.R.D., mm | 542 |
| | | 2.00 |

Rim strip

E.R.D., mm

FRONT TIRE IRC Mythos XC

REAR WHEEL Bontrager Superstock, 28°

Why this Fisher rocks: Rider: Adventure rider or Racer

Frameset

Genesisters geometry- stable, fast for a woman Platinum series ZR9000 aluminum- light, super strong

Wheelset

Bontrager Superstock wheels- light, strong IRC Mythos XC tires- great all-round treads

Components

Expert level- LX/XT, Bontrager Comp crankset Manitou Black fork- adjustable travel Bontrager Crowbar- riser for comfort, wide for control

| Rim strip | Velox 22mm | i | | | |
|-----------------------------------|-----------------------|--------------------|--------|-------------|---|
| REAR TIRE IRC Mythos XC | | 1850 Marine Magazi | 14554 | 9645 PV (5) | 100000000000000000000000000000000000000 |
| Tire size | 26 x 2.1 | CEAF | ЛŅ | G. | 12. US |
| SPOKES DT 14G stainless | | l | 22 | 32 | 44 |
| Front, mm | 254, Radial | 11 | 52 | 76 | 105 |
| Rear, mm | 267/269, 3x | | | 70 | |
| INNER TUBES Presta valve | | | | | |
| OTHER | ein ein eine eine | | • • | 60 | |
| SEATPOST Bontrager Sport | ALANGUNISI FARRIZIFI. | 16 | 36 | 52 | 72 |
| Outer diameter, mm | 31.6 | 18 | 32 | 47 | 64 |
| SADDLE WTB SST.X, Women's | | 21 | 27 | 40 | 55 |
| BRAKES Shimano M420, V type | | | | 35 | |
| PEDALS Shimano SPD M515, clipless | | | | | |
| Axle diameter | 9/16" | 28 | 21 | 30 | 41 |
| SEAT BINDER Alloy w/integral QR | | 32 | 18 | 26 | 36 |
| Inner diameter, mm | 36.4 | | 753431 | 3411355 | Diametrace |

BIKE WEIGHT 26.2 lb. 11.89 kg.

Velox 19mm

26 x 2.1

542

ADDITIONALS 3 water bottle mounts (2 on XS), replaceable COLORS Pearl White/Blue Metallic • White/Blue decal • White fork

| Frame | Size | XS | S | M |
|--------------|------------|-------|-------|-------|
| Rider height | Inches | 65 | 67 | 70 |
| | Cm | 166 | 171 | 177 |
| Handlebar | Width, mm | 600 | 600 | 600 |
| Stem | Length, mm | 60 | 75 | 75 |
| | Angle | 5 | 5 | 5 |
| Crank | Length, mm | 170 | 170 | 175 |
| Seatpost | Length, mm | 300 | 300 | 350 |
| Steerer | Length, mm | 175.0 | 175.0 | 190.0 |

derailleur hanger

| FRAMESET | | | | | | | | Ноо | Koo | | Koo |
|------------------------------|--------------------------|---|---------------------------------|---------------------------|--------------|----------------------|--|---------------------------------|-----------------|---------------------|-----------------------------|
| MAIN TUBES | Gold | series 6061 T6 a series 6061 T6 a | aluminum | | | | | | | | |
| 31M13 | | Frame weight | 310 11,111 0 1111 | 3.5 lb (1.59 kg) | | | | Maure | k Indian name | for the t | ribe of Indians |
| FORK | Marz | occhl EXR | | | | | | mone | living near the | | |
| | | Travel, mm | | 80 | | | | | Ü | | |
| | | Axle-crown length, mm | | 451 | | | | | | | |
| HEADSET | | Aneaoset Size | | 25.4/34.0/30.0 | | | | | | | |
| | | Stack height, mm | | 23.0 | | | | | | | |
| CONTROLS HANDLEBAR STEM | Bont | | port, 25m | m rise <i>25.4</i> | | | | | | | |
| | | Steerer clamp height, m | | 41.0 | | | | | | | |
| | | iano Deore Rapid | ır IFe+ | | | | | | | | |
| BRAKE LEVER GRIPS | | | | | | N MIR | | | | | Trail |
| | | | Haran Maria | i i pri feri Bereitea | | W. F IV. IA 4 5-11 6 | ************************************** | Fisher rocks: | | | |
| DRIVETRAI | National State | augus misjuden | 型面积10%。 | over the sub- | | Rid | er: Ath | letic every-da; | y or Advent | ure ri | aer |
| FT DERAILLEU | | iano Deore <i>Cable routing</i> | | Top pull | | Fra | meset | | | | |
| | | Caose routing Attachment | | 34.9 mm/ 1 3/8" | | 1 | Genesi | is geometry- st | able, fast | | |
| RR DERAILLE | UR Shim | ano Deore LX S | GS | 1 | | 1 | | eries aluminum | | ng | |
| CRANKSET | Bont | rager Sport 44/: | 32/22 | j | | | - | | <u> </u> | _ | |
| | | Bolt hole circle, mm | | 64/104 | | Wh | eelset | | L _4 | | malılm. |
| вв | | | | 72112.6 | | | | ager rims- ligh | | | |
| CHAIN | | Shell x axle, mm | | 73 x 113, Square | | | IRC M | ythos XC tires | great all-re | und tr | eads |
| CHAIN | | iano HG-53 Chain type | | 9 speed | | 0 | | _ | | | |
| | | Chain type Chain length (links) | | 106 | | Cor | nponen Fotbu | its islast level- LX, | Doore | | |
| CASSETTE | | M 7.0 11-32, 9spd | I | | | | | | | | |
| WHEELSET | | 523004646485 | | | | 1 | | ou fork- steerir | _ | | |
| FRONT WHEEL | LAllov | , QR hub, 32°, E | Bontrager (| Corvair rim | | | Bontra | ager Crowbar- | riser for cor | nfort, v | wide for |
| | | E.R.D., mm | | 542 | | c | ontrol | - | | | |
| | | Rim strip | | Velox 19mm | | 1 | Shima | no clipless peda | als- double-s | ided. u | ser friendly |
| FRONT TIRE . | | | | 25 2.1 | | | ~u | | | , | |
| DEVD WITTE | | <i>Tire size</i> nano hub, 32°, Bo | ntrader Co | 26 x 2.1 rvair OSB rim | | L | | | | | |
| NEAR WITEL | | E.R.D., mm | mayer co | 542 | | | | | | | |
| | | Rim strip | | Velox 22mm | | | | - | | | |
| REAR TIRE | | • | | | GEA | RING | dell'affallen | | | | |
| | | Tire size | | 26 x 2.1 | | 22 32 | ≥ 44 | | | | |
| SPOKES | | | | 266, 3x | 11 | 52 7 6 | 105 | | | | |
| | | Front, mm Rear, mm | | 266, 3x 263/265, 3x | 12 | 48 70 | | | | | |
| INNER TUBES | | • | | 20,120,1, 54 | 14 | 41 60 | | | | | |
| OTHER | | | o asagaasta | La de la combina | 16 | 36 52 | | | | | |
| SEATPOST | | trager Sport | loithaseithe | CONTRACTOR SECTIONS | | 32 47 | | | | | |
| | | Outer diameter, mm | | 31.6 | 18 | 27 40 | | | | | |
| SADDLE | | | | | 21 | | | | 100 | 17/11 | VETOTER ' |
| BRAKES | Alloy | y direct pull | | | 24 | 24 39 | | | è | | veight . |
| PEDALS | | nano SPD M515, | clipless | | 28 | 21 30 | | | | 27.1 lb. 12.30 k | ·a |
| CEAT BUILDED | | Axle diameter | | 9/16" | 32 | 18 26 | 36 | | | 12.30 K | y. |
| SEAT BINDER | | y w/integral QR Inner diameter, mm | | 36.4 | COL | ADC | | | | 7.17.60 | S. Markinsk |
| ADDITIONAL S | | <i>inner diameser, mm</i> ater bottle moun | ts (2 on X9 | | | | massass lic/Rive • | Metallic • Black/W | hite Metallic d | scal • Al | องสารสารสาริกัน ack fork |
| derallieur han | | and Agent Boult | -> \m 411 \/ | | DIAC | n wetall | | motalile - Didon/ W | | C | |
| PIT | | or the their states | (#JATO COSTA (IS) | 的關係的學學 | 91182 | i mili | eson alph | hara mar salaha | | | 可 你们。它看 |
| Frame | Size | XS | S | M | L | 42-44-17-17-18-78-1 | XL | | | | |
| Rider height | Inches | 65 | 69 | 72 | 75 | | 76 | | | | |
| | Cm | 165 | 174 | 183 | 190 | | 194 | | | | |
| Handlebar | Wldth, mm | 620 | 620 | 620 | 620 | | 620 | | | | |
| Stem | Length, mm | | 75 | 90 | 105 | | 105 | | | | |
| | Angle | 15 | 15 | 15 | 15 | | 15 | | | | |
| | Length, mm | 170 | 170 | 175 | 175 | | 175 | | | | |
| Crank | • | | | | | | | | | | |
| Crank Seatpost Steerer | Length, mm Length, mm | 300 | 300 175.2 | 350 190.2 | 350 210.3 | | 350 230.2 | | | | |

| FRAMESET | Silver | series 7005 al | uminum | | - Jedowy | | | | Tassajara |
|---|--|-------------------------------------|---|--|------------|-----------------|--------|----------|---|
| | Silver | | | | | | | | . assayar c |
| | | ime weight | | 3.9 lb (1.77 kg) | 1 | - 4 | \ retr | eat near | Big Sur. Indian name for a place where meats are cooked |
| FORK | Manito | u Six Elite | | | 1 | | | | |
| | | wel, mm | | 80 | | | | | |
| UPADOET | | le-crown length, mm | | 451 | 1 | | | | |
| HEADSEI | STR Al | | | 05 (10 (0)00 0 | . | | | | |
| | Siz | e ck height, mm | | 25.4/34.0/30.0 23.0 | 1 | | | | |
| | On. | ek negus, mm | | 25.0 | | | | | |
| CONTROLS HANDLEBAR | Bontra | ger Crowbar S | port. 25m | m rise | | | | | |
| *************************************** | | mp diameter, mm | , , ,, , | 25.4 | | | | | |
| STEM | Bontra | | | | | | | | |
| | Stee | erer clamp height, m | | 41.0 | 1 | | | | |
| | S Shimar | | Fire+ | | | | | | |
| | RS Alloy, o | | | | I | | | | |
| | Serfas | | | | | | Why | y this | Fisher rocks: |
| DRIVETRAI | N ama | | ne sa sa sa sa sa sa sa sa sa sa sa sa sa | San udali. | 1 | | | | nletic every-day or Adventure rider |
| FT DERAILLE | UR Shimar | ю Deore | e - Jeanne meteority (Kelija) | 1、1、4、4、4、2、1、1、1、1、1、1、1、1、1、1、1、1、1、1、 | 1 | | | | and order or any or restrocted to the transfer |
| | | ble routing | | Top pull | | | rra | meset | |
| | | achment | Plate styl | e w/34.9mm clamp | | | | Genes | is geometry- stable, fast |
| | UR Shiman | | _ | | | - 1 | | Silver | series aluminum- super strong |
| CRANKSET. | Bontra | | 32/22 | | | | **** | | . 3 |
| n.n. | | t hole circle, mm | | 64/104 | | | wne | eelset | |
| RR | Shiman | | | 72 | | 1 | | Bontr | ager rims- light, strong, smooth braking |
| CHAIN | <i>She.</i> Shiman | ll x axle, mm | | 73 × 113, Square | 1 | | | IRC M | lythos XC tires- good all-round treads |
| CHARA | | 10 HG-33 1in type | | <i>ل</i> ه | 1 | | | | - |
| | | am type ain length (links) | | 9 speed 106 | | | Con | poner | |
| CASSETTE | SRAM | | | 100 | I | ſ | | Enthu | isiast level- Shimano Deore |
| | | | rangaginekan | og-egyagan-sakara-saka | | | | Manit | ou fork- great steering control |
| FRONT WHEE | L Alloy, C | R hub, 32°, B | ontrager (| Corvair rim | | | _ | Bontra | ager Crowbar- riser for comfort, wide for |
| | | l.D., mm 1 strip | | 542 Velox 19mm | | | C | ontrol | |
| FRONT TIRE | IRC My | • | | 11WA 17MM | | | | | ion to comfort points- user friendly pedals, |
| | | e size | | 26 x 2.1 | | | W | ılde baı | rs for control, and comfy saddle |
| REAR WHEEL | Shiman | | ntrager Co | | | | | | |
| | | D., mm | - | 542 | | <u></u> | | | |
| | | ı strip | | Velox 22mm | | | | | |
| REAR TIRE | IRC My | | | | óв | ÁTTAÝA | TA COM | YS MIS. | 1 |
| CDOVEC | | size | | 26 x 2.1 | | | | | |
| SPUKES | DT 14G | | | ~~~ | . | | 32 | | |
| | | nt, mm r, mm | | 266, 3x 263/265, 3x | | | | 105 | |
| INNER TUBES | nea S Schrae | | | 2031203, 3X | 12 | 48 | 70 | 96 | |
| | THE RESERVE OF THE PARTY OF THE | | Marie Technic | | 14 | 41 | 60 | 82 | |
| OTHER | | constant | | 学和学师领 | 16 | 36 | 52 | 72 | |
| SEATPUST . | Bontrac | ger Sport ter diameter, mm | | 29.2 | | | 47 | | |
| SADDLE | WTB SS | • • • • | | 23.2 | 21 | | 40 | | |
| | Alloy di | | | | | | | | |
| | Alloy pl | • | | | 24 | | 35 | | BIKE WEIGHT |
| . 20/100 / / / / | | diameter | | 9/16" | 28 | 21 | 30 | 41 | 28.0 lb. |
| SEAT BINDER | l Alloy w | | | | 32 | | 26 | | 12.71 kg. |
| ADDITIONAL S | 5 2 water | | s (1 on XS) | . rack | CO | LOR | S | | |
| mounts | E Hatel | Source (flouist) | - (1 OII NO) | , | Bla | ck Me | talli | c/Gold M | letallic • White/Sliver Metallic decal • Black fork |
| mounts | | | | | | | | | ver decal • Black fork |
| psompson open validation and | SOUGH SECTION ESTABLISHMENT PRODUCTS IN THE | District and a second second second | P075021010300000000000000000000000000000000 | NAME OF TAXABLE PARTY AND A PARTY. | more alter | AND DESCRIPTION | - | | |
| FIT | | | | | | | 機關 | | |
| Frame | Size | XS | \$ | M | L | | | XL | |
| Rider height | Inches | 65 465 | 69 | 72 | 75 | | | 76 | |
| 11====0==0 | Cm | 165 | 174 | 183 | 19 | | | 194 | |
| Handlebar | Width, mm | 620 | 620 | 620 | 62 | | | 620 | |
| | Length, mm | 60 | 75 | 90 | 10 | 5 | | 105 | |
| Stem | Angle | 15 | 15 | 15 | 15 | | | 15 | |

Crank

Seatpost

Steerer

Angle

Length, mm

Length, mm

Length, mm

15

170

300

175.2

15

170

300

175.2

15

175

350

210.2

15

175

350

230.2

15

175

350

190.2

| MAIN TUBES | Silver | r series 7005 alumir | num | | | | | Tassajara Disc |
|----------------------------|---------------------|---|--|-----------|--------------|----------|-------------------------|--|
| STAYS | | r series 7005 alumir Frame weight | num 3.9 lb (1.77 kg) | | A r | etrea | at near E | Big Sur. Indian name for a place where meats are cooked. |
| FORK | | | | | | | | |
| | | Travel, mm Axle-crown length, mm | 80° 451 | | | | | |
| HEADSET | | . - | 2. | | | | | |
| I III | | Size | 25.4/34.0/30.0 | | | | | |
| | ٤ | Stack height, mm | 23.0 | | | | | |
| CONTROLS HANDLEBAR | Bont | rager Crowbar Sport | , 25mm rlse 25.4 | | | | | |
| STEM | | Clamp diameter, mm racer Sport | 2).4 | | | | | |
| | | Steerer clamp height, mm | 41.0 | | W. C. | | ne waa tee 🞞 | |
| SHIFT LEVERS | 5 Shim | ano Deore RapidFire | + | | 1 | | | isher rocks: |
| BRAKE LEVER | RS Hydr | aulic, attached to br | ake | | R | lide | r: Ath | letic every-day or Adventure rider |
| GRIPS | Serfa | as dual density | and the second of the second o | l | F | ran | ieset | |
| DRIVETRAIN FT DERAILLEU | N JR Shim | ano Deore | | | | | | s geometry- stable, fast |
| | | Cable routing | Top pull | | 1 | , | Silver | series aluminum- super strong |
| | | Attachment | 34.9 mm/ 1 3/8" | l | l v | | elset | |
| RR DERAILLE | UR Shim | ano Deore SGS | 22 | i | | | | ger rims- light, strong, smooth braking |
| CRANKSET | | rager Sport 44/32/2 Bolt hole circle, mm | 64/104 | | | | | ythos XC tires- good all-round treads |
| ВВ | | | | | | | | · |
| | , | Shell x axle, mm | 73 x 110, Square | l | 10 | om | ponen | ts |
| CHAIN | | | 2/22" | | | | | siast level- Shimano Deore |
| 1 | | Chain type Chain length (links) | 3/32" 104 | | | | | ou fork- great steering control |
| CASSETTE | | M 7.0 11-32, 9spd | ••• | | 1 | | Bontra | ager Crowbar- riser for comfort, wide for |
| WHEELSET | | B. (\$2014) (12022) (1204) | STREET, STREET, | | | co | ntrol | |
| FRONT WHEE | L Alloy | , disc QR hub, 32°, E | from the commence of the Parish and the contract of the first of the f | | | | Attent | ion to comfort points- user friendly pedals, is for control, and comfy saddle |
| | | E.R.D., mm Rim strip | 334.3 Rubber | | 1 | | | |
| FRONT TIRE . | IRC I | Mythos XC | 26 . 105 | | L | | Hayes | disc brakes- superior speed control |
| DEAD WHEEL | | <i>Tire size</i> , disc QR hub, 32°, Bt | 26 x 1.95 ra Corvair OSB rim | | | | | |
| KEAR WILLEL | | E.R.D., mm | 554.5 | 1 | | | | |
| | | Rim strip | Velox 22mm | | | | - Company Server Server | • |
| REAR TIRE | | | 200 100 | GEA | | | | |
| SPOKES | | Tire size | 26 x 1.95 | | | 32 | | |
| SPURES | | Front, mm | , 2x | 11 | | | 105 | • |
| | | Rear, mm | , 3x | | | 70 | | |
| INNER TUBES | | | 44 mga sa sangganga sa ng nangganga akan ay masa sa | 14 | | 60 | | |
| OTHER | A.民族主义 | war are and how | 的现在是自己的 | 16 | | 52 | | |
| SEATPOST | | | 29.2 | 18 | | 47 | | |
| SADDLE | | Outer diameter, mm | 29.2 | 21 | | 40 | | accounts the first season and season section of the season and season section of the season and season at the season of the seas |
| BRAKES | | es HFX Comp, full hy | draulic disc | 24 | | 35 | | BIKE WEIGHT |
| | | Rotor diameter | 6.3 in. | | 21 | 30 | 41 | 30.0 lb. |
| l | | Bolt circle diameter | 44mm | 32 | 18 | 26 | 36 | 13,62 kg. |
| PEDALS | | Axle diameter | 9/16 | COL | ORS | 2 | | |
| į. | | y w/integral bolt Inner diameter, mm | 34.5 | Blac | k/Re | d • E | Black/Si | Iver decal • Black fork |
| ADDITIONALS | | | on XS), rack mounts | 1 | | | | · |
| FIT | i de la compania | | | 4-10 | | | | |
| Frame | Size | XS | S M | L | 5.00.139 F/F | | XL | employees a committee of the committee o |
| Rider height | Inches | 66 | 69 73 | 76 | | | 77 | |
| 1 | Cm | · · · · · · · · · · · · · · · · · · · | 175 185 | 192 | | | 196 | |
| Handlebar | Width, mm | | 580 600 | 600 | | | 520 105 | |
| Stem | Length, mm | | 75 90 15 15 | 105 15 | | | 105 15 | |
| Crank | Angle Length, mm | 15 170 | 170 175 | 175 | | | 175 | |
| Crank Seatpost | Length, mm | | 300 350 | 350 | | | 350 | |
| Steerer | Length, mm | | 191 206 | 226 | | | 246 | |
| | | | 2002 Fisher / Le | - 4 | | | | 53 |

| FORK | MAIN TUBES | Silver series aluminum | |
|---|------------|------------------------|-----------------|
| FORK | STAYS | Sliver serles aluminum | |
| ## Travel, mm Axle-erown length, mm 42 ### HEADSET | | Frame weight | 3.5 lb (1.59 kg |
| Axle-crown length, mm 45 HEADSET | FORK | Manitou Six Elite Diva | · |
| HEADSET STR Aheadset Size 25.4/34.0/30 | | Trivel, mm | 80 |
| Size 25.4/34.0/30 | | Axle-erown length, mm | 45. |
| 5,110,110,00 | HEADSET | STR Aheadset | |
| Stack height, mm 23 | | Size | 25.4/34.0/30.0 |
| | | Stack height, mm | 23.0 |
| | | • | 25.4/34 |

Tassajara GS

A retreat near Big Sur. Indian name for a place where meats are cooked.

| CONTROLS | To 3110 SE 1 | Why this |
|---------------------------------|--|--|
| HANDLEBAR Bontrager Crowbar | Sport, 25mm rise | 0.0.465-2450.00.00.00.00.00.00.00.00.00.00 |
| Clamp diameter, mm | 25.4 | Rider: Atl |
| STEM Bontrager Sport | | Frameset |
| Steerer clamp height, 1 | | Genes |
| SHIFT LEVERS Shimano Deore Rap | ldFire+ | |
| BRAKE LEVERS Alloy, direct pull | | Silver |
| GRIPS Serfas dual density | | Wheelset |
| DRIVETRAIN | | Bontr |
| FT DERAILLEUR Shimano Deore | মাজ হয়ে জেন্দ্রা সময়র প্রকাশ প্রাণার কর্মক ও ক্ষেত্রতার ইন্তর কলা গর । এই এব | |
| Cable routing | Top pull | IRC M |
| Attachment | 34.9 mm/ 1 3/8" | Commono |
| RR DERAILLEUR Shimano Deore SGS | | Componer |
| CRANKSET Bontrager Sport 44, | /32/22 | Enthu |
| Bolt hole circle, mm | 64/104 | Manit |
| BB Shimano BB-LP28 | | Bontr |
| Shell x axle, mm | 73 x 113, Square | control |
| CHAIN Shimano HG-53 | | control |
| Chain type | 9 speed | Wome |
| Chain length (links) | 106 | cranks, |
| CASSETTE SRAM 7.0 11-32, 9sp | d | |
| WHEELSET | | L |
| FRONT WHEEL Alloy, QR hub, 32°, | • | |
| E.R.D., mm | 542 | |
| Rim strip | Velox 19mm | |
| FRONT TIRE IRC Mythos XC | 26 x 2.1 | |
| REAR WHEEL Shimano hub, 32°, Bo | | |
| ERD., mm | ontrager Corvair OSB rim | |
| E.H.D., mm Rim strip | Velox 22mm | |
| REAR TIRE IRC Mythos XC | 12WX 22MM | |
| Tire size | 26 x 2.1 GE | ARING |
| SPOKES DT 14G stainless | 203 2,1 | 22 32 44 |
| Front, mm | 266, 3x 11 | 52 76 105 |
| Rear, mm | 263/265, 3x | 40 70 00 |

Why this Fisher rocks;

Rider: Athletic every-day or Adventure rider Frameset

Genesisters geometry- stable, fast for a woman Silver series aluminum- super strong

Wheelset

Bontrager rims- light, strong, smooth braking IRC Mythos XC tires- good all-round treads

Components

Enthusiast level- Shimano Deore

Manitou fork- great steering control

Bontrager Crowbar- riser for comfort, wide for control

Women's design- user friendly pedals, shorter cranks, wide bars for control, and comfy saddle

| Tire size | 26 x 2.1 | | | | 推炼经验 |
|--|-------------|-----------------|---------------------|------------|-------------------|
| SPOKES DT 14G stainless | | | 22 | 32 | 44 |
| Front, mm | 266, 3x | 11 | 52 | 76 | 105 |
| Rear, mm 2 INNER TUBES Presta valve | 63/265, 3x | 12 | 48 | 70 | 96 |
| OTHER | ASSESSED ES | 14 | 41 | 60 | 82 |
| SEATPOST Bontrager Sport | SUSPENSION | 16 | 36 | 52 | 72 |
| Outer diameter, mm | 29.2 | 18 | 32 | 47 | 64 |
| SADDLE WTB SST.X, Women's | | 21 | 27 | 40 | 55 |
| BRAKES Alloy direct pull | | 24 | 24 | 35 | 48 |
| PEDALS Alloy platform | 01111 | 28 | 21 | 30 | 41 |
| Axle diameter SEAT BINDER Alloy w/integral bolt | 9/16" | 32 | | 26 | |
| Inner diameter, mm | 35.0 | ELECTRICITATION | NEW TOTAL PROPERTY. | THE STREET | anaya kataniya da |

BIKE WEIGHT 27.7 lb. 12.58 kg.

COLORS

Silver Metallic/Pearl White • Black/Silver decal • White fork

| FIT | | 的现代的 | | | |
|--------------|------------|-------|-------|-------|--|
| Frame | Size | XS | S | М | |
| Rider height | Inches | 64 | 66 | 68 | |
| | Cm | 163 | 168 | 174 | |
| Handlebar | Width, mm | 600 | 600 | 600 | |
| Stem | Length, mm | 60 | 75 | 75 | |
| | Angle | 15 | 15 | 15 | |
| Crank | Length, mm | 170 | 170 | 175 | |
| Seatpost | Length, mm | 300 | 300 | 350 | |
| Steerer | Length, mm | 175.2 | 175.2 | 190.2 | |

ADDITIONALS 2 water bottle mounts (1 on XS), replaceable

derailleur hanger

Marlin

Big game fish known for its strength and beauty.

| FRAMESET | |
|--|------------------|
| MAIN TUBES Sliver series 7005 aluminum | |
| STAYS Silver series 7005 aluminum | |
| Frame weight | 3.9 lb (1.77 kg) |
| FORK RockShox Judy TT | |
| Travel, mm | 80 |
| Axle-crown length, mm | 451 |
| HEADSET STR Aheadset | |
| Size | 25.4/34.0/30.0 |
| Stack height, mm | 23.0 |
| | |

| - 1 | | | |
|-----|---------------|---|----------------------------|
| ļ | CONTROLS | | |
| | HANDLEBAR | Bontrager Crowbar Spor | t, 25mm rise |
| | | Clamp diameter, mm | 25.4 |
| | STEM | Bontrager Sport | |
| | | Steerer clamp height, mm | 41.0 |
| | SHIFT LEVERS | Shimano EZ Fire+ EF33 | |
| | BRAKE LEVERS | Integrated brake/shift | |
| | GRIPS | Serfas dual density | |
| | DRIVETRAIN | | |
| | FT DERAILLEUR | Shimana Altue | |
| | FI DERAILLEON | Cable routing | Top pull |
| | | Attachment | Plate style w/34.9mm clamp |
| i | RR DERAILLEUR | | • m.v 1910 1p 1.5 |
| | | Shimano Altus 42/34/2 | 4 |
| į | CRANKSEI | Bolt hole circle, mm | Riveted |
| | BB | - · · · · · · - · · · · · · · · · · · · | 21120701 |
| | BB | Shell x axle, mm | 73 x 121, Square |
| | CHAIN | • | 70 H 121, 09 HA |
| | CHAIN | Chain type | 3/32" |
| | | Chain length (links) | 106 |
| | CASSETTE | SRAM 5.0 11-32, 8spd | • |
| | | 0.00.000 | |
| | WHEELSET | | |
| | FRONT WHEEL | Alloy, QR hub, 32°, Bon | |
| | | E.R.D., mm | 542 |
| | | Rim strip | Velox 19mm |
| | FRONT TIRE | | |
| | | Tire tize | 26 x 2.1 |
| | REAR WHEEL | . Shimano RM40 hub, 32 | |
| | | E.R.D., mm | 542 |
| | l | Rim strip | Velox 19mm |
| | REAR TIRE | IRC Mythos XC | 06.0 |
| | | | |

Tire size

Front, mm

Rear, mm

OTHER,

Axle diameter

ADDITIONALS 2 water bottle mounts (1 on XS), rack

Inner diameter, mm

Outer diameter, mm

SPOKES DT 14G stainless

INNER TUBES Schraeder valve

SEATPOST Bontrager Sport

BRAKES Alloy direct pull

SEAT BINDER Alloy w/Integral bolt

PEDALS Alloy platform

SADDLE WTB SST.X

mounts

Why this Fisher rocks:

Rider: Athletic every-day or Adventure rider Frameset

Genesis geometry-stable, fast Silver series aluminum- super strong

Wheelset

Bontrager rims- light, strong, smooth braking IRC Mythos XC tires- good all-round treads

Components

Enthusiast level- Shimano Alivio, Bontrager accessories

Judy TT fork- great steering control

Bontrager Crowbar- riser for comfort, wide for control

Attention to comfort points- user friendly pedals, wide bars for control, and comfy saddle

| 542 | | | | | |
|--|-------------|----------|--------|---------|----|
| lox 19mm | | | | | |
| | GEA | RIN | G. | | |
| 26 x 2.1 | | 24 | 34 | 42 | |
| 266, 3x | 11 | 57 | 81 | 100 | |
| 3/265, 3x | 12 | 52 | 74 | 92 | |
| | 14 | 45 | 64 | 79 | |
| | 16 | 39 | 56 | 69 | |
| VALUE OF VAL | 18 | 35 | 50 | 61 | |
| 29.2 | 21 | 30 | 42 | 52 | |
| | 26 | 24 | 34 | 42 | |
| | 32 | 20 | 28 | 34 | |
| 9/16" | | | | | |
| 35.0 | COL | ORS | OH M | NEWS DA | |
| 0.0 | HATHAKE REF | Sey, 12, | | hell's | |
| | Blac | K Me | taille | : /Yell | 0) |
| | | | | | |

263/265

BIKE WEIGHT 28,5 lb. 12.94 kg.

w Metallic • Red/Black decal • Black fork Silver Metallic/Titanium • White/Silver decal • Black fork

| Frame | Size | XS | S | М | L | XL | |
|--------------|------------|-------|-------|-------|-------|-------|--|
| Rider height | Inches | 65 | 68 | 72 | 75 | 76 | |
| - | Cm | 166 | 174 | 182 | 190 | 193 | |
| Handlebar | Width, mm | 620 | 620 | 620 | 620 | 620 | |
| Stem | Length, mm | 60 | 75 | 90 | 105 | 105 | |
| | Angle | 15 | 15 | 15 | 15 | 15 | |
| Crank | Length, mm | 170 | 170 | 170 | 170 | 170 | |
| Seatpost | Length, mm | 300 | 300 | 350 | 350 | 350 | |
| Steerer | Length, mm | 170.2 | 170.2 | 185.2 | 205.2 | 225,2 | |

Genesis Unplugged

For 2002

These hardtails were updated in the 2001 model year. The frame is unchanged.

Geometry

The regular Genesis hardtails uses Gary Fisher's race-proven Genesis Geometry. These bikes use a slightly more recreational version of that race design. The rider sits more upright, and the steering has been tuned to offer increased stability with a little less weight on the front wheel.

Ride

These bikes are stable, yet still plenty nimble for some really fun singletrack riding. The most noticeable difference in the ride will be the slightly more comfortable, and less 'committed' riding position. Other than that, they still ride like a Fisher.

Frame details

These frames use our Cro-Moly and Hi-tensile steel technology. Steel is very durable, and has great ride characteristics tuned by 100 years of perfecting. With Fisher's intelligent design, its also astoundingly light weight.

These frames have 2 water bottle mounts.

Fit Information Reminder

When considering the "Rider Height" portion of the Fit information on each page, bear in mind that we made these fit estimations with the stem at its highest point. With Ahead stems, that means all the spacers were under the stem. With quill stems, the handlebars reach their maximum height with the stem pulled up to the minimum insertion line. With adjustable stems, it's calculated with the stem at a 40 degree angle. Lowering the bars, or changing the parts, or changing the stem angle, changes the fit of the bike as well as its Rider Height. Primarily, if you lower the stem, the bike will fit a smaller person. If you make the stem more upright, it will also make the bike fit a smaller person.

| THE RESERVE AND THE PARTY OF THE PROPERTY OF THE PARTY OF | | | | | | |
|--|------|------|------|------|------|------|
| Frame sizes | XS | S | M | L | XL | XXL |
| Head angle | 70.5 | 71.0 | 71.5 | 71.5 | 71.5 | 72.0 |
| Seat angle | 74.5 | 74.0 | 74.0 | 73.5 | 73.5 | 73.0 |
| $\boldsymbol{\omega}$ | | | | | | |
| ய். Standover | 646 | 701 | 743 | 772 | 811 | |
| Seat tube | 324 | 401 | 451 | 490 | 540 | 604 |
| Head tube | 105 | 125 | 145 | 165 | 185 | 225 |
| ☐ Eff top tube | 545 | 568 | 586 | 604 | 622 | 640 |
| Standover Seat tube Head tube Eff top tube Chainstape BB batasis | 415 | 415 | 415 | 415 | 415 | 415 |
| BB height | 288 | 291 | 295 | 295 | 295 | 295 |
| Offset | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 |
| Trail | 79 | 75 | 72 | 72 | 72 | 69 |
| Wheelbase | 1022 | 1037 | 1053 | 1067 | 1085 | 1093 |
| | | | | | | |
| Standover | 25.4 | 27.6 | 29.3 | 30.4 | 31,9 | |
| Seat tube Head tube Eff top tube | 12.8 | 15.8 | 17.8 | 19.3 | 21.3 | 23.8 |
| 工 Head tube | 4.1 | 4.9 | 5.7 | 6.5 | 7.3 | 8.9 |
| ≝ Eff tóp tube | 21.5 | 22.4 | 23.1 | 23.8 | 24.5 | 25.2 |
| Chainstays | 16.3 | 16.3 | 16.3 | 16.3 | 16.3 | 16.3 |
| BB héight | 11.3 | 11,5 | 11.6 | 11.6 | 11.6 | 11.6 |
| Offset | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Trail | 3.1 | 3.0 | 2.8 | 2.8 | 2.8 | 2.7 |
| Wheelbase | 40.2 | 40.8 | 41.5 | 42.0 | 42.7 | 43.0 |
| | | | | | | |

Thin, silvery fish. Exclamation of excited fun.

| Axic-crown length, mm Axic-crown length, mm Steel Size Stack height, mm 25 CONTROLS HANDLEBAR Steel, 30mm rise Clamp diameter, mm Stem Steem clamp beight, mm 46 Steerer clamp beight, mm Attachment Serfas dual density Cable routing Attachment Top p Attachment Attachment Attachment BB Cartridge Shell x axie, mm CHAIN CASSETTE SRAM 5.0 11-32, 8spd NHEELSET FRONT WHEEL Alloy, QR hub, 36°, Matrix 550 rim READ, mm READ ERD, mm ERD, mm Stize 25.4/34.0/36 25.4/34.0/36 26x 1.4 25.4/34.0/36 26x 1.4 | RAMESET | Double-butted Cro-Moly et | s - Alio Bosco (1879) Bal |
|--|----------------|----------------------------------|--|
| FORK RockShox Judy TT Travel, mm Axle-crown length, mm Axle-crown length, mm Axle-crown length, mm Axle-crown length, mm Axle-crown length, mm Axle-crown length, mm Axle-crown length, mm Size 25.4/34.0/36 Stack height, mm 25 Stack height, mm Attachment Steen clamp diameter, mm Steen clamp height, mm Attachment Steen clamp height, mm Attachment Steen clamp height, mm Attachment Steen clamp height, mm Attachment Steen clamp height, mm Attachment Steen clamp height, mm Attachment Steen clamp height, mm Attachment Steen clamp height, mm Attachment Steen clamp height, mm Attachment | TAVE | Cro-Main stool | .441 |
| Travel, mm Axle-crown length, mm Axle-crown length, mm Axle-crown length, mm Size Size Size Stack height, mm 25 CONTROLS HANDLEBAR Steel, 30mm rise Clamp diameter, mm Steme clamp leight, mm Steme clamp leight, mm Axle-crown length, mm Steme clamp leight, mm Steme clamp leight, mm Steme clamp leight, mm Axle-crown length Steme clamp leight, mm Axle-crown length Steme clamp leight, mm Axle-crown length Steme clamp leight, mm Axle-crown length Steme clamp leight, mm Axle-crown length Steme clamp leight, mm Axle-crown length Steme clamp leight, mm Axle-crown length Steme clamp leight, mm Axle-crown length Steme clamp leight, mm Axle-crown length Steme clamp leight, mm Axle-crown length, mm Axle- | | | |
| Axic-crown length, mm Steel Size Size Size Stack height, mm 25 BONTROLS HANDLEBAR Steel, 30mm rise Clamp diameter, mm Stem Steem Bontrager Sport Steerer clamp height, mm SHIFT LEVERS Shimano EF29 BRAKE LEVERS Integrated brake/shift GRIPS Serfas dual density PRIVETRAIN FT DERAILLEUR Shimano CO50 Cabe routing Attachment 31.8 mm/ 1 in RR DERAILLEUR Shimano Acera-X CRANKSET FCM55, alloy, 42/34/24 Bolt hole circle, mm Rive BB Cartridge Shell x axle, mm CHAIN KMC Z-72 Chain type Chain length (links) CASSETTE SRAM 5.0 11-32, 8spd NHEELSET FRONT WHEEL Alloy, QR hub, 36°, Matrix 550 rim ER.D., mm Rim strip Rub FRONT TIRE IRC Mythos XC Tire size REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rim ER.D., mm Rim strip Rub Rim strip Rub Rim strip Rub Rim strip Rub Rim strip Rub Rim strip Rub Rim strip Rub Rim strip Rub Rim strip Rub Rim strip Rub Rim strip Rub Rim strip Rub Rim strip Rub Rim strip Rub Rim strip Rub Rim strip Rub Rub Rim strip Rub Rim strip Rub Rub Rim strip Rub Rub Rim strip Rub Rub Rub Rub Rim strip Rub Rub Rub Rub Rub Rub Rub Ru | URK | • | 80 |
| HEADSET Steel Size 25.4/34.0/36 Stack height, mm 22 BONTROLS HANDLEBAR Steel, 30mm rise Clamp diameter, mm 22 STEM Bontrager Sport Steerer clamp height, mm 46 SHIFT LEVERS Shimano EF29 BRAKE LEVERS Integrated brake/shift GRIPS Serfas dual density PRIVETRAIN FT DERAILLEUR Shimano CO50 Cable routing Top p Attachment 31.8 mm/ 1 in RR DERAILLEUR Shimano Acera-X CRANKSET FCM55, alloy, 42/34/24 Both hole circle, mm Rive BB Cartridge Shell x axle, mm 68 x 113, Squ. CHAIN KMC Z-72 Chain type 313 Chain type 313 CASSETTE SRAM 5.0 11-32, 8spd WHEELSET FRONT WHEEL Alloy, QR hub, 36°, Matrix 550 rlm E.R.D., mm Rim trip Rub FRONT TIRE IRC Mythos XC Tire size 26 x 1.8 REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rlm E.R.D., mm Rim trip Rub Rim trip Rub Rim trip Rub Rim trip Rub Rim trip Rub Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM Rim trip Rub SRAM SRAM SRAM SRAM Rub SRAM | | • | 451.0 |
| Size Stack height, mm Size Stack height, mm Steel, 30mm rise Clamp diameter, mm Stem Steer clamp height, mm Stee | IE A DOET | • | 4)1.0 |
| CONTROLS HANDLEBAR Steel, 30mm rise Clamp diameter, mm STEM Bontrager Sport Steerer clamp height, mm SHIFT LEVERS Shimano EF29 BRAKE LEVERS Integrated brake/shift GRIPS Serfas dual density PRIVETRAIN FT DERAILLEUR Shimano CO50 Cable routing Top p Attachment 31.8 mm/ 1 le RR DERAILLEUR Shimano Acera-X CRANKSET FCM55, alloy, 42/34/24 Bot hole circle, mm Rive BB Cartridge Shell x axle, mm 68 x 113, Sque CHAIN KMC Z-72 Chain length (linkt) 1 CASSETTE SRAM 5.0 11-32, 8spd NHEELSET FRONT WHEEL Alloy, QR hub, 36°, Matrix 550 rim E.R.D., mm Rim strip Rub FRONT TIRE IRC Mythos XC The size 26 x 1. REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rim E.R.D., mm Rim strip Rub Rear with the size Shimano RM40 hub, 36°, Matrix 550 rim E.R.D., mm Rim strip Rub Rear with the size Shimano RM40 hub, 36°, Matrix 550 rim E.R.D., mm Rim strip Rub | TEADSET | | 25 4124 0120 0 |
| CONTROLS HANDLEBAR Steel, 30mm rise Clamp diameter, mm 22 STEM Bontrager Sport Steerer clamp height, mm 46 SHIFT LEVERS Shimano EF29 BRAKE LEVERS Integrated brake/shift GRIPS Serfas dual density DRIVETRAIN FT DERAILLEUR Shimano CO50 Cable routing Top p Attachment 31.8 mm/ 1 is RR DERAILLEUR Shimano Acera-X CRANKSET FCM55, alloy, 42/34/24 Bolt hole circle, mm Rive. BB Cartridge Shell x axle, mm 68 x 113, Squ. CHAIN KMC Z-72 Chain type Chain length (linkt) CASSETTE SRAM 5.0 11-32, 8spd NHEELSET FRONT WHEEL Alloy, QR hub, 36°, Matrix 550 rlm E.R.D., mm Rim strip Rabi FRONT TIRE IRC Mythos XC The size REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rlm E.R.D., mm Rim strip Rabi FRONT STORM SO TIME SET INC Mythos XC The size Strim strip Rabi REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rlm E.R.D., mm Rim strip Rub | | | 23.0 |
| ## ANDLEBAR Steel, 30mm rise Clamp diameter, mm | | | |
| STEM | | | |
| Steerer clamp height, mm | | | 25.4 |
| SHIFT LEVERS | STEM | | |
| ### BRAKE LEVERS Integrated brake/shift GRIPS | | | 40.0 |
| Serias dual density Serias dual density | | | |
| DRIVETRAIN FT DERAILLEUR | BRAKE LEVERS | . Integrated brake/shift | |
| ### TOPRAILLEUR Shlmano C050 Cable routing | RIPS | . Serfas dual density | |
| ### TOPRAILLEUR Shlmano C050 Cable routing | DIAZETED ATAI | tieren verget in die Stein Stein | STATE OF THE STATE |
| Cable routing | | | anata antara |
| Attachment 31.8 mm/ 1 In RR DERAILLEUR Shimano Acera-X CRANKSET FCM55, alloy, 42/34/24 Bolt hole circle, mm Rive. BB Cartridge Shell x axle, mm 68 x 113, Squ. CHAIN KMC Z-72 Chain type 343 Chain tength (links) 1 CASSETTE SRAM 5.0 11-32, 8spd WHEFLSET FRONT WHEEL Alloy, QR hub, 36°, Matrix 550 rlm E.R.D., mm Rim strip Rub. FRONT TIRE IRC Mythos XC Tire size 26 x 1. REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rlm E.R.D., mm E.R.D., mm Rim strip Rub. REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rlm E.R.D., mm E.R.D., mm Rim strip Rub. | I DERAILLEUR | | T |
| RR DERAILLEUR Shimano Acera-X CRANKSET FCM55, alloy, 42/34/24 Bolt hole circle, mm Rive. BB Cartridge Shell x axle, mm 68 x 113, Squ. CHAIN KMC Z-72 Chain tope 313 Chain type 316 Chain tength (links) 1 CASSETTE SRAM 5.0 11-32, 8spd WHEELSET SRAM 5.0 11-32, 8spd WHEELSET SRAM 5.0 11-32, 8spd FRONT WHEEL Alloy, QR hub, 36°, Matrix 550 rim E.R.D., mm 5 Rim strip Rub. FRONT TIRE IRC Mythos XC Tire size 26 x 1. REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rim E.R.D., mm 6 Rim strip Rub. REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rim E.R.D., mm 6 Rim strip Rub. | | | |
| CRANKSET FCM55, alloy, 42/34/24 Bolt hole circle, mm Rive. BB CartrIdge Shell x axle, mm 68 x 113, Squ. CHAIN KMC Z-72 Chain type 313 Chain type (linkt) 1 CASSETTE SRAM 5.0 11-32, 8spd WHEELSET FRONT WHEEL Alloy, QR hub, 36°, Matrix 550 rlm E.R.D., mm 5 Rim strip Rub. FRONT TIRE IRC Mythos XC Tire size 26 x 1. REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rim E.R.D., mm 6 Rim strip Rub. REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rim E.R.D., mm 6 Rim strip Rub. | ND DED 141 EUR | | 31.0 mm 1 1/4 |
| Bolt hole circle, mm Rive. | | | |
| BB | RANKSET | | |
| Shell x axle, mm 68 x 113, Squ. CHAIN | | | Riveted |
| CHAIN | 3B | • | |
| Chain type | | | 68 x 113, Square |
| Chain length (links) 1 CASSETTE | CHAIN | . KMC Z-72 | |
| CASSETTE | | Chain type | <i>3/32</i> " |
| WHEELSET FRONT WHEEL Alloy, QR hub, 36°, Matrix 550 rlm E.R.D., min Rim strip Rub FRONT TIRE IRC Mythos XC Tite size REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rim E.R.D., min E.R.D., min Rim strip Rub | | Chain length (links) | 110 |
| WHEELSET FRONT WHEEL Alloy, QR hub, 36°, Matrix 550 rlm E.R.D., min Rim strip Rub FRONT TIRE IRC Mythos XC Tite size REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rim E.R.D., min E.R.D., min Rim strip Rub | CASSETTE | . SRAM 5.0 11-32, 8spd | |
| FRONT WHEEL Alloy, QR hub, 36°, Matrix 550 rlm E.R.D., mm Rim strip FRONT TIRE IRC Mythos XC Tire size REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rim E.R.D., mm Rim strip Rub. | | | |
| E.R.D., mm Rim strip FRONT TIRE | DONT WHEEL | Alloy OP bub 369 Matrix | , SSO rim |
| Rim strip Rub | KON! WILL | | 559 Fim |
| FRONT TIRE IRC Mythos XC Tire size 26 x 1. REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rim E.R.D., mm Rim urip 8 Rub | | • | ארכי Rubber |
| Tire size 26 x 1. REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rim E.R.D., mm Rim strip Rub | DANT TIDE | • | Rubber |
| REAR WHEEL Shimano RM40 hub, 36°, Matrix 550 rim E.R.D., mm Rim urip Rub | KONI IIKE | | 26 100 |
| E.R.D., mm 5 Rim strip Rub | | | |
| Rim strip Rub | REAR WHEEL | · | |
| v=y | | | 559 |
| DEAD TIPE IRC Mythos XC | | | Rubber |
| REAR THE TITTETT INO INJUING AG | REAR TIRE | , IRC Mythos XC | |

Tire size

Front, mm

OTHER

Axle diameter

Inner diameter, mm ADDITIONALS 2 water bottle mounts (1 on XS, S), rack

MT

XS

206

Outer diameter, mm

Rear, mm

SPOKES 14G stainless

INNER TUBES Schraeder valve

SEATPOST Alloy micro-adjust

SADDLE Fisher Padded BRAKES Alloy direct pull

SEAT BINDER Kalloy M6 x 55

Slze

Length, mm

PEDALS Platform

mounts

Frame

Steerer

| | Wh | y this F | isher roc | ks: | | | | | | |
|-------------------|--|---|-----------------------|---|---|--|--|--|--|--|
| | Ric | der: Dou | bletrack | rider or athle | tic newbie | | | | | |
| , ,, | Fra | ameset | | | | | | | | |
| op pull I 1/4" | 1 | | d Genesis comforta | | re upright design | | | | | |
| | | Steel- t | tough and | l durable | | | | | | |
| liveted | Wheelset Matrix rims- light, strong, smooth braking | | | | | | | | | |
| Square | | | - | tires- great all-: | | | | | | |
| 3/32" | | • | | tires- great air- | round treads | | | | | |
| 110 | Con | mponen Enthus | | - Alivio, Acera | | | | | | |
| | | | | | ntrol over bumps | | | | | |
| 98538d | | | | for comfort, wi | - | | | | | |
| 559 Rubber | | | | • | er friendly pedals, | | | | | |
| | , | wide bar | s for cont | rol, and comfy | saddle | | | | | |
| * 1.95 n | | | | | | | | | | |
| 559 | L | | | | | | | | | |
| Rubber | GEARING | | | | | | | | | |
| x 1.95 | 24 3 | *************************************** | | | | | | | | |
| 65. 3x | | 1 100 | | | | | | | | |
| 63, 3x | | | | | | | | | | |
| 2898888 | 14 45 6 | | | | | | | | | |
| | 16 39 5 18 35 5 | | | | | | | | | |
| 29.2 | 18 35 5 21 30 4 | | | | | | | | | |
| | _, | 4 42 | | | BIKE WEIGHT | | | | | |
| | 32 20 2 | 8 34 | | | 32.1 lb. | | | | | |
| 9/16" | | | | | 14.57 kg. | | | | | |
| 31.8 | COLORS | regularisti | | | 。 《新》新新。例如 | | | | | |
| | Sliver Meta | | ic Dark Gre | en • White/Dark Si | lver decal • | | | | | |
| | Silver Meta Black/Mirro | | White/Silve | r Metallic decal • E | Black fork | | | | | |
| 446.1 | | | | Factor 1011 | | | | | | |
| 911927XX5477 | C | XL | XXL | চাৰ কৰা কৰা চৰকাৰ কৰা কৰিব কৰা কৰিব কৰা কৰিব কৰিব কৰিব কৰিব কৰিব কৰিব কৰিব কৰিব | eaugr ne 11 mailt 4 Ann Annaidh an dhailt 1964 i 1974 i 1964 an Aineach | | | | | |
| | 76 192 | 79 202 | 81 207 | | | | | | | |
| | 1 | | · | | | | | | | |

S

266

286

325

246

26 x 1.95

265, 3x

262/263, 3x

| LKAMEDEL | 5. 今是他的人的是有一些有些情况的 | (1) 25 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1) |
|--------------|-----------------------|--|
| MAIN TUBES H | Tensile steel | |
| STAYSHI | Tensile steel | |
| FORK | R XCC | |
| | Travel, mm | 63 448 |
| | Axle-crown length, mm | 448 |
| HEADSETst | eel | |
| | Size | 25.4/34.0/30.0 |

Stack height, mm

Mamba

A great dance you can do on your bike.

| CONTROLS | ASBINITED AND ACCURATION OF THE POST AND ACCURATE |
|----------------------|--|
| HANDLEBAR Steel, 3 | |
| • | amp diameter, mm 25.4 |
| STEM Alloy A | • • |
| • | erer clamp height, mm 41.0 |
| SHIFT LEVERS Shimar | |
| BRAKE LEVERS Integra | ted brake/shift |
| GRIPS Serfas | • |
| DRIVETRAIN | 10-10-4-11-11-11-11-11-11-11-11-11-11-11-11-1 |
| FT DERAILLEUR Shiman | o C051 |
| | ble rousing Top pull, (W-down) |
| | achment 31.8 mm/ 1 1/4" |
| RR DERAILLEUR Shiman | |
| CRANKSET FCM35 | 1 |
| | t hole circle, mm Riveted |
| BB Semi-ca | artridge |
| She | ll x axle, mm 73 x 121.5, Square |
| CHAINKMC Z- | 51 |
| | ain type 3/32" |
| | tin length (links) 110 |
| CASSETTE Sun Ra | ce 13-30, 7spd |
| WHEELSET | |
| FRONT WHEEL Alloy, Q | R hub, 36°, Matrix 550 rlm |
| | 2.D., mm 559 |
| | strip Rubber |
| FRONT TIRE Bontrac | • |
| | 26 x 1.95 |
| REAR WHEEL Alloy, Q | 2D., mm 559 |
| | strip Rubber |
| REAR TIRE Bontrac | • |
| | r size 26 x 1.95 |
| SPOKES 14G sta | inless |
| Free | nt, mm 265, 3x |
| Reas | r, mm 262-263, 3x |
| INNER TUBES Schraed | der valve |
| OTHER WINDS | Declaration of the contraction o |
| SEATPOST Alloy m | icro-adiust |
| • | ter diameter, mm 29.2 |
| SADDLE Fisher I | Padded |
| BRAKES Alloy di | rect pull |
| PEDALS Platform | n |
| | e diameter 9/16" |
| SEAT BINDER Bolt, Me | 6 x 30 |
| | av |

Inner diameter, mm

ADDITIONALS 2 water bottle mounts (1 on XS, S), rack

| Why this Fisher rocks: | 4.00% 可以有效的基 |
|------------------------|--------------|
|------------------------|--------------|

Rider: Doubletrack rider or casual newble Frameset

Adapted Genesis geometry- more upright design is stable, comfortable

Steel- tough and durable

Wheelset

23

Matrix rims- light, strong, smooth braking Bontrager Connection tires- big for comfort, reduced knob size for easy pedaling

Components

Recreation level- Alivio, 24 speed, 'V' type brakes RockShox fork- comfort and control over bumps Riser bar- riser for comfort, wide for control Attention to comfort points- user friendly pedals, wide bars for control, and comfy saddle

| GEA | RIN | G. | OF WHILE | l |
|-----|-----|----|----------|---|
| | 28 | 38 | 48 | |
| 13 | 56 | 77 | 97 | |
| 15 | 49 | 66 | 84 | |
| 17 | 43 | 59 | 74 | |
| 19 | 39 | 52 | 66 | ŀ |
| 22 | 33 | 45 | 57 | |
| 25 | 29 | 40 | 50 | |
| 30 | 24 | 33 | 42 | |
| | | | | |
| | | | 1 | ł |

COLORS

Yeilow Metallic/Black Metallic • White/Silver decal • Yeilow Metallic fork Sliver Metallic/Red • Black/White decal • Sliver fork

| Frame | Size | XS | S | М | L | XL | LS-M | |
|--------------|------------|-----|-----|-----|-----|----------------|------|--|
| Rider height | Inches | 68 | 70 | 74 | 76 | 7 9 | 73 | |
| | Cm | 173 | 179 | 188 | 192 | 201 | 186 | |
| Handlebar | Width, mm | 580 | 580 | 600 | 600 | 600 | 600 | |
| Stem | Length, mm | 90 | 90 | 110 | 110 | 130 | 110 | |
| | Angle | 25 | 25 | 25 | 25 | 25 | 40 | |
| Crank | Length, mm | 170 | 170 | 175 | 175 | 175 | 170 | |
| Seatpost | Length, mm | 300 | 300 | 350 | 350 | 350 | 300 | |
| Steerer | Length, mm | 206 | 226 | 246 | 266 | 286 | 246 | |

mounts

| | Hi Tens | ile steel | | | | | | | | | Tarpon |
|------------------------|--------------------------|--|----------------|---|--------------|-------------|----------------|---|------------------------------|--------------------|---|
| | Hi Tens | | | | | | | | | Big | ; (up to 100 lbs.) game fish |
| HEADSET | <i>Axi</i> Sealed | le-crown length, mm | | 398 | | | | | | | |
| .,_,,,, | Siz | e | | 25.4/34.0/30.0 36.5 | | | | | | | |
| | 314 | ck height, mm | | | | | | | | | |
| CONTROLS | | | | | | | | | | | |
| HANDLEBAR | Steel, 3 | 30mm rise unp diameter, mm | | 25.4 | | | | | | | |
| STEM | , Steel A | ATB erer clamp height, m | m | | | | THE PROPERTY. | | | at Care | |
| | S Shimar | no EF29 | | | | | | s risner i Casual dou | | | or newbic |
| | ≀S Integra Serfas | | t | | | | rames | | idie (1 aca | , idei | OF MOTIVAC |
| DRIVETRAI | | | 3772 | | | | Ada | | | try- m | ore upright design |
| | | ble routing achment | | Top pull, (W-down) 31.8 mm/ 1 1/4" | | | Ste | el- tough a | nd durabl | е | |
| | UR, Shimai | no Altus GS | 100 | | | W | heels | | | | |
| | | lt hole circle, mm | 28 | Riveted | | | | | _ | | ooth braking ig for comfort, |
| BB | Semi-c | artridge ell x axle, mm | | 68 x 122.5, Square | - | | | ed knob si | | | |
| CHAIN | KMC Z | -51 | | • | | C | ompor | ents | | | |
| | | ain type ain length (links) | | 3/32" 110 | | | | | _ | | type brakes |
| | Sun Ra | | | 111111111111111111111111111111111111111 | | | Ris trol | er handleb | ar- riser f | or com | fort, wide for con- |
| WHEELSET FRONT WHEE | L Alloy, (| QR hub, 36°, I | Matrix 550 |) rlm 559 | | | Att | ention to c bars for co | omfort po | ints- u | ser friendly pedals, |
| | Rin | n strip | _ | Rubber | | | wide | Dais for Co | ritioi, and | comi | dadio |
| | | re size | | 26 x 1.95 | | | | | | | |
| REAR WHEEL | Alloy, 6 | DR hub, 36°, i R <i>D., mm</i> | datrix 550 |) rim 559 | | - | | | | | |
| 0540 TIDE | Rin | m strip | _ | Rubber | Nart Wasyall | inovidante. | 24.00 St. | 4Const | | | |
| REAR TIRE | Bontra | ger Connectio v ilze | II | 26 x 1.95 | GEA | | G 38 48 | | | | |
| SPOKES | 14G sta | ainless ont, mm | | 265, 3× | 13 | | 77 97 | | | | |
| | Re | ar, mm | | 262/263, 3x | 15 | | 66 84 | | | | |
| INNER TUBES OTHER | Schrae | der valve | echel argesta! | | 17 19 | | 59 74 52 66 | | | | |
| | Alloy r | | | t podostronis objektom in | 22 | | 45 57 | - 1 | | | |
| SADDLE | o، Fisher | iter diameter, mm Padded | | 29.2 | 25 | 29 | 40 50 | | | | |
| BRAKES | Alloy o | lirect pull m | | 011 (11 | 30 | 24 | 33 42 | | | | BIKE WEIGHT 31.1 lb. 14.12 kg. |
| SEAT BINDER | Boit, M | le diameter 16 x 30 ner diameter, mm | | 9/16" 31.8 | COL | ORS | CACACA | 100000000000000000000000000000000000000 | 1167 (CIVALER) | | 1744 Ny. |
| ADDITIONALS mounts | 2 wate | | ts (1 on X5 | | Pea | ri Whi | te/Slive | r Metallic • B ue Metallic • | liack/White o White/Silve | decal • r decal | Pearl White fork • Silver Metallic fork |
| FIT | | | la Cerki di | enares ses | 1 (1) (1) | Út. A | | allaska. | | a cord | |
| Frame | Size | XS 67 | S 69 | М 72 | L 75 | | XL 79 | LS-S 67 | LS-M 71 | | |
| Rider helght | Inches Cm | 170 | 175 | 184 | 191 | | 200 | 170 | 181 | • | |
| Handlebar Stom | Width, mm | 580 90 | 580 90 | 600 105 | 600 120 | | 600 135 | 580 105 | 600 105 | | |
| Stem | Length, mm Angle | 25 | 25 | 25 | 25 | | 25 | 40 | 40 | | |
| Crank Seatpost | Length, mm Length, mm | 170 300 | 170 300 | 175 350 | 175 350 | | 175 350 | 170 300 | 170 300 | | |
| agarhogr | Length, mm | 144 | 164 | 184 | 204 | | 222 | 164 | 184 | | |

Comfort Series

For 2002

Gary's Comfort series bikes address an emerging segment of the bike market were a big hit in the introductory year of 2001. They are unchanged for 2002 (why mess with success?).

Geometry

The Comfort series is designed with geometry which puts you in a full 'heads up' position. The dimensions look a bit odd on paper, but there is a reason; we designed these frames from the ground up to use suspension seatposts and adjustable stems.

Ride

For the recreational cyclist, these bikes are an epiphany. Instead of focusing on race qualities like carving turns, or power uphill, the Comfort series' first feature is comfort. Some aficionados will point out that an upright position is not aero, and is therefore inefficient. We'll point out that if you are off the bike because your back hurts, aerodynamic efficiency isn't worth much. Furthermore, the Comfort series rider is not trying to beat the clock, they just want to have fun.

Riding a Comfort series bike, you will enjoy anything from a spin around the neighborhood to commuting and day tours. The comfort features, like suspension fork, sprung saddle, or seatpost are all tuned to react at low bump forces, so you don't have to be going really fast or hit big bumps to enjoy their benefits. The smooth tires make these bikes pretty fast, but the large footprint also makes them stable on dirt footpaths or Rails-to-Trails tours.

Frame details

The Comfort series uses Silver series aluminum frame technology.

Designed for suspension seatposts and adjustable stems, this frame has a unique look to it. The seat tube is short compared to other blkes because a suspension seatpost has a section which cannot be lowered into the frame. This means the normal seat height is quite a ways above the top tube. Meanwhile, this rider wants to sit upright. If a suspension seatpost were put on a 'normal' frame, the head tube would be too short to position the handlebars for a comfortable, bent-elbow position.

Comfort series bikes have 2 water bottle mounts, except the S and Ladies frames. These frame sizes do not have enough seat tube to allow a water bottle mount to be used.

Fit Information Reminder

When considering the "Rider Height" portion of the Fit information on each page, bear in mind that we made these fit estimations with the stem at its highest point. With Ahead stems, that means all the spacers were under the stem. With quill stems, the handlebars reach their maximum height with the stem pulled up to the minimum insertion line. With adjustable stems, it's calculated with the stem at a 40 degree angle, and many of these stems have very long quills. Lowering the bars, or changing the parts, or changing the stem angle, changes the fit of the bike as well as its Rider Height. Primarily, if you lower the stem, the bike will fit a smaller person. If you make the stem more upright, it will also make the bike fit a smaller person.

| A DECIMA A DESCRIPTION OF THE WORLD BY A SHOULD SHOW THE WAY T | | | | | |
|--|------|------|------|-------|------|
| Frame sizes | S | M | L | XL | M-L |
| Head angle | 70.5 | 70.5 | 70.5 | 70.5 | 70.5 |
| Seat angle | 73.5 | 73.0 | 73.0 | 72.5 | 73.5 |
| O. | | | | | |
| Standover Seat tube Head tube Eff top tube Chainstays | 679 | 716 | 760 | 810 | 595 |
| Seat tube | 368 | 431 | 495 | . 533 | 419 |
| Head tube | 125 | 145 | 185 | 225 | 145 |
| ☐ Eff top tube | 550 | 574 | 598 | 610 | 574 |
| ≓ Chainstays | 425 | 425 | 425 | 425 | 425 |
| BB height | 291 | 291 | 291 | 291 | 291 |
| Offset | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 |
| Trail | 79 | 79 | 79 | 79 | 79 |
| Wheelbase | 1029 | 1049 | 1053 | 1083 | 1049 |
| | | | | | |
| Standover | 26.7 | 28.2 | 29.9 | 31.9 | 23.4 |
| Ω Seat tube | 14.5 | 17.0 | 19.5 | 21.0 | 16.5 |
| 日 Head tube | 4.9 | 5.7 | 7.3 | 8.9 | 5.7 |
| Seat tube Head tube Eff top tube | 21.7 | 22.6 | 23,5 | 24.0 | 22.6 |
| □ Chainstays | 16.7 | 16.7 | 16.7 | 16.7 | 16.7 |
| BB height | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 |
| Offset | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Trail | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| Wheelbase | 40.5 | 41.3 | 41.5 | 42.6 | 41.3 |
| | | | | | |

| | Silver s | | | vere rock fatti valetti fi | | | | Presidio |
|----------------|----------------------------------|---|---------------------|----------------------------|------------------|------------------------|--|--|
| | Silver s RockSh | | ummum | | | | | |
| 10KK | | vel, mm | | 80 | | | | A popular place to begin your ride at the south en |
| | | e-crown length, mm | | 451 | | | | of San Francisco's Golden Gate bridg |
| HEADSET | Steel | | | | | | | |
| | Size | | | 25.4/34.0/30.0 | | | | |
| | Stac | ck height, mm | | 23.0 | | | | |
| | | | | | | | | |
| controls: | | | | | | | | |
| | | mp diameter, mm | | 25.4 | | | | |
| STEM | Alloy q | | | ct connect 41.0 | | | | |
| SHIET I EVEDS | <i></i> SRAM ا | rer damp height, m Dual Driva | m | 41.0 | | Why | this l | Fisher rocks |
| | S Alloy, d | | | | | | | e path, commuter, or comfort rider |
| | Serfas | | | | | | | e pacif, communes, or common race |
| DRIVETRAII | V | Maraji Perint | 外性的心理 | 10.00 | | | neset Comfo | ort geometry- special design for suspension |
| | JR SRAM I SRAM I | | Γ, w/chaingu | ard | | 1 - | | l adjustable stem |
| ВВ | <i>Bol.</i> , , , , , Cartrid | t bole circle, mm ae | | Riveted | | 1 | onver elset | series aluminum- light weight |
| | She | ll x axle, mm | | , Square | | | | rims- light, strong, smooth braking |
| CHAIN | KMC Z- | | | | | 1 | | _ |
| | | iin type ain Isaach (links) | | 3/32" | | | | at tires- smooth for speed, and wide for low |
| CASSETTE | SRAM ! | <i>iin length (links)</i> 5.0-11-32, 8spri | 1 | | | pr | essure | e comfort |
| 071002172 17 | | | - | | | | ponen Sankir | nts sticated recreation level- SRAM DualDrive |
| | | | | | | | • | |
| WHEELSET | | | | name in the | | | | type gearing- easy uphills, plus you don't over-spin on the downhill |
| FRONT WHEEL | _ , , Alloy, G |)R hub, 32°, N 2.D., mm | datrix 750 r | im <i>561</i> | | | | nsion fork, seatpost- soft springs for com- |
| | | ı strîp | | Rubber | | | | pension |
| FRONT TIRE . | Hutchir | • | | | | | Attent | ion to comfort points- user friendly pedals, |
| | | e size | 800 11-1-1 | 26 x 1.95 | | W: | ide bai | rs for control, and comfy sprung saddle |
| REAR WHEEL | SRAM | DualDrive hub, ?. <i>D., mm</i> | , 32°, Matri | x 750 rim 561 | | | | |
| | | a.D., mm n strip | | Velox 19mm | | | | _ |
| REAR TIRE | Hutchlr | | | | GEA | RING | | |
| | | e size | | 26 x 1.95 | | 38 | | |
| SPOKES | 15G sta | | | 25. 4 | 11 | 66 91 | 124 | |
| | _ | nt, mm tr, mm | | 261, 3x , 3x | 12 | 61 83 | 113 | |
| INNER TUBES | Schrae | | | , ,,,, | 14 | 52 71 | 97 | |
| OTHER | | n vernige geleet | | ACCEPTED TO 12 | 16 | 45 62 | | |
| | Suspen | namassass | Participate Carrier | KERREPASIVADE | | 40 55 | | |
| SEMIPUSI II | | ter diameter, mm | | 27.2 | 18 | | | |
| SADDLE | Oasis V | | | _, 12 | 21 | 34 47 | | |
| BRAKES | Alloy d | irect pull | | | 26 | 28 38 | | BIKE WEIGHT |
| PEDALS | Platfor | m le diameter | | 9/16" | 32 | 23 31 | 42 | 34.3 lb. 15.57 kg. |
| SEAT BINDER | Alloy w | | , | | MERRY DEL | HARDA MARINE PALLMER 1 | AND SECTION AND SECTION ASSESSMENT AND SECTION ASSESSMENT ASSESSME | |
| | | er diameter, mm | | | COI Silv | ORS er Metalli | c/Metal | lic Red • Silver/White decal • Silver fork |
| | on Women's) | medii | , | |] "" | | J | *** |
| pottie/no rack | | | | | TV TOTAL CONTROL | 22 / Fabra Documentary | | |
| | e disadi | | en Heitelle | | 1.14 | 编制设施 | | Mark State of the Mark State State State of the Mark State of the State State State State State State State St |
| FIT Frame | Slze | Circ Verigori S | M | Military (1975) | XL | Mark Constant | (A+8) | |
| EIT | Size Inches | S 72 | M 74 | 77 | 79 | | | |
| EIT Frame | | | | | |) | | |

Stem

Crank

Seatpost

Steerer

Length, mm

Length, mm Length, mm Length, mm

Angle

| MAIN TUBES | T 5 Silver | series 7005 a | luminum | | | | Solstice |
|-----------------------|--|--------------------------------------|------------------|-----------------------------|-------|------------------|--|
| STAYS | Silver | series 7005 a | luminum | | | | |
| FORK | SR XC | R-E | | | 1 | The | e longest day of the year (or shortest), as in the Summer |
| | | avel, mm | | 7 3 | | | solstice. A great day to ridel |
| | | le-crown length, m | m | 454 | 4 | | |
| HEADSEI | Steel | | | 25 (12 (2/2) | . | | |
| | Sis | ze tok height, mm | | <i>25.4/34.0/30.0</i> 23 | | | |
| | Su | ex neigns, inni | | 23 | 'l | | |
| | | | | | ļ | | |
| | | | | | | | |
| CONTROLS HANDLEBAR | S Steel, | 50mm rise | | | | | |
| CTEM | <i></i> Alloy و | amp diameter, mm | | 25.4 | 'l | | |
| 31EM | | erer clamp height, i | | rect connect 41.0 | , l | BBC | |
| SHIFT I EVER | RS Shimai | | | 41.0 | Ί | Why this | Fisher rocks: |
| | ERS Alloy, o | | OI HET | | 1 | Rider: Bi | ke path, commuter, or comfort rider |
| | Serfas | | | | 1 | Frameset | |
| | | | ministra, vera | tetan satura kasara | , | | Ort geometry- special design for suspension |
| FT DERAILLE | IN EUR Shimai | no T301 | | ur staknima | | post an | d adjustable stem |
| | | ble routing | | Down pull | | Silve | r series aluminum- light weight |
| DD DEDAULI | | achment | | 34.9 mm/ 1 3/8" | | Wheelest | |
| | EUR Shimar Shimar | | | alamies | 1 | Wheelset | |
| CRANNSEI . | | 10 1303 40/3 It hole circle, mm | 0/20, W/CII | ainguaro <i>Riveted</i> | | Matr | lx rims- light, strong, smooth braking |
| BB | Cartrid | | | Rivesea | | Acrol | oat tires- smooth for speed, and wide for low- |
| DD | | ell x axle, mm | | 73 x 116, Square | l | | e comfort |
| CHAIN | KMC Z | | | 73 x 116, Square | | | |
| CHAIN | | ain type | | <i>3/32</i> " | | Compone | |
| | | ain iypi ain length (links) | | 112 | | Recre | eation level- Nexave 300 |
| CASSETTE . | SRAM | | d | 112 | | Road | -type gearing- easy up hill, don't have to |
| NHEELSET | C arrain in the same | English San | akoi Xisil | Postancial in | | over-sp | in on the downhill |
| FRONT WHEE | EL Alloy, C | | Matrix 750 | | 1 | | ension fork, seatpost- soft springs for com- |
| | | R.D., mm | | 561 | 1 | fort sus | spension |
| COONT TIDE | | n strip | | Rubber | l | Atten | tion to comfort points- user friendly pedals, |
| FRONT TIRE | Hutchin | nson Acrobat Esize | | 26 106 | l | | ars for control, and comfy sprung saddle |
| DEVD MITEL | L Shimar | | 220 Matel | 26 x 1.95 | l | """ | as for correctly used somely optiming baddle |
| REAR WHEEL | E.F. | R.D., mm | 32°, mairi | 561 | | | |
| DEAD TIDE | Hutchli | r <i>strip</i> neon Acrobat | | Velox 19mm | L | | _ |
| REAR TIRE . | | ison Acrobat esize | | 26 x 1.95 | GEA | RING | |
| SPOKES | 14G sta | | | 20 X 1.93 | | 28 38 48 | Ĩ |
| | | nt, mm | | 261, 3x | 11 | 67 91 114 | 1 |
| | | r, mm | | 258/259, 3x | Ľ | | |
| INNER TUBES | S Schrae | • | | | 1,444 | 61 83 105 | |
| THER | MORE STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, S | PROGRAMMAN | SACRET SEEDS | THE REPORTER | 14 | 52 71 90 | |
| | Suspen | elon alloy | 共1988日開發賞 | eaned next will | 16 | 46 62 79 | |
| SEMIPUSI . | | | | 27.2 | | 41 55 70 | |
| SADDLE | Oasis V | <i>ter diameter, mm</i> Vohenring | | 27.2 | | | |
| | Alloy di | | | | 21 | 35 47 60 | |
| | Platfor | | | | 26 | 28 38 48 | BIKE WEIGHT |
| I FDWF9 '''' | | m e diameter | | 9/16" | 32 | 23 31 39 | 34.3 lb. |
| SEAT BINDER | R Alloy w | | _ | <i>9/16</i> " | | | 15.57 kg. |
| ATVI DINDEU | | /quick release er diameter, mm | ī | 31.8 | | | |
| | S 2 wate: | | ts, rack mo | | COL | | /Metallic Deep Blue • Silver/White decal • Warm |
| DOLLIE/110 FACE | k on Women's) | | | | | er Metallic fork | , |
| IT . | | | | | | | |
| Frame | Size | \$ | М | L | XL | | The control of the co |
| Rider height | Inches | 72 | 74 | 77 | 79 | | |
| | Cm | 183 | 188 | 195 | 200 |) | |
| Handlebar | Width, mm | 600 | 600 | 600 | 600 | ì | |
| Stem | Length, mm | 125 | 125 | 125 | 125 | | |
| | Angle | 35 | 35 | 35 | 35 | | |
| Crank | Length, mm | 170 | 170 | 170 | 170 | | |

Seatpost

Steerer

Length, mm Length, mm Length, mm

Napa

Popular bike touring area, near wineries and hot springs. For several years the location of the opening round of the mountain bike World Cup.

| FRAMESET | | |
|------------|-----------------------------|----------------|
| MAIN TUBES | Silver series 7005 aluminur | m |
| STAYS | Sliver series 7005 aluminur | n |
| FORK | SR XCC-E | |
| | Travel, mm | 63 |
| | Axle-crown length, mm | 448 |
| HEADSET | Steel | |
| | Size | 25.4/34.0/30.0 |
| | Stack height, mm | 23.0 |
| | | |
| | | |
| | | |

WANTED AT A CONTROL OF THE PROPERTY OF THE PRO

| CONTROLS | | 首任 推进 "特别" |
|-----------------|--|------------------------------|
| HANDLEBAR | Steel, 50mm rise | |
| | Clamp diameter, mm | 25.4 |
| STEM | Alloy quick change, adj. ris | e, direct connect |
| | Steerer clamp height, mm | 41.0 |
| SHIFT LEVERS S | Shimano EF29 | |
| BRAKE LEVERS I | ntegrated brake/shift | |
| GRIPS | Serfas dual density | |
| DRIVETRAIN | ng dan suyun dan indan sor bagasadisi su | anasia da da da kara |
| | | |
| FT DERAILLEUR S | | |
| | Cable routing | Down pull 34.9 mm/ 1 3/8" |
| | Attachment | 34.9 mm/ 1 3/8 |
| RR DERAILLEUR | | |
| CRANKSET | Shimano C203 48/38/28, | |
| | Bolt hole circle, mm | Riveted |
| BB | • | |
| | Shell x axle, mm | 73 x 116, Square |
| CHAIN | | |
| | Chain type | 3/32" |
| | Chain length (links) | 114 |
| CASSETTE | | |
| WHEELSET | NOT HOSPINATE FAIL | SERVICE TO |
| FRONT WHEEL | Alloy, QR hub, 36°, Matrix | 750 rlm |
| | E.R.D., mm | 561 |
| <u>.</u> | Rim strip | Rubber |
| FRONT TIRE | | |
| | Tire size | 26 x 1.95 |
| REAR WHEEL | Shimano RM-40 hub, 36°, | Matrix 750 rlm |
| | E.R.D., mm | 561 |
| | Rim strip | Velox 19mm |
| REAR TIRE | | - |
| | Tire size | 26 x 1.95 |
| SPOKES 1 | 4G stainless | |
| | | |

Inner diameter, mm ADDITIONALS 2 water bottle mounts, rack mounts (1

bottle/no rack on Women's)

| wn | A CI | nis li | sher i | OCKS: | | | 通用器基础 |
|-----|------|--------|--------|---------|-------|--------|--------------|
| Rid | er: | Bike | path, | commute | r, or | comfor | t rider |
| Fra | me | set | | | | | |
| | _ | | | | | | |

Comfort geometry- special design for suspension post and adjustable stem

Silver series aluminum- light weight

Wheelset

Matrix rims- light, strong, smooth braking

Acrobat tires- smooth for speed, and wide for lowpressure comfort

Components

Recreation level- Shimano C Series

Road-type gearing- easy up hill, don't have to over-spin on the downhill

Suspension fork, seatpost- soft springs for comfort suspension

Attention to comfort points- user friendly pedals, wide bars for control, and comfy sprung saddle

| Rim strip | PEROX 170000 | | |
|-----------------------------------|-----------------------|------------|--------|
| REAR TIRE Hutchinson Acrobat | | EARING | 3 |
| The size | 26 x 1.95 | 28 | 38 48 |
| SPOKES14G stainless | 1,4 | <i>(</i> 7 | 91 114 |
| Front, mm | _{259, 3x} 11 | 67 | 91 114 |
| Rear, mm | 256/257, 3x 12 | 61 | 83 105 |
| INNER TUBES Schraeder valve | 14 | 52 1 | 71 90 |
| OTHER | 16 | 46 | 62 79 |
| SEATPOST Suspension, alloy | 18 | 41 | 55 70 |
| Outer diameter, mm | 27.2 | • • • | |
| SADDLE Oasis Webspring | 21 | 35 | 47 60 |
| BRAKES Alloy direct pull | 26 | 28 | 38 48 |
| PEDALS Platform | 32 | 23 | 31 39 |
| Axle diameter | 9/16" | | |
| SEAT BINDER Alloy w/quick release | L | | |
| | | | |

BIKE WEIGHT 34.3 lb. 15.57 kg.

31.8 COLORS
Silver Metallic/White Pearl • Black/Dark Silver decal • Silver Metallic fork

| Frame | Size | S | М | L | XL | LS-S | LS-M | |
|--------------|------------|-----|-----|-----|-----|------|------|--|
| Rider height | Inches | 72 | 74 | 77 | 79 | 72 | 74 | |
| | Cm | 182 | 187 | 195 | 200 | 182 | 187 | |
| Handlebar | Width, mm | 600 | 600 | 600 | 600 | 600 | 600 | |
| Stem | Length, mm | 125 | 125 | 125 | 125 | 125 | 125 | |
| | Angle | 35 | 35 | 35 | 35 | 35 | 35 | |
| Crank | Length, mm | 170 | 170 | 170 | 170 | 170 | 170 | |
| Seatpost | Length, mm | 300 | 300 | 350 | 350 | 300 | 300 | |
| Steerer | Length, mm | 225 | 245 | 285 | 325 | 225 | 245 | |

| STAYS | Silver s Silver s High te Steel Size | eries 7005 al nsile steel e-crown length, mm | uminum | 39/ 25.4/34.0/30.0 36. | , | | Beac | Capitola th town just south of Santa Cruz, California |
|-------------------------------------|---|--|-----------------|--|----------------|--|-----------------------------|---|
| STEM SHIFT LEVERS BRAKE LEVER | Steel, 5 Clai Alloy ac Steel Shiman S Integral | mp diameter, mm djustable rise rer clamp height, m o EF29 ted brake/shif | | 25.4 | we will be | | | ks |
| DRIVETRAIN | JR Shiman | o CO51 | | | | Frameset Comfe | ort geometr | mmuter, or comfort rider -y- special design for suspension |
| | | | | Down pul. 34.9 mm/ 1 3/8° Juard | | Silver | d adjustable series alun | e stem ninum- light weight |
| BB | Bolt Shel | hole circle, mm artridge I x axle, mm | | Rivetea x 124.5, Square | | Acrob | at tires- sm | nt, strong, smooth braking nooth for speed, and wide for low- |
| | | in type in length (links) | ŀ | 3/32 ⁴ 112 | | Componer | | Shimano C Series |
| WHEELSET | Alloy, Q | | 4000 | im 555 | | Road- over-sp | type gearin in on the do | ng- easy up hill, don't have to wnhill |
| | | size | 1-t-i 550 - | Rubber 26 x 1.95 | | pension Atten | i tion to comi | post- soft springs for comfort sus- fort points- user friendly pedals, |
| | | D., mm strip | Matrix 350 F | III 559 Velox 19mm | | | rs for contr | ol, and comfy sprung saddle |
| SPOKES | _ | Inless n, mm | | 26 x 1.95 | 13 | UNG 28 38 48 56 77 97 | | |
| OTHER | Schraec | | | 262/263, 3x | 17 | 49 66 84 43 59 74 39 52 66 | | |
| SADDLE BRAKES | Oasis W Alloy di Platforn | er diameter, mm lebspring rect pull n | | | 22 26 34 | 33 45 57 28 38 48 22 29 37 | | BIKE WEIGHT |
| | Alloy w/ | r diameter, mm | | <i>9/16</i> ° <i>31.8</i> nts (1 | COLO |)RS | | 15.57 kg. |
| - bottle/no rack | | | | | Silver fork | · Metallic/Slate | Blue Metallic | Black/Silver decal • Silver Metallic |
| FIT Frame | Size | Kanalan (6. 19) S | ucialisti. M | j:Krell-jur-∈ L | XL | t in the state of the state of the state of the state of the state of the state of the state of the state of t | LS-M | |
| | Inches | 68 | m 71 | 74 | 76 | 68 | 71 | |
| , | Cm | 172 | 180 | 187 | 192 | 172 | 180 | |
| | Width, mm Length, mm | 600 110 | 600 110 | 600 110 | 600 110 | 600 110 | 600 110 | |
| | Angle | 40 | 40 | 40 | 40 | 40 | 40 | |
| Crank | Length, mm | 170 | 170 | 170 | 170 | 170 | 170 | |
| - | Length, mm Length, mm | 300 164 | 300 184 | 350 222 | 350 264 | 300 164 | 300 184 | |
| Steel el | ernani mm | 10-4 | 10-1 | LLG | 204 | 104 | 104 | |

City/Path Series

For 2002

These frames remain unchanged from 2000.

Geometry

Most of our Hybrid frames are just that- a blend of road and mountain bike geometries. They use lightweight, large diameter 700c wheels for speed and a smooth ride. They use mountain bike angles and wheelbase dimensions for stability and a more upright position.

The Fast City has an unique geometry for this type of bike; it has a focus on performance, with other hybrid features being secondary. This is the bike for those who always thought a hybrid made sense but the ride was too docile.

Ride

Our Hybrid bikes offer stable handling and steady tracking. They smoothly glide over the ground, and are not as reactive to weight changes or bumps and other irregular terrain. This makes them ideal for all-round riding, commuting, or those just getting into cycling.

Frame details

The aluminum hybrid frames use Silver series frame technology. With this frame, somewhat oversize tubing creates a rigid structure between the bottom bracket and head tube, for pedaling efficiency. But we didn't overdo the stiffness; our Silver series hybrids are very comfortable and shock absorptive.

The Fast City, being a performance-oriented hybrid, is equipped with our premium Platinum butted ZR9000 tubeset.

Our most economical Hybrid is the Tiburon. This bike uses a hi-tensile steel frame. On this bike, we've focused on providing the best ride for the cost. By carefully designing the frame geometry, tubing wall thicknesses, and tubing diameters, we've managed to create a bike that rides like it should cost a lot more. This allows riders a viable high quality alternative to chain store bikes which don't ride nearly as well.

Hybrid bikes have 2 water bottle mounts, except the Ladies sizes. These frame sizes do not have enough seat tube to allow a water bottle mount to be used.

| | | | | | | *************************************** |
|---|------|------|------|------|------|---|
| Frame sizes | XS | S | M | L | XL | W-M |
| Head angle | 70.0 | 70.0 | 70.5 | 70.5 | 71.5 | 70.5 |
| Seat angle | 74.5 | 74.0 | 74.0 | 73.0 | 73.0 | 74.0 |
| o. · | | | | | | · · |
| ∰ Standover | 654 | 685 | 731 | 769 | 817 | 603 |
| Seat tube | 330 | 381 | 445 | 508 | 572 | 445 |
| 号 Head tube | 90 | 90 | 105 | 105 | 125 | 125 |
| Eff top tube | 538 | 544 | 548 | 565 | 581 | 547 |
| Standover Seat tube Head tube Eff top tube Chainstays BB heldhi | 445 | 445 | 445 | 445 | 445 | 445 |
| BB height | 281 | 281 | 281 | 281 | 281 | 281 |
| Offset | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 | 50.0 |
| Trail | 74 | 74 | 70 | 70 | 64 | 70 |
| Wheelbase | 1055 | 1056 | 1056 | 1062 | 1069 | 1056 |
| e le distanta Makada | | | | | | |
| Standover | 25.8 | 27.0 | 28.8 | 30.3 | 32.2 | 23.7 |
| ∷ Seat tube | 13.0 | 15.0 | 17.5 | 20.0 | 22.5 | 17.5 |
| Seat tube Head tube Eff top tube | 3.5 | 3.5 | 4.1 | 4.1 | 4.9 | 4.9 |
| ⊆ Eff top tube | 21.2 | 21.4 | 21.6 | 22.2 | 22.9 | 21.5 |
| Chainstays | 17.5 | 17.5 | 17.5 | 17.5 | 17.5 | 17.5 |
| BB height | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 |
| Offset | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Trail | 2.9 | 2.9 | 2.8 | 2.8 | 2.5 | 2.8 |
| Wheelbase | 41.6 | 41.6 | 41.6 | 41.8 | 42.1 | 41.6 |
| | | | | | | |

Fast City

| CANTERNA STATE OF A POLICY AND A STATE OF A | | | | |
|---|------|------|------|------|
| Frame sizes | S | M | L | XL |
| Head angle | 70.5 | 71.0 | 71.5 | 71.5 |
| Seat angle | 74.0 | 74.0 | 73.5 | 73.0 |
| (A) | | | | |
| # Standover | 695 | 729 | 757 | 799 |
| 吕 Seat tube | 394 | 442 | 479 | 529 |
| 号 Head tube | 80 | 80 | 90 | 105 |
| B : Eff top tube | 590 | 608 | 628 | 647 |
| Standover Seat tube Head tube Head tube Eff top tube Chainstays | 440 | 440 | 440 | 440 |
| ■ BB height | 292 | 292 | 292 | 297 |
| Offset | 42.0 | 42.0 | 42.0 | 42.0 |
| Trail | 87 | 83 | 80 | 80 |
| Wheelbase | 1081 | 1094 | 1103 | 1119 |
| Section 4 English | | | | |
| Standover | 27.3 | 28.7 | 29.8 | 31.5 |
| | 15.5 | 17.4 | 18.9 | 20.8 |
| Seat tube Head tube | 3.1 | 3.1 | 3.5 | 4.1 |
| Eff top tube | 23.2 | 23.9 | 24.7 | 25.5 |
| [⊟] Chainstays | 17.3 | 17.3 | 17.3 | 17.3 |
| BB height | 11.5 | 11.5 | 11.5 | 11.7 |
| Offset | 1.7 | 1.7 | 1.7 | 1.7 |
| Trail | 3.4 | 3.3 | 3.1 | 3.1 |
| Wheelbase | 42.6 | 43.1 | 43.4 | 44.1 |
| 公益 包里 在美国 专 | | | | |

| FRAMESET | | uran ja | | Ì | | East City |
|---|--|---|---|------------------------------|--|--|
| MAIN TUBES | | | 00 | | | Fast City |
| STAYS | | luminum | | | A | |
| FORK | Manitou Luxe Travel. mm | | 70 | | Att | exciting place to be. An 80's-type expression of exclamation |
| | Axle-crown length | . mm | 75 450 | ĺ | | |
| HEADSET | | , | .50 | | | |
| | Size | | 25.4/34.0/30.0 | | | |
| | Stack height, mm | | 23.2 | | | |
| | | | | | | |
| CONTROLS HANDLEBAR | J. P. M. ST. SCHENGER STREET, Phys. Lett. 80 (197) | | | | | |
| | Clamp diameter, s | nm | 25.4 | | | |
| STEM | . Bontrager Comp Steerer clamp heigt | he was | 41.0 | | | |
| SHIFT LEVERS | | | 41.0 | | | |
| BRAKE LEVERS | | apiui ilet | | | P. C. T. T. C. T. T. C. | |
| GRIPS | ••• | ty | | | Why this | Fisher rocks: |
| DRIVETRAIN | . Al administration of the | Mawatane | Barsacha an an an an an an an an an an an an an | | Rider: Po | erformance commuter, extended urban |
| FT DERAILLEUR | . Shimano Deore I | SUMBREMĀNĀ X | 64.15×64.44%(1944) | | | re, or Fast day tourer |
| TI DENAILLEUN | Cable routing | ^ | Top pull | | Framese | t |
| | Attachment | | 34.9 mm/ 1 3/8" | | Perfe | ormance hybrid geometry- mountain style |
| RR DERAILLEUR | | | | | comfor | t, road style responsiveness |
| CRANKSET | | | | | 1 | num series ZR9000 aluminum- light weight |
| BB | Bolt hole circle, m | | 64/104 | | | |
| <u> </u> | Shell x axle, mm | v | 73 x 113, Square | | Wheelset | |
| CHAIN | | | 25 x 115, square | | | rager wheelset- Engineered wheel design |
| | Chain type | | 9 speed | | • | ptimal strength, low weight |
| | Chain length (link | | 108 | | IRC | Duro-Tour tires- fast and tough |
| CASSETTE | . SRAM 7.0 11-32, 9 | spd | | | Compone | onts |
| WHEELSET | an de la caracte | 高數數數 | | | | ormance level- Shimano LX |
| FRONT WHEEL | | Hybrid, 20° | | | i | |
| | E.R.D., mm Rim strip | | 592 Velox 16mm | | | l gearing- easy up hill, don't have to over-spin downhill |
| FRONT TIRE | | | veiox 10mm | | | |
| | Tire size | | 700 x 35c | | | nds- more hand positions for comfort, extra |
| REAR WHEEL | | Hybrid, 24° | | | positio | n provides more power on the hills |
| i | E.R.D., mm | | 603 | | | |
| REAR TIRE | Rim strip | | Velox 16mm | | | _ |
| REAR LINE | Tire size | | 700 x 35c | GEA | RING | |
| SPOKES | | stainless | 700 x 33c | | 26 36 48 | |
| | Front, mm | | 278, Radial | 11 | 69 95 127 | |
| I INITIAL TURBE | Rear, mm | | 293/294, 2x | 12 | 63 87 116 | |
| INNER TUBES | . Presta valve | y y r a y m gay an reason a reason | w begging open a second | 14 | 54 75 99 | |
| OTHER . | | 11 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (| ut is the | 16 | 47 65 87 | |
| SEATPOST | | | | 18 | 42 58 77 | |
| SADDLE | Outer diameter, m. | 111 | 31.6 | 21 | 36 50 66 | |
| BRAKES | | type | | | | |
| PEDALS | | | | 24 | 31 44 58 | BIKE WEIGHT |
| | Axle diameter | | 9/16" | 28 | 27 37 50 | 25.4 lb. |
| SEAT BINDER | . Alloy w/integral be | | | 32 | 24 33 44 | 11.53 kg. |
| 4 B B 197 - 0 - 1 - | Inner diameter, mr | | 36.4 | COL | ORS | |
| ADDITIONALS | . Z water bottle mo | unts, rack m | ounts, Cane | AND ENGLISHED | CT TO THE PARTY AND THE PARTY OF THE PARTY O | k Metallic • Silver Metallic decal • Silver fork |
| Creek Ergo barends | | | • | 5,,,,, | | Offer metallic decay. Oliver lots |
| Name of the state | | | | | | |
| FIT | | | | - 10 W. A. Miller # 11 B. W. | | |
| Frame Size | S | М | <u>L</u> | XL | | |
| Rider height Inches | | 69 | 72 | 73 | | |
| Cm Handlohar Width | 170 | 176 | 183 | 186 | | |
| Handlebar Width, Stem Lengti | | 620 90 | 620 105 | 620 | | |
| Angle | 1, mm 75 5 | 90 5 | 105 10 | 105 10 | | |
| Crank Lengti | | 175 | 175 | 175 | | |
| 91 | | 350 | 350 | 350 | | |
| Seatpost Lengti | 1, 111111 300 | 220 | 330 | | | |
| Seatpost Lengtl Steerer Lengtl | • | 163.2 | 173.2 | 188.2 | | |

Utopia

An ideal society. Where we would be if more people rode bikes.

| FRAMESET | Şaarıanı |
|-----------------------------------|----------------|
| MAIN TUBES Silver series aluminum | |
| STAYS Silver series aluminum | |
| FORK RockShox Ruby Metro XC | |
| Travel, mm | 50 |
| Axle-crown length, mm | 428 |
| HEADSET STR Aheadset | |
| Size | 25.4/34.0/30.0 |
| Stack height, mm | 23.2 |
| · · | |

| CONTROLS | |
|---|--|
| HANDLEBAR Bontrager Crowbar Sport, 25m | ım rise |
| Clamp diameter, mm | 25.4 |
| STEM Bontrager Sport | |
| Steerer clamp height, mm | 41.0 |
| SHIFT LEVERS Shimano Alivio RapidFire+ | |
| BRAKE LEVERS Alloy, direct pull | |
| GRIPS Serfas dual density | |
| DRIVETRAIN | |
| FT DERAILLEUR Shimano Nexave T301 | Protestation of the Principle and Company (1992) |
| Cable routing | Top pull |
| Attachment | 34.9 mm/ 1 3/8" |
| RR DERAILLEUR, Shimano Deore LX SGS | |
| CRANKSET Shimano Nexave T411 48/38/2 | |
| Bolt hole circle, mm | 79 |
| BB Shimano BB-LP28 | |
| Shell x axle, mm | 73 x 113, Square |
| CHAIN | 0/004 |
| Chain type | 3/32" 112 |
| Chain length (links) | 112 |
| CASSETTE SRAM 5.0 11-32, 8spd | And the proportion of the Control (No. 1) |
| WHEELSET FRONT WHEEL Bontrager Select Hybrid, 20° | W 13 X 42 15 15 |
| E.R.D., mm | 592 |
| Rim strip | Velox 16mm |
| FRONT TIRE IRC Duro Tour | |
| Tire size | 700 x 35c |
| REAR WHEEL Bontrager Select Hybrid, 24° | |
| E.R.D., mm | 603 |
| Rim strip | Velox 16mm |

Inner diameter, mm ADDITIONALS 2 water bottle mounts, rack mounts

REAR TIRE IRC Duro Tour

SEAT BINDER Alloy w/integral QR

Why this Fisher rocks:

Rider: Performance commuter, urban adventure, or Day tourer

Frameset

Hybrid geometry- mountain style comfort, road style responsiveness

Silver series aluminum- light weight

Wheelset

Bontrager wheelset- aerodynamic for speed, Bontrager design for low maintenance

Duro-Tour tires- fast, and tough

Components

Enthusiast level- LX, Nexave 400, Bontrager Road gearing- easy up hill, don't have to over-spin on the downhill

Suspension fork-smoothens the ride

| REAR TIRE IRC Duro lour | (G | EARIN | C. | Karibis H |
|--|-------------------|-------|----|-----------|
| Tire size | 700 x 35c | 28 | 38 | 48 |
| SPOKESDT 14/15G butted stainless Front, mm | 278, Radial 11 | | 94 | |
| Rear, mm | 293/294, 2x 12 | 2 64 | 86 | 109 |
| INNER TUBES Presta valve | 14 | 1 54 | 74 | 93 |
| OTHER | 16 | 5 48 | 65 | 82 |
| SEATPOST Bontrager Sport | 18 | 3 42 | 58 | 73 |
| Outer diameter, mm | ^{27.2} 2 | 1 36 | 49 | 62 |
| SADDLE Oasis CRZ+ BRAKES Alloy direct pull | 2 | 6 29 | 40 | 50 |
| PEDALS Alloy/alloy cage w/clips and stra | aps 3 | 2 24 | 32 | 41 |
| Axle diameter | 9/16" | | | |
| ALL DINDER Allow Wintegral OD | i i | | | |

BIKE WEIGHT 27.1 lb. 12.30 kg.

COLORS

Black Metallic/Metallic Sliver • Black/Dark Sliver decal • Sliver fork

| Handlebar Width, mm 620 Stem Length, mm 90 | 620 90 | 620 105 | 620 105 15 | |
|---|-----------|------------|------------------|--|
| Handlebar Width, mm 620 | 620 | | | |
| | | | | |
| Cm 168 | 170 | 174 | 180 | |
| Frame Size S Rider height Inches 66 | 67 | 69 | 71 | |

| FRAMESET | 计设计学 建物 基金 |
|-----------------------------------|-------------------|
| MAIN TUBES Silver series aluminum | |
| STAYS Silver series aluminum | |
| FORK Cozy ST | |
| Travel, mm | 40 |
| Axle-crown length, mm | 450 |
| HEADSET STR Aheadset | |
| Size | 25.4/34.0/30.0 |
| Stack height, mm | 23.2 |
| | |

Kinda like heaven. A place you'll find yourself when you ride a bike.

| parameters was margines of the base of the control | |
|---|--|
| CONTROLS | |
| HANDLEBAR Bontrager Crowbar Sport, 2 | 5mm rise |
| Clamp diameter, mm | 25.4 |
| STEM Alloy quick change, adj. rise | , direct connect |
| Steerer clamp height, mm | 40.0 |
| SHIFT LEVERS GripShift Centera | |
| BRAKE LEVERS Alloy, direct pull | |
| GRIPS Dual density | Į. |
| DRIVETRAIN | TENERS TO THE PERSON OF THE PE |
| FT DERAILLEUR Shimano Nexave T303 | |
| Cable routing | 75II AVI I 1 |
| Attachment | Top pull, (W-down) 34.9 mm/ 1 3/8" |
| RR DERAILLEUR Shimano Deore SGS | 34.7 mm 1 310 |
| CRANKSET Shimano Nexave 301 48/38/28 | . w/shalasward |
| Bolt hole circle, mm | Riveted |
| BBShimano BB-CT92 | niverea |
| Shell x axle, mm | 73 x 122.5, Square |
| CHAIN HG-50 | 75 x 122.5, square |
| Chain type | 3/32" |
| Chain length (links) | 3/32 112 |
| CASSETTE Shimano HG50-I 11-30, 8spd | |
| | No. Serfin. No compared to the environment of the |
| WHEELSET | |
| FRONT WHEEL Alloy, QR hub, 32°, Bontrag | er Fairlane rim |
| E.R.D., mm | 604 |
| Rim strip | Velox 19mm |
| FRONT TIRE Bontrager Select | |

Tire size

ADDITIONALS 2 water bottle mounts, rack mounts

REAR WHEEL Shimano Acera-X hub, 32°, Btrg Fairlane rim E.R.D., mm

Why this Fisher rocks:

Rider: Performance commuter, urban adventure, or Day tourer

Frameset

Hybrid geometry- mountain style comfort, road style responsiveness

Silver series aluminum- light weight

Wheelset

Bontrager rim- light for speed, smooth braking Bontrager Select tires- comfortable width, and tough

Components

Enthusiast level- Deore, Nexave 300

Road gearing- easy up hill, don't have to over-spin on the downhill

GripShift- intuitive gear changes without letting go of the grips

| Estates, sum | 007 | | | | |
|---------------------------------|----------------|-------------------|-------|--------------|------|
| Rim strip | Velox 19mm | | | | |
| REAR TIRE Bontrager Select | | esistence et ents | | 55-32+335-00 | 2020 |
| Tire size | 700 x 38c | GEAR | ING: | | |
| SPOKES DT 14G stainless | | | 28 38 | 3 48 | |
| Front, mm | 296, 3x | 11 | 69 94 | 1 119 | |
| Rear, mm | 294/295, 3x | | 59 80 | | |
| INNER TUBES Schraeder valve | | | | | |
| OTHER : | 444. Taliansas | 15 | 51 69 | 87 | |
| SEATPOST Suspension | | 17 | 45 61 | 77 | |
| Outer diameter, mm | 27.2 | 20 | 38 52 | 2 65 | |
| SADDLE Oasis CRZ+ | 2712 | 23 | 33 45 | 5 57 | |
| BRAKES Alloy direct pull | | | | | |
| PEDALS Platform | | 26 | 29 40 | 50 | |
| Axle diameter | 9/16" | 30 | 25 35 | 44 | |
| | 9/16 | | | | |
| SEAT BINDER Alloy w/integral QR | | <u> </u> | | | |
| Inner diameter, mm | 31.9 | COTO | ne | 210HH | 16 |

BIKE WEIGHT 29.1 lb. 13.21 kg.

COLORS

700 x 38c

604

Silver Metallic/Metallic Deep Blue • Silver/White decal • Silver Metallic fork

| Frame | Size | XS | S | M | L | XL | L-M | |
|--------------|------------|-------|-------|-------|-------|-------|-------|--|
| Rider height | Inches | 68 | 68 | 69 | 69 | 71 | 69 | |
| | Cm | 172 | 172 | 174 | 175 | 181 | 176 | |
| Handlebar | Width, mm | 620 | 620 | 620 | 620 | 620 | 620 | |
| Stem | Length, mm | 105 | 105 | 105 | 105 | 105 | 105 | |
| | Angle | 35 | 35 | 35 | 35 | 35 | 35 | |
| Crank | Length, mm | 170 | 170 | 170 | 170 | 170 | 170 | |
| Seatpost | Length, mm | 318 | 318 | 350 | 350 | 350 | 318 | |
| Steerer | Length, mm | 189.2 | 189.2 | 204.2 | 204.2 | 224.2 | 224.2 | |

| MAIN TUBES Platinum series butted ZR9 STAYS Platinum series aluminum | 000 | | | Zebrano |
|---|-------------------------|----------------|----------------------|--|
| FORK Manitou Luxe | 1 | | | A zebra-striped African hardwood of unusual beauty |
| Travel, mm | 75 | | | |
| Axle-crown length, mm | 450 | | | |
| HEADSET STR Aheadset | 1 | | | |
| Size | 25.4/34.0/30.0 | | | |
| Stack heighs, mm | 23.2 | | | |
| ONTROLS HANDLEBAR Bontrager Select | | | | |
| Clamp diameter, mm | 25.4 | | | |
| STEM Bontrager Comp | | | | • |
| Steerer clamp height, mm | 41.0 | | | |
| SHIFT LEVERS Shimano Deore RapidFire+ | | | | |
| BRAKE LEVERS Alloy, direct pull | l | | | isher rocks: |
| GRIPS Serfas dual density | | | Rider: Perf | formance commuter, urban adventure, o |
| DRIVETRAIN | AND BYSHIP | | Day tourer | • |
| FT DERAILLEUR Shimano Deore LX | Western to the survivor | | Frameset | |
| Cable routing | Top pull | | | l geometry- mountain style comfort, road |
| Attachment | 34.9 mm/ 1 3/8" | | style res | ponsiveness |
| RR DERAILLEUR Shimano Deore LX SGS | ļ | | | |
| CRANKSET Shimano Deore 48/36/26 | | | Silver | series aluminum- durable, and light |
| Bolt hole circle, mm | 64/104 | | Wheelset | |
| BB Shimano BB-UN40 | | | | rim- light for speed, smooth braking |
| Shell x axle, mm | 73 x 113, Square | | | |
| CHAIN Shimano HG-53 | اليبير. و | | | nger Select tires- comfortable width, and |
| Chain type | 9 speed 108 | | tough | |
| CASSETTE SPAM 7.0 11-32 95pd | ,,,, | ĺ | Componen | 4 |
| CASSETTE SRAM 7.0 11-32, 9spd | | ĺ | Doctor | ation level- Shimano C Series |
| WHEELSET | | ĺ | | |
| FRONT WHEEL Bontrager Select Hybrid, 2 | 00 | | Road g | gearing- easy up hill, don't have to over-spi |
| E.R.D., mm | 592 Velov 16mm | | on the d | ownhill |
| Rim strip | Velox 16mm | 1 | Riser | bars and adjustable stem- comfort |
| FRONT TIRE IRC Duro Tour Tire size | 700 x 35c | ĺ | | Jais and adjusters. |
| REAR WHEEL Bontrager Select Hybrid, 2 | | l | | |
| ERD., mm | 603 | ĺ | | |
| Rim strip | Velox 16mm | | | |
| REAR TIRE IRC Duro Tour | ļ | CEA | RING | |
| Tire size | 700 x 35c | ľ | 26 36 48 | |
| SPOKES DT 14/15G butted stainless | | 11 | 69 95 127 | |
| Front, mm | 278, Radial | 1 | 63 87 116 | |
| Rear, mm | 293/294, 2x | | | |
| INNER TUBES Presta valve | | 14 | 54 75 99 | |
| OTHER SEATPOST Bontrager Sport | 31.6 | 16 18 | 47 65 87 42 58 77 | |
| Outer diameter, mm | 32.0 | 21 | 36 50 66 | |
| SADDLEWTB SST.X | | 24 | 31 44 58 | BIKE WEIGHT |
| BRAKES Shimano M420, V type PEDALS Shimano SPD M515, cliples | • | 28 | 27 37 50 | 25.4 lb. |
| PEDALS Snimano SPD moio, clipies Axle diameter | 9/16" | | 24 33 44 | 11.53 kg. |
| SEAT BINDER Alloy w/integral bolt | | 32 | 24 33 77 | |
| Inner diameter, mm | 36.4 | രവ | ORS | |
| ADDITIONALS 2 water bottle mounts, rac | k mounts, Cane | Silver Silv | Notallic/Black | Metallic • Silver Metallic decal • Silver fork |
| Creek Ergo barends | | JHV | el Merallo Diagra | Medalle - Shifet metanic adam - Shift |
| Oldek Erde paranas | | 1 | | |

Zebrano

her rocks:

| Frame | Size | amanana Amananan | M | L | XL | |
|--------------|------------|---------------------|-------|-------|-------|--|
| | | 67 | 69 | 72 | 73 | |
| Rider height | Inches | | | 183 | 186 | |
| | Cm | 170 | 176 | | | |
| Handlebar | Width, mm | 620 | 620 | 620 | 620 | |
| Stem | Length, mm | 75 | 90 | 105 | 105 | |
| | Angle | 5 | 5 | 10 | 10 | |
| Crank | Length, mm | 170 | 175 | 175 | 175 | |
| Seatpost | Length, mm | 300 | 350 | 350 | 350 | |
| Steerer | Length, mm | 163.2 | 163.2 | 173.2 | 188.2 | |

| FRAMESET MAIN TUBES Platinum series butted ZR9000 STAYS Platinum series aluminum | | Tiburon |
|---|------------------------------|---|
| FORK Manitou Luxe Travel, mm | 75 | A town on the San Francisco bay in Marin County, California. Spanish for shark. |
| Axle-crown length, mm HEADSETSTR Aheadset | 450 | |
| Size Stack height, mm | 25.4/34.0/30.0 23.2 | |
| | | |
| CONTROLS HANDLEBAR Bontrager Select | | |
| Clamp diameter, mm STEM Bontrager Comp | 25.4 | |
| Steerer clamp height, mm | 41.0 | |
| SHIFT LEVERS Shimano Deore RapidFire+ | | |
| BRAKE LEVERS Alloy, direct pull GRIPS Serfas dual density | | Why this Fisher rocks: |
| DRIVETRAIN | | Rider: Performance commuter, urban adventure, or Day tourer |
| FT DERAILLEUR Shimano Deore LX | and the second of the second | Frameset |
| Cable rousing Attachment | Top pull "34.9 mm/ 1 3/8 | Hybrid geometry- mountain style comfort, road |
| RR DERAILLEUR Shimano Deore LX SGS | | style responsiveness |
| CRANKSET Shimano Deore 48/36/26 Bolt hole circle, mm | 64/104 | Silver series aluminum- durable, and light |
| BB Shimano BB-UN40 | | Wheelset |
| Shell x axle, mm CHAIN Shimano HG-53 | 73 x 113, Square | Matrix rim- light for speed, smooth braking |
| Chain type | 9 speed | Bontrager Select tires- comfortable width, and tough |
| Chain length (links) CASSETTE SRAM 7.0 11-32, 9spd | 108 | _ |
| WHEELSET FRONT WHEEL Bontrager Select Hybrid, 20° | | Components Recreation level- Shimano C Series Road gearing- easy up hill, don't have to over-spin |
| E.R.D., mm Rim strip | 592 Velox 16mm | on the downhill |
| FRONT TIRE IRC Duro Tour | | Riser bars and adjustable stem- comfort |
| Tire size REAR WHEEL Bontrager Select Hybrid, 24° | 700 x 35c | |
| E.R.D., mm | 603 | |
| Rim strip REAR TIRE IRC Duro Tour | Velox 16mm | |
| Tire size | 700 x 35c | GEARING 26 36 48 |
| SPOKES DT 14/15G butted stainless Front, mm | 278, Radial | 11 11 11 |
| Rear, mm | 293/294, 2× | 12 63 87 116 |
| INNER TUBES Presta valve OTHER | | 14 54 75 99 |
| SEATPOST Bontrager Sport | | 16 47 65 87 |
| Outer diameter, mm SADDLE | 31.6 | 18 42 58 77 21 36 50 66 |
| BRAKES Shimano M420, V type | | 24 31 44 58 BIKE WEIGHT |
| PEDALS Shimano SPD M515, clipless Axle diameter | 9/16" | 28 27 37 50 25.4 lb. |
| SEAT BINDER Alloy w/integral bolt Inner diameter, mm | 9/16" 36.4 ₁ | 32 24 33 44 11.53 kg. |
| ADDITIONALS 2 water bottle mounts, rack mou Creek Ergo barends | | COLORS Sliver Metallic/Black Metallic • Sliver Metallic decal • Sliver fork |
| FIT | | |
| Frame Size S M | L | XL |
| Rider height Inches 67 69 | 72 | 73 |
| Cm 170 176 Handlebar Width, mm 620 620 | 183 620 | 186 620 |
| Stem Length, mm 75 90 | 105 | 105 |
| Angle 5 5 Crank Length, mm 170 175 | 10 175 | 10 175 |
| Seatpost Length, mm 300 350 | 350 | 175 350 |
| Steerer Length, mm 163.2 163.2 | 173.2 | 186.2 |

Intermediate mountain

For 2002

These Fishers will fit both smaller adults and kids. They have been very well accepted because they ride great, and remain unchanged for 2002.

Geometry

These frames use a geometry which delivers performance for a smaller rider. The head angles are slightly slackened to allow good off-road stability for a rider with less upper body strength. Standover is maximized to allow a rider to get on early, and ride it for a longer period of time as they grow.

Ride

These are real mountain bikes, and that's how they ride. This is important, because although we show them in the Kids section in the catalog, they have the ride performance and handling required to be enjoyed by smaller adults.

Frame details

These bikes use hi-tensile steel, and with a Cro-Moly seat tube on the hardtails. The advantage of Cro-Moly steel is higher tensile strength and fatigue resistance; it's no more rigid than good hi-tensile steel. For this reason, we've only used Cro-Moly in the seat tube, which can see lots of flexing as the seatpost quick release is used. For the rest of the bike, we've focused on providing the best ride for the cost. By carefully designing the frame geometry, tubing wall thicknesses, and tubing diameters, we've managed to get a lot of ride from a less expensive frame material. This allows riders a viable high quality alternative to chain store bikes which don't ride nearly as well.

Bike Fit

Once again, we remind you that the fit information is for an average rider with the handlebars adjusted to their highest possible position. The rider fitting this bike may be several inches taller than our recommendations due to personal preference of other factors which we can't readily predict. But we do, in fact, expect that a smaller rider would also fit a given bike simply by lowering the handlebars.

Mt. Jam FS

| and the second second second second | |
|-------------------------------------|------|
| Frame sizes | S |
| Head angle | 70.0 |
| Seat angle | 71.5 |
| Ω | |
| 当 : Standover | |
| Seat tube | 380 |
| Head tube | 100 |
| ☐ Eff top tube | 529 |
| □ Chainstays | 400 |
| ≥ BB height | 306 |
| Offset | 45.0 |
| Trail | 62 |
| Wheelbase | 993 |
| | |
| Standover | |
| Seat tube | 15.0 |
| 王 Head tube | 3.9 |
| ∠ Eff top tube | 20.8 |
| □ Chainstays | 15.7 |
| BB height | 12.0 |
| Offset | 1.8 |
| Trail | 2.5 |
| Wheelbase | 39.1 |
| 经外域部分 的现在分词 | |

Hardtails

| _ | | |
|---------------------|------|------|
| · Frame sizes | 13B | 13G |
| Head angle | 70.0 | 70.0 |
| Seat angle | 72.0 | 72.0 |
| ਜ਼੍ਹੀ Standover | 606 | 550 |
| Seat tube | 335 | 335 |
| Head tube | 90 | 90 |
| ☐ 'Eff top tube | 524 | 524 |
| 日 Chainstays | 405 | 405 |
| BB height | 272 | 272 |
| Offset | 45.0 | 45.0 |
| Trail | 62 | 62 |
| Wheelbase | 983 | 983 |
| | | |
| Standover | 23.9 | 21.7 |
| Seat tube Head tube | 13.2 | 13.2 |
| 工 Head tube | 3.5 | 3.5 |
| Eff top tube | 20.6 | 20.6 |
| Chainstays | 15.9 | 15.9 |
| BB height | 10.7 | 10.7 |
| Offset | 1.8 | 1.8 |
| Trail | 2.5 | 2.5 |
| Wheelbase | 38.7 | 38.7 |
| | | |

| FRAMESET | on free season by | THE REPORT OF THE PROPERTY OF THE |
|--|--|--|
| MAIN TUBES | | (1967年) 1967年 1967 |
| STAYS | | Į. |
| SIATS | | 0.07 ((0.11) |
| FORK | Frame weight SYNC 288B | 8.8 lb (4.01 kg) |
| TORK | Travel mm | 63 |
| | Axle-crown length, mm | |
| REAR SHOCK | | 2.0 |
| | Stroke | 30mm |
| | Length | 125mm |
| | Width | 24mm |
| | Eyes | 6mm |
| HEADSET | . Sealed | |
| | Size | 25.4/34.0/30.0 |
| | Stack height, mm | 36.5 |
| CONTROLS | 经股股股份的 | |
| HANDLEBAR | . Steel, 5° bend, 40mm | rise |
| | Clamp diameter, mm | 25.4 |
| STEM | | |
| | Steerer clamp height, mi | n |
| SHIFT LEVERS | . SR 225 | |
| BRAKE LEVERS | , CS VL-313D | |
| GRIPS | . Kraton | l l |
| DRIVETRAIN | | British British (\$1 |
| FT DERAILLEUR | | |
| TI DERMIELEOR | Cable routing | Down pull |
| | Attachment | 31.8 mm/ 1 1/4" |
| RR DERAILLEUR | | 31.0 mmu 1 114 |
| | . SR XR17G 42/34/24 | |
| ORAMOLI IIIIIII | Bolt hole circle, mm | Riveted |
| BB | . VP-B33W | Advini |
| | Shell x axle, mm | 68 x 122.5, Square |
| CHAIN | | oo x 122.5, oquare |
| | Chain type | <i>3/32"</i> |
| | Chain length (links) | 102 |
| CASSETTE | . HG72 13-28, 7spd | 1 |
| WHEELSET | andra eta eta eta eta eta eta eta eta eta et | ANGLE U PO NTE PON U VARASE |
| FRONT WHEEL | . Alloy, nutted hub, 32° | Weinmann 510 rim |
| TRONT WHEEL | E.R.D., mm | , wemmann 519 rm 499 |
| | E.R.D., mm Rim strip | 499 Rubber |
| FRONT TIRE | Bontrager Revolt ST-2 | |
| | Tire size | 24 × 2.1 |
| REAR WHEEL | Alloy, nutted hub, 32°, | Weinmann 519 alloy rim |
| | E.R.D., mm | 499 |
| | Rim strip | Rubber |
| REAR TIRE | . Bontrager Revolt ST-2 | |
| | Tire size | 24 x 1.95 |
| SPOKES | . 14G UCP | |
| | Front, mm | <i>242, 4</i> x 1 |
| | Rear, mm | <i>240/241, 4</i> x |
| INNER TUBES | . Schraeder valve | |
| OTHER 1 | | en en en en en en en en en en en en en e |
| 的过去式和过去分词 医克拉克氏征 医多克克氏征 医多克克氏征 医克拉克氏征 医克克克氏征 医克克克氏征 医克克克氏征 医克克克氏征 医克克克氏征 医克克克氏征 医克克克克氏征 医克克克克氏征 医克克克克氏征 医克克克克克氏征 医克克克克克克克克克克 | Alloy micro-adjust | |
| | Outer diameter, mm | 27.2 |
| SADDLE | | 27.2 |
| | Alloy direct pull | |
| PEDALS | • | |
| , PDUFA | Axle diameter | 011.77 |
| SEAT BINDED | Outals rataines | 9/16" |

Mt. Jam FS

Why this Fisher rocks:

Rider: Aggressive youth or smaller adult single-track rider

Frameset

Joshua suspension- all-round performance URT design- no suspension activation through chain tension

Wheelset

Alloy rims- light, good braking action Bontrager tires- name brand known for easy pedaling, traction

Components

Youth enthusiast level- Altus, SYNC suspension fork

Size specific- parts fit smaller rider for improved comfort, control

Direct pull brakes- extra stopping power

| GEA | RIN | G | |
|-----|-----|----------|----|
| | 24 | 34 | 42 |
| 13 | 44 | 62 | 76 |
| 15 | 38 | 54 | 66 |
| 17 | 33 | 47 | 58 |
| 19 | 30 | 42 | 52 |
| 22 | 26 | 37 | 45 |
| 25 | 23 | 32 | 40 |
| 28 | 20 | 29 | 35 |
| | | | |

BIKE WEIGHT 34.3 lb, 15.57 kg,

COLORS
Yellow/Red

| FII LEVINGE I | | enanda, and an archive | |
|----------------------|------------|------------------------|--|
| Frame | Size | S | |
| Rider height | Inches | 58 | |
| | Cm | 147 | |
| Handlebar | Width, mm | 560 | |
| Stem | Length, mm | 50 | |
| | Angle | 15 | |
| Crank | Length, mm | 162 | |
| Seatpost | Length, mm | 300 | |
| Steerer | Length, mm | 138 | |

SEAT BINDER Quick release

ADDITIONALS 1 water bottle mount

Inner diameter, mm

Mt. Jam

| TAYS HI Tersile steel Frame weight Frame weight Frame weight Frame beigh, man Steel Same beight, man | RAMESET . MAIN TUBES . | | nsile steel w/CroMoly | seat tube | | | | Mt. Jan |
|--|---|--|--|--|----------------------|---------|----------|---|
| Advisors beigh, mm Adviso | | | | | | | | |
| Timed, none Auto-considered, none 400 Auto-considered, none 400 State bright, none 400 State bright, none 25 d Auto-Class blance and Class demonsts none Class of Cla | | | rame weight | 6.8 lb (3.10 kg) | | | | |
| Additional longth, mm Allowards longth, mm Assach bright, mm Assach bright, mm Additional longth, mm Addition | ORK | | | - | | | | |
| See Steel St | | | • | | | | | |
| Size 3.546.4690.0 Stank keigh, mm 3.54 AMDLEBAR Steel Chesp Essurer, mm 5.54 ESTEM Outs change quill STET LEVERS SPAM Group beigh, mm 5 SHIFT LEVERS SPAM Group beigh, mm 5 SHIFT LEVERS SPAM Group beigh, mm 6 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group beigh, mm 7 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beight, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 SHIFT LEVERS SPAM Group Beigh, mm 8 S | | | xle-crown length, mm | 410 | | | | |
| ONTROLS ANADLEBAR See ANADLEBAR SEE ANADLEBAR SE | HEADSET | | | 25 (/2 4 2)22 2 | | | | |
| ONTROLS ANADLESAR Class femores and Class femores and STEM Class femores and Stem Guels change, guill Source domp feight man Stem Stem Guels change, guill Source domp feight man Stem Stem Stem Stem Class femore Stem | | | | | | | | |
| ANDLEBAR Steel Change discovers more Change discovers more Service Work change, quill Source droup heigh, more SHAKE LEVERS SRAM Centers SRAKE LEVERS Alloy, direct puil SRIPS Kraton KIVETRAIN. Shimano Altus Chile words Annehment Shimano Carrey TY40 Chile words RR DERAILLEUR Shimano Carrey TY40 BB There pices type Challe long to Chile more Chain spe C | | 3. | tack height, mm | 34.3 | | | | |
| ANDLEBAR Steel Change discovers more Change discovers more Service Work change, quill Source droup heigh, more SHAKE LEVERS SRAM Centers SRAKE LEVERS Alloy, direct puil SRIPS Kraton KIVETRAIN. Shimano Altus Chile words Annehment Shimano Carrey TY40 Chile words RR DERAILLEUR Shimano Carrey TY40 BB There pices type Challe long to Chile more Chain spe C | ANTERATE | | 的情報為此時的確認關係的關係可能 | 经经验的建筑与成本是建筑建筑的建筑 | | | | |
| STEM Outs change, quill Susers could peligh, man SHIFT LEVERS SAM Gentera SHIFT LEVERS Alloy, direct pull SRIPS Kraton MIVEFRAIN. Schamano Altus Schweinig Attachment RR DERAILLEUR Schimano Altus RR DERAILLEUR Schimano Tourney TV40 CRANKSET SunRace TK-1, 42/34/24 Stable brick, mm Riccel BB Three-piece type Schild schol, mm Riccel Schild schol, mm Riccel BB Three-piece type Chain inegle (flash) Chain spre Chain inegle (flash) Chain spre Chain inegle (flash) Chain spre Chain inegle (flash) READ, mm READ, mm READ, mm READ mm | SEXVINEDAL KLOP CONTROL PROPERTY OF STATES | Steel | 以代表或自己的有力性的原理的 - | erde de la lactica de la lactica de la lactica de la lactica de la lactica de la lactica de la lactica de la l | | | | |
| Shiff LEVERS SAM Centers BRAKE LEVERS Alloy, direct pull SRIPS Wraton RIVETRAIN TI DERAILLEUR Shimano Altus Cada versing | | | | 25.4 | | | | ssive youth or smaller adult single- |
| SHIFT LEVERS SRAM Center a RRAKE LEVERS Alloy, direct pull SRIPS Kraton REPVETRAIN. TO DEFAILLEUR Shimnon Atts Alloy more pull Attachment 31.8 mont 114- RR DEFAILLEUR Shimnon Coursey TV40 CRANKSET SunRace TK-1, 42/34/24 Bab Three-piece type Sold such man Bitend Bitend Sold such man The Sold such man The Sold such man Bitend Sold such man The Sold such man The Sold such man The Sold such man The Sold such man The Sold such man The Sold such man The Sold such man | STEM | Quick | change, quill | | 1 | rac | k rider | |
| SHIFT LEVERS SRAM Centere RRAKE LEVERS Alloy, direct pull SRIPS Kraton RRVETRAIN. RR DERAILLEUR Shinano Altus Attachment Shinano Tourney TY40 CRANKSET Sunface Tk-I, 42/34/24 Bib Med bid rick, mm | | S | ieerer clamp height, mm | | i_ | ran | neset | |
| SRAKE LEVERS Alloy, direct pull RIPETRAIN FT DERAILLEUR Shimano Altus Colds reading Anabomen ART DERAILLEUR Shimano Tourney 1740 RR DERAILLEUR Shimano Tourney 1740 RR DERAILLEUR Shimano Tourney 1740 RR DERAILLEUR Shimano Tourney 1740 RR DERAILLEUR Shimano Tourney 1740 RR Derailleur Shimano Tourney 1740 RR Bib | SHIFT LEVERS | SRAM | 1 Centera | l | | | | ong and durable |
| ## Wheelse Alloy rims - light, good braking action ## Components | BRAKE LEVER | S Alloy, | direct pull | l | | | | - |
| Shinano Altus Chile revining RR DERAILLEUR Shinano Clurrey TY40 RRAD DERAILLEUR R. Shinano Clurrey TY40 CRANKSET SunRace TK1, 4274/24 BB Three-piece type Sulfix and subsemin | GRIPS | Krato | n | į. | | | Off-roa | geometry- stable in rough terrain |
| Alloy rims- light, good braking action Chair per Michamon RE DERAILLEUR Shimano Fourney TV40 CRANKSET SunRace TK-1, 42/34/24 Re black rink, mm Rivered BB Three-piece type Sulf acad, mm 70 x 31, 5quare Chair per Calin longth (links) Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension fork- smoothens the bumps, adds or trol Suspension for | | | | STATE OF THE STATE | Ι, | NIE | alect | |
| Rate Defaulteur Shimano Tourney TY40 CRANKSET Surface TK-1, 42/34/24 BB Shimano Tourney TY40 BB Shimano Tourney TY40 BB Shimano Tourney TY40 BB Shimano Tourney TY40 BB Shimano Tourney TY40 BB Shimano Tourney Ty40 BB Shimano Tourney Ty40 BB Shimano Tourney Ty40 BB Shimano Tourney Ty40 BB Shimano Tourney Ty40 BB Shimano Tourney Ty40 BB Shimano Tourney Ty40 BB Shimano Tourney Ty40 BB Shimano Tourney Binano Tourney Binano Tourney Binano Tourney Binano Tourney Binano Tourney Binano Tourney Binano Tourney Binano Tourney Binano Tourney Binano | | | ng en en Helmaninis. na Altur | 数とは、これでは、自然の数は、高級では、自 | | | | Italia mand himbline notice |
| Attachment RD DERAILLEUR Shimano Tourney T140 CRANKSET SurRace Tk-1, 42/34/24 Rub kob sink, mm BB More Piece type Chain May Kind saw, mm CHAIN CASI CASSETTE Chain Py Chain hapfy (late) CASSETTE H672 13-28, 7spd THEELSET FRONT WHEEL Alloy, nutted hub, 32°, Aluminum alloy rim E.R.D., mm | F I DERAILLEU | | | Down Aul! | | | • | - |
| RR DERAILLEUR Shimano Tourney TY40 CRANKSET SunRace TK-1, 42/34/24 BB Three-plece type Shirk sada, man 70 x 31, Square CHAIN MC Z-51 Chain topp: | | | | | | | Bontra | er tires- name brand known for easy pe |
| CRANKSET SunRace TK-1, 42/34/24 BB Three-piece type Shold x. ada, mm Chain type Shold x. ada, mm Chain type Shold x. ada, mm Chain type Shold x. ada, mm Chain type Shold x. ada, mm Chain type Chain type Chain type Chain type Chain type Chain type Chain type Chain type Chain type Chain type Shold x. ada, mm Chain type Chain type Chain type Chain type Chain type Chain type Chain type Chain type Chain type Shold x. ada, mm Chain type | DD DEDAILLEU | | | J110 MIRE 1 117 | | | | |
| BB Three-piec type Shill x xix, mm Nieutal Shill x xix, mm Shill x xix, | | | | | | | ٠. | |
| BB Three-plece type Shell'x acds, mm | CKANKSEI | | | Dinated | | | | ubs- secure wheel attachment for new |
| Shell x ack, mm | n.D. | *L | ous note circle, mm | niveied | | ri | der | |
| Chain New Cz-51 Chain tops (Link type Chain tops) (Link type Chain tops) (Link type Chain tops) (Link type) (Link | pp | | | 7027 | 1. | ٠ | mo | |
| Cubin longth (flatk) 104 | | | • | 70 x 3L, square | · ' | | | Alexa valde estle seems |
| Clair longh (links) Class ETTE HG72 13-28, 7 spd HIEELSET FRONT WHEEL Alloy, nutted hub, 32°, Aluminum alloy rimpore comfort, control FRONT WHEEL Alloy, nutted hub, 32°, Aluminum alloy rimpore comfort, control FRONT TIRE Innova MTB Tractice FREAR WHEEL Alloy, nutted hub, 32°, Aluminum alloy rimpore comfort, control FREAD, mm 499 Rim strip REAR TIRE Innova MTB Tractice 24 x 2.1 Frame State paided 180 micro-adjust Outer diameter, mm 30.4 SEAT BINDER Alloy direct puil PEDALS Platform Add diameter SEAT BINDER Quick release Inner diameter, mm ADDITIONALS 1 water bottle mount, chainguard, kickstand INNER TUBES Schreader Valve Frame State Alloy direct puil PEDALS 1 water bottle mount, chainguard, kickstand INNER TUBES Schreader Valve Frame State Alloy direct puil PEDALS 1 water bottle mount, chainguard, kickstand INNER TUBES Schreader Valve Frame State 13 Rider height 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 1 water bottle mount, chainguard, kickstand INNER TUBES 24 x 2.1 SEARING. 24 x 2.1 SEARING. 24 x 2.4 25 x 3 x 2 4 0 28 20 29 35 INNER TUBES 2 x 3 x 2 | LMAIN | | | 2/27" | | | | |
| CASSETTE | | | 74 | | | | Susper | on fork- smoothens the bumps, adds co |
| Size specific - parts fit smaller rider for improve comfort, control Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve comfort, control Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve confort. Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve confort. Direct pull brakes - extra stopping power Size specific - parts fit smaller rider for improve confort. Direct pu | CACCETTE | | | 104 | | | • | • • |
| COMPANY Company Comp | | | . 13.58' 12ba | 10. 20.011 1/2 22315 - 3404104400 | | | | off |
| Rim strip | | Alloy, | | uminum alloy rim | | C | omfort, | ontrol |
| Time Innove MTB Time size 24 x 2.1 Time size Time | | | | | 1 | | Direct | iii brakes- extra stopping power |
| The size | FRONT TIRE | Innov | a MTB | | L | | | |
| REAR WHEEL Alloy, nutted hub, 32°, Aluminum alloy rim E.R.D., mm 499 Rear Tire Innova MTB The rise 24 x 2.1 From, mm 240241, 45 Rear, mm 24024, 45 Rear, mm 240241, 45 Rear, mm 240241, 45 Rear, mm 240241, 45 Rear, mm 240241, 45 Rear, mm 24024, 45 | | 7 | Tire size | | | | | |
| ## Colors Frame Sear Binder Sear Bind | REAR WHEEL | | | uminum alloy rlm | | | | |
| REAR TIRE Innova MTB Tire size 24 x 2.1 SPOKES 14G UCP Front, mm 240,4x 15 38 54 66 INNER TUBES Schraeder valve 17 33 47 58 INNER TUBES Schraeder valve 17 33 47 58 SEATPOST Alloy micro-adjust 22 26 37 45 SADDLE Fisher Padded 18 diameter 18 diameter 18 diameter 18 diameter 1916 SEAT BINDER Quick release I water bottle mount, chainquard, kickstand 1 water bottle mount, chainquard, kickstand 18 linches 1 water bottle mount, chainquard, kickstand 18 linches 18 linches 1916 Handlebar Wildth, mm 560 Stem Length, mm 70 Angle 40 Crank Length, mm 162 Seatpost Length, mm 162 Seatpost Length, mm 162 Seatpost Length, mm 250 | | | | | | | | |
| Tire size 24 x 2.1 24 x 34 42 | | | | Rubber | | | | |
| Tire size 24 x 2.1 24 x 3.4 42 13 44 62 76 15 38 54 66 17 33 47 58 18 18 18 18 18 18 18 | REAR TIRE | Innov | a MTB | Í | GEARIN | ıc. | | |
| SPOKES | | | | 24 x 2.1 | | | | |
| Front, mm | SPOKES | 14G l | JCP | | | | | |
| Rear, mm | | | | 272, 74 | | | | |
| THER SEATPOST | | | • | 240/241, 4x | 15 38 | 54 | 66 | |
| THER SEATPOST | INNER TUBES | Schra | aeder valve | | 17 33 | 47 | 58 | |
| THER SEATPOST | a cours or passage regression reger | Court of Laterty & Astronomy, National | participants - A resistant for the Properties (90) | CONTROL OF THE PROPERTY OF THE | | | | |
| SEATPOST | | MARINE TARABLE | AMAGENTA DE PARTICIONA DE LA PERSONA DE LA P | ALTO CONTROL OF THE PARTY OF TH | | | | |
| SADDLE Fisher Padded BRAKES Alloy direct pull PEDALS Platform Aske diameter SEAT BINDER Quick release Inner diameter, mm ADDITIONALS 1 water bottle mount, chainguard, kickstand TO Frame Size 13 Rider height Inches 61 Cm 156 Handlebar Width, mm 560 Stem Length, mm 70 Angle 40 Crank Length, mm 162 Seatpost Length, mm 250 | | Allov | micro-adjust | | | | | |
| SADDLE Fisher Padded BRAKES Alloy direct pull PEDALS Platform Axtle diameter SEAT BINDER Quick release Inner diameter, mm ADDITIONALS 1 water bottle mount, chainguard, kickstand COLORS Blue/Yellow COLORS Blue/Yellow COLORS Blue/Yellow COLORS Blue/Yellow COLORS Blue/Yellow COLORS Blue/Yellow COLORS Blue/Yellow COLORS Blue/Yellow COLORS Blue/Yellow COLORS Blue/Yellow COLORS Blue/Yellow COLORS Blue/Yellow COLORS Blue/Yellow | SEMIPUSI | | | 20 4 | | | | |
| BRAKES Alloy direct pull PEDALS Platform Axte diameter SEAT BINDER Quick release Inner diameter, mm ADDITIONALS 1 water bottle mount, chainguard, kickstand ADDITIONALS 1 water bottle mount, chainguard, kickstand ADDITIONALS 1 water bottle mount, chainguard, kickstand ADDITIONALS 1 water bottle mount, chainguard, kickstand ADDITIONALS 1 water bottle mount, chainguard, kickstand ADDITIONALS 1 water bottle mount, chainguard, kickstand ADDITIONALS 1 water bottle mount, chainguard, kickstand ADDITIONALS 1 water bottle mount, chainguard, kickstand ADDITIONALS 1 water bottle mount, chainguard, kickstand ADDITIONALS 1 water bottle mount, chainguard, kickstand ADDITIONALS 1 water bottle mount, chainguard, kickstand ADDITIONALS 1 water bottle mount, chainguard, kickstand ADDITIONALS 1 water bottle mount, chainguard, kickstand | CADDI E | | | | 28 20 | 29 | 35 | RIKE WEIGHT |
| PEDALS Platform Axle diameter SEAT BINDER Quick release Inner diameter, mm ADDITIONALS 1 water bottle mount, chainguard, kickstand TE Frame Size 13 Rider height Inches 61 Cm 156 Handlebar Width, mm 560 Stem Length, mm 70 Angle 40 Crank Length, mm 162 Seatpost Length, mm 250 | | | | | | | • | |
| Axte diameter 9/16" SEAT BINDER Quick release Inner diameter, mm 31.8 ADDITIONALS 1 water bottle mount, chainguard, kickstand Frame Size 13 Rider height Inches 61 Cm 156 Handlebar Width, mm 560 Stem Length, mm 70 Angle 40 Crank Length, mm 162 Seatpost Length, mm 250 | | | | | | | | |
| SEAT BINDER Quick release Inner diameter, mm ADDITIONALS 1 water bottle mount, chainguard, kickstand Frame Size Inches Cm I56 Handlebar Width, mm 560 Stem Length, mm 70 Angle Angle 40 Crank Length, mm 162 Seatpost Length, mm 250 | PEDALS | | | 0/1/2" | | | | 10.70 mg. |
| Inner diameter, mm ADDITIONALS1 water bottle mount, chainguard, kickstand Frame Size 13 Rider height Inches 61 Cm 156 Handlebar Width, mm 560 Stem Length, mm 70 Angle 40 Crank Length, mm 162 Seatpost Length, mm 250 | CEAT DIMPER | | | | eat an | 2 7/2 | 5.018109 | |
| ADDITIONALS1 water bottle mount, chainguard, kickstand Frame Size 13 Rider height Inches 61 Cm 156 Handlebar Width, mm 560 Stem Length, mm 70 Angle 40 Crank Length, mm 162 Seatpost Length, mm 250 | SCAL BINDER | | | ž. | 527 725 5237 531 541 | 200.0 | | and a supplication of the |
| Frame Size 13 Rider height Inches 61 Cm 156 Handlebar Width, mm 560 Stem Length, mm 70 Angle 40 Crank Length, mm 162 Seatpost Length, mm 250 | ADDITIONALS | | | | plue/ Ye | Ю₩ | | |
| Frame Size 13 Rider height Inches 61 Cm 156 Handlebar Width, mm 560 Stem Length, mm 70 Angle 40 Crank Length, mm 162 Seatpost Length, mm 250 | | | | | | Ç (494) | | |
| Rider height Inches 61 Cm 156 Handlebar Width, mm 560 Stem Length, mm 70 Angle 40 Crank Length, mm 162 Seatpost Length, mm 250 | Ball Salver • "Alva Tommers • remove a grante | | | | THE PARTY OF | WE | HER TEN | b. \$45.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$1 |
| Cm 156 Handlebar Width, mm 560 Stem Length, mm 70 Angle 40 Crank Length, mm 162 Seatpost Length, mm 250 | | | | | | | | |
| Handlebar Width, mm 560 Stem Length, mm 70 Angle 40 Crank Length, mm 162 Seatpost Length, mm 250 | Didos bolabt | | | | | | | |
| Stem Length, mm 70 Angle 40 Crank Length, mm 162 Seatpost Length, mm 250 | Kider height | | | | | | | |
| Angle 40 Crank Length, mm 162 Seatpost Length, mm 250 | • | | 560 | | | | | |
| Crank Length, mm 162 Seatpost Length, mm 250 | | | | | | | | |
| Seatpost Length, mm 250 | Handlebar | | 70 | | | | | |
| | Handlebar | Length, mm | 70 | | | | | |
| | Handlebar Stem | Length, mm Angle | 70 40 | | | | | |
| Steerer Length, mm 126 | Handlebar Stem Crank | Length, mm Angle Length, mm | 70 40 162 | | | | | |

| T | "V | r | 0 |
|-----|-----------|-----|---|
| *** | y | 100 | • |

| Tyro | be | Hi Tensile steel w/CroMoly s | |
|---|---------------------------|--|---|
| • | | Hi Tensile steel | STAYS |
| | 5.8 lb (3.10 kg) | Frame weight Hi Tenslie steel | FORK |
| | 361 | Axle-crown length, mm | TORK |
| | | | HEADSET |
| | 25.4/34.0/30.0 | Size | |
| | 34.5 | Stack height, mm | |
| | | | CONTROLS HANDLEBAR |
| | 25.4 | Clamp diameter, mm | HANDLEDAR |
| Why this Fisher rocks: | | Quick change, quill | STEM |
| Rider: Youth or smaller adult doubletrack rider | | Steerer clamp height, mm | |
| Frameset | | SRAM Centera | |
| Steel- strong and durable | | Alloy, direct pull | |
| T | AUM SE TOPSCOM | | GRIPS |
| Off-road geometry- stable in rough terrain | | . KT 2. LUCK PROMESS SECTION 1. S. B. 22. 148 PARTURE REPORTED TO HIS PROPERTY OF A STANDARD SECTION AND A SEC | DRIVETRAIN |
| Wheelset | Down pull | Shimano Altus Cable routing | C DERAILLEU |
| Alloy rims- light, good braking action | 1.8 mm/ 1/4" | Attachment | |
| Bontrager tires- name brand known for easy ped- | ł | Shimano Tourney TY40 | RR DERAILLEU |
| aling, traction | | SunRace TK-1, 42/34/24 | CRANKSET |
| Nutted hubs- secure wheel attachment for new | Riveted | Bolt hole circle, mm | DD |
| rider | x 122, Square | Three-plece type Shell x axle, mm | DD |
| Components | | KMC Z-51 | CHAIN |
| Components Youth anthustest level. Altres suide ratio genting. | <i>3/</i> 32" | Chain type | |
| Youth enthusiast level- Altus, wide-ratio gearing | 102 | Chain length (links) | |
| Size specific- parts fit smaller rider for improved | | HG72 13-28, 7spd | |
| comfort, control | | 题课程学生的特别的 | WHEELSET |
| Direct pull brakes- extra stopping power | | Alloγ, nutted hub, 32°, Alum | FRONT WHEEL |
| | 499 Rubber | E.R.D., mm Rim strip | |
| | Rubber | Innova MTB | FRONT TIRE |
| | 24 x 2.1 | Tire size | |
| | | Alloy, nutted hub, 32°, Alum | REAR WHEEL |
| | 499 | E.R.D., mm | |
| | Rubber | Rim strip Innova MTB | DEAD TIDE |
| UNG | 24 x 2.1 CE | Tire size | REAR TIRE |
| 24 34 42 | 2172 | | SPOKES |
| 44 62 76 | 242, 4x 13 | Front, mm | |
| 38 54 66 | ^{240/241, 4x} 15 | Redr, mm | |
| 33 47 58 | 17 | Schraeder valve | color a cital agreement a consession of |
| 30 42 52 | 19 | | OTHER |
| 26 37 45 | 27.2 22 | | SEATPOST |
| 23 32 40 | 27.2 22 | Outer diameter, mm Fisher Padded | SADDLE |
| | | Alloy direct pull | |
| 20 29 35 BIKE WEIGHT | 28 | | PEDALS |
| 31.9 lb. | 9/ 16 " | Axle diameter | |
| 14.48 kg. | l | Quick release | SEAT BINDER . |
| DRS | len | Inner diameter, mm | ADDITION |
| r/Black (boys) le/Blue (girls) | SI SI | 1 water bottle mount, chainrí | stand |
| | 的情報研查/ 數 | | FIT |
| | | ze 13B 13G | |
| | | ches 59 59 | • |
| | | n 149 149 | |
| | | ldth, mm 560 560 | |
| | | ength, mm 50 50 | |
| | | ngle 15 15 | |
| | | ength, mm 162 162 ength, mm 250 250 | |
| | | | |

BMX

For 2002

These successful frames remain unchanged from 2000.

Geometry

Our BMX bikes are designed to satisfy both kids and their parents. By carefully designing the frame and components, we make the bikes easier for kids to get on and ride. At the same time, we provide competition level performance that's tested by our Fisher BMX Pro team.

Frame details

BMX riding and performance is all about durability. Check out the hefty dropouts and grind plates on our bikes. Look at the massive welds joining the tubes. Notice the strategically placed gussets. What you can't see is the carefully selected tubing wall thicknesses, and the almost endless testing that's required before a Fisher BMX bike hits the market.

Our Jumping bikes are all built from rugged steel. These bikes are beefy. Look at the super heavy-duty head tube. This is to resist headset stretch, a major problem when the bikes suddenly aren't airborne anymore. Both the top tube and down tube intersect the head tube, making for the strongest possible frame. At the other end of the bike, we've increased the diameter of the stays to add strength for rear first landings.

Our Racing frames are aluminum for lower weight, but we still built them beefy for competition. The down tubes are slightly smaller in diameter to allow a slight flex for excellent handling on the berms, but they're still stiff enough to land smoothly after jumping a double.

Our freestyle bikes feature long top tubes, with short rear ends. This design provides great balance for those radical tricks. They're also heavily built, with thick tubes and extra gussets.

| FRAMESET MAIN TUBES HITensile w/ Cro-Moly top and | down tube | C | al |
|---|---|---|-------------------|
| STAYS High tensile steel FORK Fisher Dirt, 1 3/8" tapered Cro | - Matu Madaa | | |
| Axle-crown length, mm | 322.0 | | |
| HEADSET Tioga threadless | 322.0 | | |
| Size | 25.4/34.0/30.0 | | |
| Stack height, mm | 25.5 | | |
| | | | |
| | | | |
| CONTROLS | | | |
| HANDLEBAR Fisher | | | |
| Clamp diameter, mm | 22.2 | | |
| STEM Alloy Ahead type | | | |
| Steerer clamp height, mm BRAKE LEVERS Alloy, direct pull | 31.8 | Why this Fisher rocks: | 144 |
| GRIPS Bontrager BMX | | Rider: Aggressive BMX rider or Racer | क्ष इक्ष्या अभिने |
| ONIFS Dollträger Dinx | | 30 | |
| | 3233 100 35 55 55 55 55 55 55 55 | Frameset | |
| DRIVETRAIN | | Cro-Moly steel- strong and durable | |
| CRANKSET Fisher forged Bolt hole circle, mm | 110 | Massive tubes- stiff for jumping, slight flex f | for |
| BB One-piece type | 110 | berm shots | |
| Shell x axle, mm | 24 TPI, | YXIbaalaat | |
| CHAIN KMC | | Wheelset | |
| Chain type | 1/8" | Alloy rims w/48 spokes- light, but tough | |
| Chain length (links) | 90 | 14mm axles- super strong | |
| CASSETTE ACS Claw, 16T | j | Components | |
| | | Name brand parts- quality and durability | |
| | | | |
| | | Cro-Moly and alloy parts- high strength, low | , |
| | Language Company (Carlos State) | weight | |
| WHEELSET | SECTION OF STREET | | |
| FRONT WHEEL Alloy, nutted hub, 48°, 3/8 as | | | |
| E.R.D., mm Rim strip | 406 PVC | | |
| FRONT TIRE Knobby, square style | PVC | | |
| Tire size | 20 x 2.1 | | |
| REAR WHEEL Alloy, nutted hub, 48°, 3/8 ax | | | |
| E.R.D., mm | 406 | | |
| Rim strip | PVC | | |
| REAR TIRE Knobby, square style | e | EARING | |
| Tire size SPOKES 14G UCP | 20 x 2.1 | 44 | |
| Front. mm | 185, 4x 16 | | |
| rront, mm Rear. mm | 183/183, 4x | , 55 | |
| INNER TUBES Schraeder valve | 105/105/ 14 | | |
| OTHER | THE STREET STREET | | |
| SEATPOST Steel | 2010年2月1日年20日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日 | | |
| Outer diameter, mm | 25.4 | | |
| SADDLE Bontrager FS10 BMX | 2).7 | | |
| BRAKES Alloy direct pull | | | |
| PEDALS Alloy platform | | | |

1/2 28.6 COLORS

FIT Size Frame Pro Handlebar Width, mm 685 Stem Length, mm 55 Angle 0 Length, mm 180 Crank Seatpost Length, mm 350 Steerer Length, mm 160

PEDALS Alloy platform

SEAT BINDER Alloy w/integral boit

Axle diameter

ADDITIONALS SST Oryg rotor, Fisher pegs (1 pr.)

Inner diameter, mm

Green

Mullet

| FRAMESET | | |
|---|---|---------------------------------------|
| MAIN TUBES | Cro-Moly steel | |
| STAYS | Cro-Moly steel | |
| FORK | Fisher Dirt, 1 3/8" tapere | ed Cro-Moly |
| | Axle-crown length, mm | 322.0 |
| HEADSET | | 05 (10 (0100 (|
| | Size | 25.4/34.0/30.0 25.5 |
| | Stack height, mm | ,,,,, |
| CONTROLS | | |
| HANDLEBAR | | |
| | Clamp diameter, mm | 22.2 |
| STEM | | 31.0 |
| | Steerer clamp height, mm | 31.0 |
| BRAKE LEVERS GRIPS | | |
| DRIVETRAIN CRANKSET | . Fisher forged Cro-Moly | |
| 411 | Bolt hale circle, mm | 110 |
| BB | . One-piece type | |
| | Shell x axle, mm | 24 TPI |
| CHAIN | , KMC | |
| | Chain type | 1/8 |
| | Chain length (links) | 90 |
| CASSETTE | . ACS Claw, 16T | |
| | | |
| | | |
| PROBABLE TO COLO DO DE COLO DE TOTO DE LA COLO DECOLO DE COLO | and a continuous contraction of the contraction of | opropries in a service process is the |

Why this Fisher rocks: Rider: Aggressive BMX rider or Racer

FramesetCro-Moly steel- strong and durable

Massive tubes- stiff for jumping, slight flex for berm shots

Wheelset

Bontrager Bruiser rims w/48 spokes- light, but tough

14mm axles- super strong

Components

Name brand parts- quality and durability Cro-Moly and alloy parts- high strength, low weight

| THE PROPERTY OF THE PROPERTY O | 4 |
|--|----------|
| FRONT WHEEL Alloy, nutted hub, 48°, Aluminum alloy rim | 1 |
| E.R.D., mm 406 | 4 |
| Rim strip PVC | : |
| FRONT TIRE Maxxis Holy Roller | |
| Tire size 20 x 2.1 | r |
| REAR WHEEL Alloy, nutted hub, 48°, Aluminum alloy rim | 1 |
| E.R.D., mm 406 | |
| Rim strip PVC | <i>:</i> |
| REAR TIRE Maxxis Holy Roller | G |
| Tire size 20 x 1.95 | ĵ. |
| SPOKES | 16 |
| Front, mm 185, 45 | d" |
| Rear, mm 183/183, 43 | ٢ |
| INNER TUBES Schraeder valve | |
| OTHER | 2.55.X |
| SEATPOST Steel | 1 |
| Outer diameter, mm 25.4 | 1 |
| SADDLE Fisher Dirt Jumper | ı |
| BRAKES Alloy direct pull | |
| PEDALS Alloy platform | |
| Axle diameter 1/2 | " |
| SEAT BINDER Alloy w/integral bolt | |
| Inner diameter, rom 28.0 | 6 C |
| ADDITIONALS SST Oryg rotor | |

GEARING
5 44
16 55
44
16 55
6
COLORS

Pro XL Size Frame Width, mm 685 Handlebar 55 Length, mm Stem Angle 0 180 Crank Length, mm 350 Seatpost Length, mm Length, mm Steerer

Woody

| FRAMESET | Hi Tensile steel | | |
|---|---|--|--------------------|
| | Hi lensile steel | | |
| P . | Fisher Freestyle, 1 3/8" ta | · | |
| } | Axle-crown length, mm | 322.0 | |
| HEADSET | Tloga threadless | Ī | |
| | Size | 21.2/32.5/26.4 | |
| | Stack height, mm | 40.5 | |
| | | | |
| CONTROLS HANDLEBAR | | | |
| *************************************** | Clamp diameter, mm | 22.2 | |
| STEM | Alloy Ahead type | | |
| | Steerer clamp height, mm | | |
| BRAKE LEVERS | Alloy, direct pull | | |
| B . | Bontrager dual density | | |
| | , | | |
| DRIVETRAIN | CATTORIS CONTRACTORIS PROGRAMMENTO | SANCA BENEVALENDA SENSON EST | Why this |
| | | | Rider: BM |
| CRANKSET | | | |
| l | Bolt hole circle, mm | 1 piece | Frameset |
| RR | One-piece type | 24 7701 | Heavy |
| ALLAIN, | Shell x axle, mm | 24 TPI, | Full fr |
| CHAIN | | 170 | |
| | Chain type | 1/8" | for pegs |
| CASSETTE | Chain length (links) ACS Claw, 16T | 88 | Wheelset Alloy |
| | | | Componer Freest |
| THE PERSON NAMED IN COLUMN | POSTAS COMPANION POR PROMISSO | NASSESSEE EN ESTE COMP | Steel 1 |
| WHEELSET | s parametric company and transfer and company of the property | (2) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1 |] |
| FRONT WHEEL | Steel hub, 48°, Aluminum | | |
| Į. | E.R.D., mm | 422 | Ì |
| COOUT TIDE | Rim strip | PVC | |
| FRONT TIRE | Flsher Freestyle | 22 24 | |
| DEAD MILES | Tire, size | 20 x 2.0 | |
| REAR WHEEL | Steel hub, 48°, Aluminum | | |
| | E.R.D., mm | 422 | |
| DEAD TIDE | Rim strip | PVC | |
| KEAR HRE | Fisher Freestyle | _{20 x 2.0} GEA | RING |
| SPOKES | Tire size | 20 x 2.0 | 44 |
| SPUNES | | 105 4 16 | |
| | Front, mm | 185, 4x 16 | 55 |

| Why | y this/Fisher rocks: |
|-----|---|
| Rid | er: BMX racer |
| Fra | meset |
| | Heavy duty steel- strong for radical moves |
| fo | Full freestyle features- grinders, massive dropouts or pegs |
| Who | e elset Alloy rims, 48 spokes- super tough, good stopping |
| Con | nponents Freestyle parts- rotor and pegs |
| | Steel parts- durability |

| interest interest interest in the confiction of | |
|---|-----------------|
| Tire, size | 20×2.0 |
| REAR WHEEL Steel hub, 48°, Aluminum alloy rii | m |
| E.R.D., mm | 422 |
| Rim strip | PVC |
| REAR TIRE Fisher Freestyle | |
| Tire size | 20 x 2.0 |
| SPOKES 14G UCP | |
| Front, mm | 185, 4x |
| . Rear, mm | 184/184, 4x |
| INNER TUBES Schraeder valve | |
| OTHER | |
| SEATPOST Steel | |
| Outer diameter, mm | 25.4 |
| SADDLE Fisher Freestyle, padded | |
| BRAKES Alloy direct pull | |
| PEDALS Alloy platform | |
| Axle diameter | 1/2" |
| SEAT BINDER Alloy w/integral bolt | |
| Inner diameter, mm | 28.6 |
| ADDITIONALS SST Oryg rotor, Fisher pegs (2 pr.) | |
| .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | I |
| | |

| | L | | |
|--------|---|------------|--------------|
| COLORS | | 型的 ACARDON | oleh swetter |
| Green | | | |
| Black | | | |

| Frame | Size | All Around | |
|-----------|------------|------------|--|
| Handlebar | Width, mm | 685 | |
| Stem | Length, mm | 55 | |
| | Angle | 0 | |
| Crank | Length, mm | 175 | |
| Seatpost | Length, mm | 350 | |
| Steerer | Length, mm | 174 | |

Mr. Skinner

| CONTROLS HANDLEBAR Fisher | 2. | |
|---|------------|-----------|
| STEM Alloy Ahead type | 22.2 | |
| Steerer clamp height, mm SHIFT LEVERS Alloy, direct pull | | |
| GRIPS Bontrager BMX | 23/16 | _ |
| DRIVETRAIN CRANKSET Fisher forged Bolt hole circle, mm | 110 | |
| BB One-piece type | TPI, | |
| CHAIN KMC Chain type | 1/8" | |
| Chain length (links) CASSETTE ACS Claw, 16T | 90 | |
| | | |
| | 1046001 | |
| WHEELSET FRONT WHEEL Steel hub, 36°, 3/8 axle, Bontrager Brulser E.R.D., mm | rim 406 | |
| Rim snip FRONT TIRE Knobby, square style | PVC | j |
| Tire size 20 x | 1.95 | |
| REAR WHEEL Steel hub, 36°, 3/8 axle, Bontrager Bruiser E.R.D., mm | 406 | |
| Rim strip | PVC | 4-70-2-71 |
| REAR TIRE Knobby, square style | | GEAR |
| 1110 1110 | 1.95 | 4 |
| SPOKES | 86, 4x | 16 |
| Rear, mm 183/18 | | |
| INNER TUBES Schraeder valve | | |
| OTHER | in A | |
| SEATPOST Steel | | Į. |
| Outer diameter, mm | 25.4 | |
| SADDLE Bontrager FS10 BMX | | |
| BRAKES Alloy direct pull | | J |
| PEDALS Alloy platform | 1/2" | |
| Axle diameter SEAT BINDER Alloy w/integral bolt | 112 | <u> </u> |
| Inner diameter, mm | 28.6 | COLO |
| ADDITIONALS SST Oryg rotor, Fisher pegs (1 pr.) | | Dark l |
| | | Yellov |
| | | |

Pro

685

55

0

175

350

174

Size

Angle

Width, mm

Length, mm

Length, mm

Length, mm

Length, mm

Frame

Stem

Crank

Seatpost Steerer

Handlebar

FRAMESET

MAIN TUBES HI Tensile steel

STAYS HI Tensile steel

HEADSET Tioga threadless

FORK Fisher Dirt, 1 3/8" tapered

Size Stack height, mm

Axle-crown length, mm

322.0

40.5

21.2/32.5/26.4

| R | lder: BMX racer |
|-------------------------------|--|
| Fi | rameset Cro-Moly steel- extra strong for radical moves |
| | Full freestyle features- grinders, massive dropouts for pegs |
| W | /heelset Bontrager rims- super tough, smooth stopping |
| C | omponents Steel parts- durability |
| | Direct pull brakes- extra stopping power |
| GEARIN 44 16 55 | |
| COLORS Dark blue Yellow | NOCK SAGANG - A CONTRACTOR AND AND AND AND AND AND AND AND AND AND |

Why this Fisher rocks:

EIP WEST ENDOWS THE SEASON OF

Kids'

For 2002

These successful frames remain unchanged from 2000.

Geometry

Our Kids' bikes are designed to satisfy both kids and their parents. By carefully designing the frame and components, we make the bikes easier for kids to get on and ride. At the same time, we make the bikes provide a wide range of fit so kids can get on a model early, and enjoy it longer as they grow.

Ride

Within the normal limits of parts availability, we've looked at keeping the pedals close together. We use size specific crank lengths, bar widths, and saddle sizing. We keep the bottom brackets as low as possible for easy on and off, as well as a low center of gravity. When we spec a hand brake, we also make sure that fits. With our attention to these details, Fisher kids bikes are easier to learn on, and more fun to ride.

Frame details

Our frame details will likely be lost on the kids. But the parents will be concerned with durability and cost.

These bikes aren't really about a technical dissertation, so we don't even include frame geometry here. The important difference here is that our Kids' bikes go through the full Fisher testing regimen. Passing this rigorous evaluation means they're designed and built to last

For the rest of the bike, we've focused on providing the best ride for the cost. By carefully designing the frame geometry and tubing, and carefully selecting the components, we've managed to get a lot of ride from a bike that will still pass our testing requirements. This allows riders a viable high quality alternative to chain store bikes which don't ride or last nearly as well. These are bikes that can be handed down from kid to kid as a family grows, and which will promote cycling because they make riding more fun.

Extra attention to specs on kids' bikes.

To an experienced cyclist, many of the details of our Kids' bikes may seem humdrum or at best 'normal'. There-in lies a key to our Fisher kids' bikes; they use parts you'd expect on other Fisher bikes. While other brands may use plastic bushings, we use real, round steel ball bearings because the parts will run smoother and last longer. Even on our 12" wheeled models. On bikes where we spec training wheels, they are massively overbuilt, because we know your toddler is depending on them. We use 4 bolt stems, for extra handlebar security (parents, just how often do you thoroughly check your kids' bikes?). Our saddles use adjustable seatpost clamps, offering both fore/aft adjustment and tilt. Just like on an adult bike, this allows proper positioning and comfort for your child. Many of our competitors forego these simple details to cut costs. We go the extra mile and specify size specific cranks, handlebars, pedals, and even saddles. For bikes with hand brakes, we've found better fitting levers, so your child can comfortably apply all the stopping power they need. All this attention costs a bit more, but we think your child will be more comfortable, safer, and learn faster on a Fisher bike.

Cosmo

| MAIN TUBES Hi Tensile ste STAYS Hi Tensile ste | |
|---|---|
| Frame weigh | |
| FORK RST | |
| Travel, mm | 60 |
| Axle-crown | length, mm 352 |
| HEADSET Steel | |
| Size | 25.4/34.0/30.6 t. mm 34.5 |
| Stack heigh | , mm S45 |
| CONTROLS HANDLEBAR Steel | |
| Clamp dian | |
| | p height, mm |
| SHIFT LEVERS SRAM MRX, | • |
| BRAKE LEVERS Alloy, direct | pull |
| GRIPS Kraton | |
| DRIVETRAIN | ndiacinal de la Arma- |
| RR DERAILLEUR Shimano Tou | • |
| CRANKSET One-piece ty | |
| Bolt hale ci | |
| BB One-plece ty Shell x axle | |
| CHAIN KMC Z-51 | , mm do |
| Chain type | 3/32 |
| Chain lengt | • |
| CASSETTE HG60 14-28, | |
| | |
| WHEELSET | |
| FRONT WHEEL Alloy, nutted | hub, 32°, Aluminum alloy rim |
| E.R.D., mr. | |
| Rim strip | pve |
| FRONT TIRE Innova MTB | 20. 2 |
| Tire size REAR WHEEL Alloy, nutted | 20 x 2. |
| E.R.D., m | |
| Rim strip | PVC |
| REAR TIRE Innova MTB | |
| Tire size | 20 x 2. |
| SPOKES14G UCP | |
| Front, mm | 192, 3 |
| Rear, mm INNER TUBES Schraeder vo | 189/191, 3. |
| OTHER | arve |
| SEATPOST Alloy | |
| Outer dian | · · |
| SADDLE Fisher Padde | |
| PEDALS Platform | pun |
| Axle diame | ster 9/16 |
| SEAT BINDER Quick releas | |
| Inner dian | |

| Why this Fisher rocks: |
|--|
| Rider: Young off road rider or First geared bike |
| Frameset |
| Steel- strong and tough |
| Low standover- fits wider range for longer use |

Wheelset

Alloy rims- light, good stopping Bontrager tires- easy pedaling and fast, yet grippy

Components

Shimano derailleur- easy shifting and pedaling Suspension fork- comfort and control

Size specific fit parts- more comfortable, easier to control

| GE/ | RING |
|-----|------|
| | 38 |
| 14 | 55 |
| 16 | 48 |
| 18 | 42 |
| 21 | 36 |
| 24 | 32 |
| 28 | 27 |
| ļ | |
| | |
| l . | 1 |

BIKE WEIGHT 26.0 lb. 11.80 kg.

COLORS:

Silver/Black (boys) Purple/Dark Purple (girls)

| FIT | | | | |
|-----------|------------|-----|-----|---|
| Frame | Size | 12B | 12G | |
| Handlebar | Width, mm | 580 | 580 | |
| Stem | Length, mm | 40 | 40 | |
| | Angle | 15 | 15 | |
| Crank | Length, mm | 140 | 140 | , |
| Seatpost | Length, mm | 250 | 250 | |
| Steerer | Length, mm | 123 | 123 | |
| | • • | | | |

Inner diameter, mm

ADDITIONALS Double chainring guards, kickstand

Comet

| BB WP-B33W CHAIN KMC 410 Chain bye Chain length (links) CASSETTE 19 WHEELSET FRONT WHEEL Star The rise 20 x 2.0 REAR WHEEL Coaster brake hub, 36°, Aluminum alloy rim E.R.D., mm E.R.D., | | Stack height, mm | 35.0 | |
|--|--|-------------------------------|----------------------|--|
| HANDLEBAR Steel BMX Camp damater, mm 25.4 STEM 4 bolt BMX Surer damp height, mm BRAKE LEVERS Alloy, right only with the price of the property of t | | | | |
| Clamp dismoster, mm 4 do to IBMN Secure Unity pleight, mm BRAKE LEVERS Alloy, right only GRIPS Fisher Star DRIVETRAIN CRANKSET One-plece type, 36T BB VP-B33W Sold sends, mm CHAIN KMC 410 Chain type Chain type Chain longth (limbs) CASSETTE 19 CASSETTE 19 Why this Fisher rocks: Rider: Developing new rider Frameset Steel- strong and tough Low standover- fits wider range for longer use Wheelset Bontrager tires- brand-name performance in a kids' size Components Coaster brake with rear hand brake- stepping stone to hand controls on 'big' bikes Size specific fit parts- more comfortable, easier to control FRONT TIRE Fisher Star The size 20 x 20 REAR WHEEL Coaster brake hub, 36°, Aluminum siloy rim ERD, mm ERD, mm PPC REAR TIRE Fisher Star The size 20 x 20 REAR TIRE Fisher Star The size 20 x 20 Rear Time is 20 x | C ONTROLS HANDLEBAR | Steel BMX | | |
| BRAKE LEVERS. Alloy, right only GRIPS Fisher Star DRIVETRAIN CRANKSET One-piece type, 36T But but sixth, mm BB V-B33W CHAIN KMC 410 Chain type Chain largh (links) CASSETTE 19 CASSETTE 19 Will EELSET FRONT WHEEL Steel hub, 36°, Aluminum alloy rim ERD, mm ERD, mm ERD, mm ERD, mm ERD, mm Avz REAR WHEEL Coaster brake hub, 36°, Aluminum alloy rim ERD, mm PVC REAR WHEEL Coaster brake hub, 36°, Aluminum alloy rim ERD, mm PVC REAR TIRE Fisher Star Tire ize 20 × 2.0 Frout, mm 185, 3x INNER TUBES Schraeder valve Outre damate, mm Abd diameter SEAT BINDER Quake rims Abd diameter Abd controls COLORS COLORS COLORS COLORS COLORS COLORS Why this Fisher Tocks: Ridder: Developing new rider Frameset Steel- strong and tough Low standover- fits wider range for longer use Wheelset Bontrager tires- brand-name performance in a kids' staze Components Coaster brake with rear hand brake- stepping stone to hand controls on 'big' bikes Size specific fit parts- more comfortable, easier to control Coaster brake with rear hand brake- stepping stone to hand controls on 'big' bikes Size specific fit parts- more comfortable, easier to control Coaster brake with rear hand brake- stepping stone to hand controls on 'big bikes Size specific fit parts- more comfortable, easier to control Coaster brake with rear hand brake- stepping stone to hand controls on 'big bikes Size specific fit parts- more comfortable, easier to control Coaster brake with rear hand brake- stepping stone to hand controls on 'big bikes Size specific fit parts- more comfortable, easier to control Coaster brake with rear hand brake- stepping stone to hand controls on 'big bikes Size specific fit parts- more comfortable, easier to control Coaster brake with rear hand brake- stepping stone to hand controls on 'big bikes Size specific fit parts- more comfortable, easier to control Coaster brake with rear hand brake- stepping stone to hand controls on 'big bikes Size specific fit parts- more comfortable, easie | | Clamp diameter, mm 4 bolt BMX | 25.4 | |
| CRANKSET One-piece type, 36T Bolt bolt circle, mm BB VP-B33W Sold s sade, mm CHAIN KMC 410 Chain pop Chain length (links) CASSETTE 19 WHEELSET FRONT WHEEL Steel hub, 36°, Aluminum alloy rim ERD, m | | Alloy, right only | | |
| BB | and the Carter of Commission of the Carter o | One-place type 36T | | Why this Fisher rocks: |
| Shell'x acid, mm Chain type Chain type Chain the gift (links) CASSETTE 19 WHEELSET FRONT WHEEL Steel nub, 36°, Aluminum alloy rim E.R.D., mm E | | Bolt hole circle, mm | 1 piece | Rider: Developing new rider |
| CHAIN | | Shell x axle, mm | 68, | |
| CASSETTE 19 Wheelset Bontrager tires- brand-name performance in a kids' size Components Coaster brake with rear hand brake- stepping stone to hand controls on 'big' bikes FRONT WHEEL Steel hub, 36°, Aluminum alloy rim ERD, mm 422 Rim strip PVC FRONT TIRE Fisher Star Tire size REAR WHEEL Coaster brake hub, 36°, Aluminum alloy rim ERD, mm 422 Rim strip PVC REAR TIRE Fisher Star Tire size SPOKES 14G UCP Front, mm 189, 3x Roar, mm 185, 3x INNER TUBES Schraeder valve OTHER SEATPOST Alloy micro-adjust Outer diameter, mm 27.2 SADDLE Padded BRAKES Coaster type PEDALS Platform Ask diameter SEAT BINDER Quick release, 47mm Inner diameter, mm Inner | CHAIN | KMC 410 | | |
| WHEELSET FRONT WHEEL Steel hub, 36°, Aluminum alloy rim E.R.D., mm Alloy micro-adjust Outer diameter, mm ADDITIONALS WHEELSET FRONT WHEEL Steel hub, 36°, Aluminum alloy rim E.R.D., mm Alloy micro adjust Outer diameter, mm ADDITIONALS Coster brake with rear hand brake- stepping stone to hand controls on 'big' bikes Coaster brake with rear hand brake- stepping stone to hand controls on 'big' bikes Size specific fit parts- more comfortable, easier to control Richard and controls on 'big' bikes Size specific fit parts- more comfortable, easier to control GEARING Size specific fit parts- more comfortable, easier to control Size specific fit parts- more comfortable, easier to control GEARING Size specific fit parts- more comfortable, easier to control Size specific fit parts- more comfo | CASSETTE | Chain length (links) | i | Wheelset |
| WHEELSET FRONT WHEEL Steel hub, 36°, Aluminum alloy rim ERD, mm Rim trip FRONT TIRE Fisher Star Tire tize REAR WHEEL Coaster brake hub, 36°, Aluminum alloy rim ERD, mm ERD, mm PVC REAR TIRE Fisher Star Tire size SPOKES 14G UCP Front, mm Rean, mm 189, 3× INNER TUBES Schraeder valve OTHER SEATPOST Alloy micro-adjust Oater diameter, mm Aske diameter Aske diameter Aske diameter Quick release, 47mm Inner diameter, mm In | | | | |
| FRONT WHEEL Steel hub, 36°, Aluminum alloy rim ERD., mm ERD., | | | | |
| ERD., mm Rim trip RRONT TIRE Fisher Star Tire size REAR WHEEL Coaster brake hub, 36°, Aluminum alloy rim ERD., mm ERD., mm ERD., mm PVC REAR TIRE Fisher Star Tire size SPOKES 14G UCP Front, mm Rear, mm 189, 3x Rear, mm 185, 3x INNER TUBES Schraeder valve OTHER SEATPOST Alloy micro-adjust Outer diameter, mm Aske diameter PEDALS Platform Aske diameter Aske diameter Asked diameter And DITIONALS Chalcourser ADDITIONALS Chalcourser Tire size 20 x 2.0 SEARING 36 19 38 SEARING | | | AND SERVICE SERVICES | stone to hand controls on 'big' bikes |
| FRONT TIRE Fisher Star Tire size 20 x 2.0 REAR WHEEL Coaster brake hub, 36°, Aluminum ailoy rim ERD, mm 422 Rim strip PVC REAR TIRE Fisher Star Tire size 20 x 2.0 SPOKES 14G UCP Front, mm 189, 3x Rear, mm 189, 3x Rear, mm 189, 3x INNER TUBES Schraeder valve OTHER SEATPOST Alloy micro-adjust Outer diameter, mm 27.2 SADDLE Padded BRAKES Coaster type PEDALS Platform Axile diameter 9/16° SEAT BINDER Quick release, 47mm Inner diameter, mm ADDITIONALS Chalcoured Chalcoured COLORS COLORS | FRONT WHEEL | E.R.D., mm | 422 | Size specific fit parts- more comfortable, easier to control |
| REAR WHEEL Coaster brake hub, 36°, Aluminum ailoy rlm ER.D., mm 422 Rim strip PVC REAR TIRE Fisher Star Tre size 20 x 2.0 SPOKES 14G UCP Front, mm 189, 3x Rear, mm 185, 3x INNER TUBES Schraeder valve OTHER SEATPOST Alloy micro-adjust Outer diameter, mm ERAR WHEEL Coaster type PEDALS Platform Axle diameter 9/16" SEAT BINDER Quick release, 47mm Inner diameter, mm COLORS COLORS | FRONT TIRE | . Fisher Star | | |
| REAR TIRE Fisher Star Tire size 20 × 2.0 SPOKES 14G UCP 36 Front, mm 189, 3× Rear, mm 185, 3× INNER TUBES Schraeder valve OTHER SEATPOST Alloy micro-adjust Outer diameter, mm 27.2 SADDLE Padded BRAKES Coaster type PEDALS Platform Axle diameter 9/16" SEAT BINDER Quick release, 47mm Inner diameter, mm Inner diameter, mm COLORS COLORS | REAR WHEEL | . Coaster brake hub, 36°, Al | luminum alloy rim | |
| SPOKES | DEAD TIDE | Rim strip | PVC | |
| Front, mm Rear, mm 189, 3x Rear, mm 185, 3x INNER TUBES Schraeder valve OTHER SEATPOST Alloy micro-adjust Outer diameter, mm 27.2 SADDLE Padded BRAKES Coaster type PEDALS PIAtform Axle diameter SEAT BINDER Quick release, 47mm Inner diameter, mm Inner diameter, mm COLORS COLORS | | Tire size | 20 × 2.0 G | |
| Rear, mm 185, 3x INNER TUBES Schraeder valve OTHER SEATPOST Alloy micro-adjust Outer diameter, mm 27.2 SADDLE Padded BRAKES Coaster type PEDALS Platform Axle diameter SEAT BINDER Quick release, 47mm Inner diameter, mm ADDITIONALS Chapter and COLORS COLORS | SPOKES | | 189, 3x 19 | |
| OTHER SEATPOST Alloy micro-adjust Outer diameter, mm 27.2 SADDLE Padded BRAKES Coaster type PEDALS Platform Axle diameter 9/16" SEAT BINDER Quick release, 47mm Inner diameter, mm ADDITIONALS Chapturerd | WINED THOSE | Rear, mm | | |
| SADDLE | OTHER | | | |
| SADDLE | SEATPOST | | 27.2 | |
| PEDALS Platform Axle diameter SEAT BINDER Quick refease, 47mm Inner diameter, mm ADDITIONALS Chairpoured | | . Padded | _ | |
| Axle diameter 9/16" SEAT BINDER Quick release, 47mm Inner diameter, mm ADDITIONALS Chairment COLORS | | . Platform | | |
| Inner diameter, mm ADDITIONALS Chairculard | SEAT BINDER | | 9/16" | |
| | | Inner diameter, mm | C | OLORS |
| Red/Black (boys) White/Pink (girls) | ADDITIONALS | , Chainguard | | Red/Black (boys) |
| FIT 12C | | | | |

FRAMESET

Frame weight

Axle-crown length, mm

4.0 lb (1.80 kg)

22.2/30.0/27.0

284

MAIN TUBES ,,,... Hi Tensile steel STAYS Hi Tensile steel

FORK HI Tensile steel

HEADSET Steel

| Why this Fis | sher rocks: |
|--------------|-------------|

Rider: Developing new rider

Frameset

Components

| GE. | ARING | |
|-----|-------|--|
| | 36 | |
| 19 | 38 | |
| | | |

| Frame | Size | 12B | 12G |
|-----------|------------|-----|-----|
| Handlebar | Width, mm | 550 | 550 |
| Stem | Length, mm | 50 | 50 |
| | Angle | 0 | 0 |
| Crank | Length, mm | 140 | 140 |
| Seatpost | Length, mm | 255 | 255 |
| Steerer | Length, mm | 123 | 123 |

FRAMESET MAIN TUBES HI Tensile steel STAYS HI Tensile steel FORK Hi Tensile steel 234 Axle-crown length, mm HEADSET Steel 22.2/30.0/27.0 Size Stack height, mm 35.0 CONTROLS HANDLEBAR Steel BMX, 130mm rise Clamp diameter, mm 22.2 STEM 4 bolt BMX, alloy top Steerer clamp height, mm GRIPS Fisher Star DRIVETRAIN CRANKSET One-piece type, 32T Bolt hole circle, mm 1 piece BB One-piece type Shell x axle, mm CHAIN KMC 410 1/8 Chain type Chain length (links) CASSETTE 19 WHEELSET FRONT WHEEL Steel hub, 28°, Steel rlm 321 E.R.D., mm PVCRim strip FRONT TIRE Fisher Star Tire rize 16 x 2.125 REAR WHEEL Coaster brake hub, 28°, Steel rlm 321 E.R.D., mm PVC Rim strip REAR TIRE Fisher Star 16 x 2.125 Tire size SPOKES 14G UCP Front, mm 138. 3x 133. 3x INNER TUBES Schraeder valve OTHER . SEATPOST Steel Outer diameter, mm SADDLE Fisher Padded BRAKES Coaster type PEDALS Platform 1/2 Axle diameter SEAT BINDER Bolt Inner diameter, mm ADDITIONALS Training wheels, chainguard, fenders

Gamma Ray

Why this Fisher rocks:

Rider: First timer or Developing new rider Frameset

Steel- strong and tough

Low standover- fits wider range for longer use

Wheelset

Comp III type tires- popular BMX styling

Components

Coaster brake with rear hand brake- stepping stone to hand controls on 'big' bikes

Size specific fit parts- more comfortable, easier to control

| GE/ | RING |
|-----|------|
| | 32 |
| 19 | 26 |
| | |
| | |

COLORS
Blue (boys)

Purpie (giris)

| FIT | The state of the | Commence of | | |
|-----------|------------------|-------------|-----|--|
| Frame | Size | 9B | 9G | |
| Handlebar | Width, mm | 510 | 510 | |
| Stem | Length, mm | 50 | 50 | |
| | Angle | 0 | 0 | |
| Crank | Length, mm | 114 | 114 | |
| Seatpost | Length, mm | 300 | 300 | |
| Steerer | Length, mm | 128 | 128 | |
| | • • | | | |

| FRAMESET MAIN TUBES HI Tensile steel STAYS HI Tensile steel | | Sun Spot |
|---|--|---|
| FORK Hi Tensile steel | J | 1 |
| Axle-crown length, mm | 185 | 1 |
| HEADSET Steel | | 1 |
| Size Stack beinkt num | 22.2/30.0/27.0 as a | 1 |
| Stack height, mm | 35.0 | |
| | | |
| CONTROLS HANDLEBAR BMX | | |
| STEM 4 bolt BMX | 22.2 | |
| Steerer clamp height, mm GRIPS Fisher Space | | |
| DRIVETRAIN CRANKSET One-piece type, 24T | ्रिक्तिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिक स्थानिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिकार्थिका | |
| Bolt hole circle, mm | l piece | Why this Fisher rocks: |
| BB One-plece type | ' ' | Rider: First timer or Developing new rider |
| Shell x axle, mm | 24 TPI, | Frameset |
| CHAIN KMC 410 | 1/8" | Steel- strong and tough |
| Chain type Chain length (linkı) | 1/8" 60 | Low standover- fits wider range for longer use |
| CASSETTE19 | 1 | Wheelset |
| | | Wheelset Fisher Paw tires- easy pedaling, popular animal motif |
| | | Components Coaster brake, use strong leg muscles to control |
| WHEELSET FRONT WHEEL Steel hub, 20°, Steel r | ikalihiri serimanan ang | Coaster brake- use strong leg muscles to control |
| E.R.D., mm | rim 220 | speed |
| Rim strip | PVC | Size specific fit parts- more comfortable, easier to |
| FRONT TIRE Fisher Space | | control |
| Tire size REAR WHEEL Coaster brake hub, 20° | 12 x 2.5 | |
| REAR WHEEL Coaster brake hub, 20° E.R.D., mm | °, Steel rim | |
| Rim strip | PVC | |
| REAR TIRE Fisher Space | 5 | GEARING |
| SPOKES 146 HCP | 12 × 2.5 | CEARING 24 |
| SPOKES14G UCP | 75, 3× | |
| Front, mm Rear, mm | 75, 3x 86, 3x | 19 15 |
| INNER TUBES Schraeder valve | 1660年6年5月8日 | |
| SEATPOST Steel | 22.2 | |
| Outer diameter, mm SADDLE Padded BRAKES Coaster type | 22,2 | |
| PEDALS Platform Assle diameter | 1/2" | |
| SEAT BINDER Bolt, M6 x 30 Inner diameter, mm | Į | |
| ADDITIONALS Training wheels, chaing pads | uard, fenders, and | COLORS Red (boys) Pink (girls) |
| PHI CONTRACTOR | OTTO DESCRIPTION OF THE PERSON | |
| | | ・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・ |
| Frame Size 8 | 8G | бет в бавительный том в должно в технология поставля на выстрания для не ставля не ставля в технология и в не п Ставляющей в том в должно в технология в технология поставля на выстрания в поставля не ставля в не в не в нев |
| Frame Size 8 Handlebar Width, mm 480 | 480 | бот Мангадан и 1994 развит выворания в том и 1994 година подоба и выста и 1904 година и 1904 година и 1904 година подоба на навыгода на навыгода на подоба подоба на навыгода |
| Frame Size 8 Handlebar Width, mm 480 Stem Length, mm 50 | 480 50 | |
| Frame Size 8 Handlebar Width, mm 480 Stem Length, mm 50 Angle 0 | 480 50 0 | |
| Frame Size 8 Handlebar Width, mm 480 Stem Length, mm 50 | 480 50 | |

LeMond Titanium

For 2002

The LeMond titanium frames remain unchanged from their introduction in 2001.

Geometry

The titanium LeMond models use Greg's proven geometry, like all LeMond models. These bikes ride really, really well, so we've used the same geometry centerlines for all of them.

Ride

We did a lot of research and development to tune the ride of this bike. The result is an amazing ride, unlike any other Titanium bike on the market.

Its quick to accelerate, and feels lively underneath you like the best of the competitors.

But this LeMond is firm to the pedal when standing on a climb, not whippy like some Ti bikes.

And even though its sprints great, its amazingly comfortable, not harsh in the saddle like other Ti bikes can be.

Compared to our own bikes, the Ti frame offers similar drivetrain efficiency to our Aeroluminum, and its very near our lightest. This makes it a great sprinting and climbing bike. At the same time, this Ti bikes offers the liveliness and comfort of our 853 frame. Basically, the LeMond titanium models combine the best of both worlds.

Frame details

We spared no details in the design of this bike. Starting with the fully butted tubeset, where we've put the stiffness and strength where it needs to be, without needlessly reducing the outer diameter of the tubes. Butting reduced the overall weight, and the thin tubing shows in the lively, resilient ride. Some call it silky.

We use an outer-butted head tube which provides a home for the integral $1^{1/8}$ " headset. The outer butting puts more beef at the bearing seats as well as providing increased weld area for additional frame stiffness and strength.

The tubing is shaped to tune the ride, while adding weld area and additional strength at both the top tube and bottom bracket.

The stays are also shaped, instead of cost cutting with cylindrical tubing. This extra attention to detail makes the bike more comfortable at the saddle, yet actually increases the pedal response when sprinting or climbing. Sure, it costs more, but it makes the bike look so much nicer! Even the dropouts are elegant, functional pieces.

The seat tube of our Ti bikes uses a composite internal sleeve to prevent galvanic corrosion of the seatpost to the frame. Do not grease the seatpost, or the seatpost clamp may not provide adequate clamping force.

All LeMond road bikes have 2 water bottle mounts.

| | Frame sizes | 49 | 51 | 53 | 55 | 57 | 59 | 61 |
|-------------------------|--------------|------|------|------|------|------|------|------|
| | Head angle | 72.0 | 72.5 | 73.0 | 73.5 | 73.5 | 74.0 | 74.0 |
| | Seat angle | 74.0 | 73.8 | 73.3 | 73.0 | 72.5 | 72.5 | 72.0 |
| Ñ | | | | | | | | |
| ER | Standover | 752 | 754 | 772 | 790 | 808 | 831 | 848 |
| H | Seat tube | 517 | 537 | 557 | 576 | 596 | 616 | 636 |
| $\overline{\mathbb{N}}$ | Head tube | 102 | 117 | 134 | 151 | 169 | 191 | 209 |
| MILLIMETERS | Eff top tube | 519 | 532 | 545 | 565 | 576 | 591 | 606 |
| | Chainstays | 412 | 415 | 415 | 415 | 415 | 417 | 417 |
| 2 | BB height | 266 | 266 | 266 | 266 | 266 | 270 | 270 |
| | Offset | 47 | 47 | 47 | 45 | 45 | 43 | 43 |
| | Trail | 61 | 58 | 55 | 54 | 54 | 53 | 53 |
| | Wheelbase | 967 | 980 | 984 | 995 | 1000 | 1013 | 1021 |
| | | | | | | | | |
| | Standover | 29.6 | 29.7 | 30.4 | 31.1 | 31.8 | 32.7 | 33.4 |
| ES | Seat tube | 20.3 | 21.1 | 21.9 | 22.7 | 23.5 | 24.3 | 25.0 |
| H | Head tube | 4.0 | 4.6 | 5.3 | 5.9 | 6.7 | 7.5 | 8.2 |
| INCHES | Eff top tube | 20.4 | 20.9 | 21.5 | 22.3 | 22.7 | 23.3 | 23.9 |
| П | Chainstays | 16.2 | 16.3 | 16.3 | 16.3 | 16.3 | 16.4 | 16.4 |
| | BB height | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.6 | 10.6 |
| | Offset | 1.9 | 1.9 | 1.9 | 1.8 | 1.8 | 1.7 | 1.7 |
| | Trail | 2.4 | 2.3 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| | Wheelbase | 38.1 | 38.6 | 38.7 | 39.2 | 39.4 | 39.9 | 40.2 |
| | | | | | | | | |

| FRAMESET | | | | | | | | T | ste 4 | de Cours |
|---------------|---------------------|-------------------------------------|--------------|------------------------------|-----------|----------------------|--|---------|-------------|---------------------------|
| | Reynold | | | | | | | 16 | 21 C | u e v ouisi |
| STAYS | Reynold | | apered | | | | | | | |
| 50 51/ | | me weight | | 3.1 lb (1.41 kg) | | | | | | |
| FORK | Air Rail | | | | | | | | | |
| | | vel, mm e-crown length, mm | | 371 | | | | | | |
| HFADSFT | LeMond | _ | | 3/1 | | | | | | |
| HEADSET | Size | | | 25.4/34.0/30.0 | | | | | | |
| | Stac | k height, mm | | 8.0 | | | | | | |
| | | | | | | | | | | |
| CONTROLS | | | | | | | | | | |
| HANDLEBAR | 3T Zep | p XL mp diameter, mm | | 31.75 | | | | | | |
| STEM | 3T Zep | | | | | | | | | |
| | | rer clamp height, m | | 34.0 | | | | | | |
| | SS Shiman | | | compatible | | 1171 ₋ T | o M = 1 1 | 1 | lo o 1 · | 0.001 |
| | RS Integra | | τ | | | | | eads t | the pelote | on: |
| | Powerc | OFK | | | | Rider: | Racer | | | |
| DRIVETRAI | | | | | | Frames | set | | | |
| FT DERAILLE | UR Shiman | | | | | I | Mond ge | ometr | Y | |
| | | ole routing schment | | Down pull 31.8 mm/ 1 1/4" | | | _ | | _ | out any shortcuts |
| BB DEBAILLE | Atta EUR Shiman | | | 31.0 mm/ 1 1/4" | | | | ııı tub | eset with | iout arry shortcuts |
| | Shiman | | 3/39 | | | Wheels | set | | | |
| J | | t hole circle, mm | -, | 130 | | | | Race 2 | X-Lite- in | credibly light, yet stron |
| BB | Shiman | o Ultegra | | | | | PST TM | | | v G v |
| | | Shell x axle, mn | n 68 x 109.5 | , Splined, Shimano | | Co | ntinenta |] Grar | nd Prix 30 | 000 tires- super fast rol |
| CHAIN | Shiman | o Dura-Ace | | | | ing | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | . Grai | | ooo areo super last 101. |
| | | iin type | | 9 speed | | | | | | |
| CACCETTE | | nin length (links) | | 108 | | Compo | | | | |
| | Shiman | o Dura-Ace 12 | -23, 9spd | | | Pr | o level- I | Oura-A | ce, 3T | |
| WHEELSET | | | | | | | | | | |
| FRONT WHEE | L Bontra | | e, 20° | | | | | | | |
| | | .D., mm | | 592 | | | | | | |
| FRONT TIRE | Contine | o strip ental Grand Pr e size | ix 3000 | Velox 16mm 700 x 23c | | | | | | |
| REAR WHEEL | Bontrac | | e, 24° | 700 x 25t | | | | | | |
| REAR TIRE | Rim | ostrip ental Grand Pr | ix 3000 | Velox 16mm | | | | | | |
| | | e size | | 700 x 23c | GEA | RING 39 53 | | | | |
| 2. 22 | | nt, mm | - | 278, Radial | 12 | 86 117 | | | | |
| | | r, mm | | 291/291, 2x | 13 | 79 108 | | | | |
| INNER TUBES | S Presta | valve, 48mm | stem | | | | | | | |
| OTHER | | | | | 14 | 74 100 | | | | |
| | LeMond | d, 2014 alloy | | 27.2 | 15 16 | 69 93 64 88 | | | | |
| SADDLE | SSM Er | _ | | | 17 | 61 82 | | | | |
| | Shiman | | | | 19 | 54 74 | | | | BIKE WEIGHT |
| | not su | | | | 21 | 49 67 | | | | 16.7 lb. |
| | | e diameter | | 9/16" | | | | | | 7.58 kg. |
| SEAT BINDER | R Alloy w | - | | | 23 | 45 61 | | | | 7.50 kg. |
| ADDITIONALS | S 2 water | er diameter, mm bottle mount | ts (1 bottle | 31.9 on 49), | COL | ORS shed Titaniur | n/Yellow D | eboss | • Deboss de | ecals • Black Fade fork |
| Pamp peg (110 | ,, on 47, 51) | | | | | | | | | |
| FIT | Cina | 40 | | | | | | | | |
| Frame | Size | 49 65 | 51 67 | 53 69 | 55 71 | | 5 | | 61 76 | |
| Rider height | Inches Cm | 65 166 | 67 171 | 69 176 | 71 180 | | | | 76 193 | |
| Handlebar | Width, mm | 420 | 440 | 440 | 460 | | | | 460 | |
| Stem | Length, mm | 90 | 100 | 110 | 110 | | | | 130 | |
| 20011 | Angle | 10 | 100 | 10 | 10 | 10 | 10 | | 10 | |
| Crank | Length, mm | 170 | 172.5 | 172.5 | 175 | | | | 175 | |

Crank Seatpost

Steerer

175

250

229.0

172.5

250

212.0

175

250

247.0

175

250

269.0

175

250

287.0

170

250

180.0

Length, mm

Length, mm

Length, mm

172.5

250

| FRAMESET MAIN TUBES Reynolds titanium, double butted STAYS Reynolds titanium, tapered Frame weight 3.1 lb (1.41 kg) FORK Air Rail Travel, mm Axtle-crown length, mm 371 HEADSET LeMond internal Size 25.4/34.0/30.0 Stack height, mm 8.0 CONTROLS HANDLEBAR 3T Forgie XL Clamp diameter, mm 31.75 STEM Steerer clamp height, mm 41.0 | |
|---|-----------|
| FORK | |
| Travel, mm | |
| HEADSET LeMond internal Size 25.4/34.0/30.0 Stack height, mm 8.0 CONTROLS HANDLEBAR 3T Forgie XL Clamp diameter, mm 31.75 STEM 3T Forgie XL | |
| Size 25.4/34.0/30.0 Stack height, mm 8.0 CONTROLS HANDLEBAR 3T Forgie XL Clamp diameter, mm 31.75 STEM 3T Forgie XL | |
| CONTROLS HANDLEBAR 3T Forgie XL Clamp diameter, mm 31.75 STEM 3T Forgie XL | |
| HANDLEBAR3T Forgie XL Clamp diameter, mm 31.75 STEM3T Forgie XL | |
| HANDLEBAR3T Forgie XL Clamp diameter, mm 31.75 STEM3T Forgie XL | |
| HANDLEBAR 3T Forgie XL Clamp diameter, mm 31.75 STEM 3T Forgie XL | |
| STEM 3T Forgie XL | |
| | |
| Steerer clamb height, mm 4101 | |
| SHIFT LEVERS Shimano Ultegra STI, Flite Deck compatible BRAKE LEVERS Integrated brake/shift GRIPS Powercork | |
| DRIVETRAIN FT DERAILLEUR Shimano Ultegra Why LeMond leads the peloton: | |
| FT DERAILLEUR Shimano Ultegra Cable routing Down pull Rider: Racer | |
| Attachment 31.8 mm/ 1 1/4" | |
| RR DERAILLEUR Shimano Ultegra CRANKSET Shimano Ultegra 53/39 Frameset LeMond geometry | |
| Christian Street Salaria Salaria | |
| Bolt hole circle, mm 130 Full titanium tubeset without any shortcut. BBShimano Ultegra | S |
| Shell x axle, mm 68 x 109.5, Splined, Shimano Wheelset | _ |
| CHAIN Shimano HG-92 Bontrager wheelset- aerodynamic for speed | i, |
| Chain type 9 speed strong and low maintenance with PST ^{IM} Chain length (links) 108 | |
| CASSETTE Shimano Ultegra 12-25, 9spd Continental Grand Prix 3000 tires- super fa | ast roll- |
| WHEELSET | |
| FRONT WHEEL Bontrager Race Lite Road, 20° Components | |
| E.R.D., mm 592 Race level- Ultegra; Pro performance for ec | onomi- |
| FRONT TIRE Continental Grand Prix 3000 Tire size 700 x 23c | |
| REAR WHEEL Bontrager Race Lite Road, 24° E.R.D., mm 595 | |
| Rim strip Velox 16mm | |
| REAR TIRE Continental Grand Prix 3000 Tire size 700 x 23c 30 53 | |
| SPOKES DT Aero allov ninnles | |
| Front, mm 278, Radial 12 86 117 | |
| Rear, mm 291/291, 2x 13 79 108 INNER TUBES Presta valve, 48mm stem 14 74 100 | |
| | |
| CEATROCT LAMOR & 2014 all suc | |
| Outer diameter mm 27.2 | |
| SADDLE | a |
| BRAKES Shimano Ultegra 21 49 67 BEDALS and supplied 23 45 61 | GHT |
| PEDALSnot supplied- Axle diameter 23 45 61 25 41 56 18.5 lb. 8.40 kg. | |
| SEAT BINDER Alloy w/integral bolt Inner diameter, mm 9/16 25 41 56 COLORS | |
| ADDITIONALS 2 water bottle mounts (1 bottle on 49), pump peg (not on 49, 51) Brushed Titanium/Blue Deboss • Deboss decals • Black Fade fork | |
| EIT | |
| FIT Frame Size 49 51 53 55 57 59 61 | |
| Rider height Inches 65 67 69 71 72 74 76 | |
| Cm 166 171 176 181 182 188 193 | |
| Handlebar Width, mm 420 440 440 460 460 460 | |
| Stem Length, mm 90 100 110 110 120 130 | |
| Angle 10 10 10 10 10 10 10 10 10 10 10 10 10 | |
| Craink Length, min | |
| Steerer Length, mm 187.0 202.0 219.0 236.0 254.0 276.0 294.0 | |

| FRAMESET | 1 | | | | 1 | | | | |
|-------------------|--------------------------|------------------------------|-----------------|------------------|------------|----------------|--------------|--------------|----------------------------|
| | Reynold: | s titanium | double butte | d | | | | Le \ | /ictoire T |
| | Reynold: | | | - | | | | | |
| | Fram | e weight | , | 3.1 lb (1.41 kg) | | | | | |
| FORK | Air Rail | | | | | | | | |
| | | el, mm crown length, m | | 371 | | | | | |
| HEADSET | LeMond | U | m | 3/1 | | | | | |
| TIEADSET | Size | incoma | | 25.4/34.0/30.0 | | | | | |
| | Stack | height, mm | | 8.0 | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| CONTROLS | | | | | | | | | |
| | 3T Forgi | e XL | | | | | | | |
| | | p diameter, mm | | 31.75 | | | | | |
| STEM | 3T Forgi | | | | | | | | |
| CHIET LEVED | | er clamp height, | | 41.0 | | | | | |
| | S Shimano | | | compatible | | Whatan | and land- | the relat- | n. |
| | RS Integrate Powerco | | III L | | | | | the peloto | 11. |
| | | · · · · | | | | Rider: Ra | cer | | |
| DRIVETRAI | | Illtonr- T | | | | Frameset | | | |
| FIDERAILLE | UR Shimano | Oltegra T | | Down pull | | LeMo | nd geome | try | |
| | | e routing hment | Braze-on type | w/31.8mm clamp | | | | | out any shortcuts |
| RR DERAILLE | EUR Shimano | | | | | | | LUCECT WITH | at any bhorteaus |
| | Shimano | - | | | | Wheelset | | _ | |
| | | hole circle, mm | | 74/130 | | | | | ynamic for speed, |
| BB | Shimano | | _ | 0.10. 1.71 | | strong | and low m | naintenance | with PST ^{IM} |
| | | x axle, mm | 68 x 118, | Splined, Shimano | | Conti | nental Gra | and Prix 30 | 00 tires- super fast roll- |
| CHAIN | Shimano | | | 0 | | ing | | | - |
| | | n type n length (links) | | 9 speed 108 | | Componer | nte | | |
| CASSETTE . | Shimano | | -25, 9spd | 130 | | | | gra. Pro po | rformance for economi- |
| WHEELSET | | - | | | | | | | riple chainrings |
| | L Bontrage | er Race Lite | e Road. 20° | | | | | , pedamig t | |
| | - | D., mm | | 592 | | - | | | |
| | Rim s | strip | | Velox 16mm | | | | | |
| FRONT TIRE | Continer | | Prix 3000 | | | | | | |
| DEAD WILES | Tire s | | Dood 240 | 700 x 23c | | | | | |
| KEAR WHEEL | Bontrage | er Race Lite D., mm | e κυdα, ∠4° | 595 | | | | | |
| | Rim s | | | Velox 16mm | | | | | |
| REAR TIRE . | Continer | | Prix 3000 | | | | | | |
| | Tire s | | | 700 x 23c | GEA. | RING | | | |
| SPOKES | DT Aero, | | es | | | 30 42 52 | | | |
| | Front | | | 278, Radial | | 66 93 115 | | | |
| INNED TIBES | Rear, S Presta v | | n stam | 291/291, 2x | 13 | 61 85 106 | | | |
| | J FIESIG V | aive, 40IIII | ı ətemi | | 14 | 57 79 98 | | | |
| OTHER | 1 - 1 - 1 | 2014 - !! | | | 15 | 53 74 92 | | | |
| SEATPOST . | LeMond, | 2014 alloy r diameter, mm | | 27.2 | | 47 65 81 | | | |
| SADDLE | Outer | | her | 2/.2 | 19 | 42 58 72 | | | |
| | Shimano | | | | 1 | | | | DIVE WEY COM |
| | not sup | | | | 21 | 38 53 66 | | | BIKE WEIGHT |
| | · | diameter | | 9/16" | 23 | 35 48 60 | | | 18.8 lb. |
| SEAT BINDER | R Alloy w/i | | t | | 25 | 32 44 55 | | | 8.54 kg. |
| | | diameter, mm | | 31.9 | COL | ORS | | | |
| | S 2 water | bottle mou | nts (1 bottle (| on 49), | | | lue Dehoss | Deboss deca | ls • Black Fade fork |
| pump peg (no | τ on 49, 51) | | | | | Italiiaiii, Di | 200000 | ucu | |
| | | | | | | | | | |
| FIT | | | | | | | | | |
| Frame | Size | 49 | 51 | 53 | 55 | 57 | 59 | 61 | |
| Rider height | Inches | 65 | 67 | 69 | 71 | 73 | 74 | 76 | |
| l | Cm | 166 | 171 | 176 | 181 | 185 | 188 | 193 | |
| Handlebar | Width, mm | 420 | 440 | 440 | 460 | | 460 | 460 | |
| Stem | Length, mm | 90 10 | 100 | 110 | 110 | 120 | 120 | 130 | |
| Crank | Angle | 10 170 | 10 172 5 | 10 172 5 | 10 175 | 10 175 | 10 175 | 10 175 | |
| Crank Seatpost | Length, mm Length, mm | 170 250 | 172.5 250 | 172.5 250 | 175 250 | 175 250 | 175 250 | 175 250 | |
| Steerer | Length, mm Length, mm | 250 187.0 | 250 202.0 | 250 219.0 | 236.0 | | 250 276.0 | 250 294.0 | |
| Steelel | Length, mill | 107.0 | 202.0 | £19.U | ۷.٥٥.١ | 234.0 | 210.0 | £ 34.0 | |

New for 2001

We first built a Reynolds 853 LeMond in 1996. These frames are very similar, but improved. For this year, we have made slight changes in the tube designs to further tweak the great ride. They also now use an oversize headset system (see page 20).

Geometry

The 853 LeMond models use Greg's proven geometry, like all LeMond models. These bikes ride really, really well, so we've used the same geometry centerlines for all of them. See page 10-11 for a more detailed description.

Ride

Steel is famous for two things: durability and ride quality (see Comparing Materials on pages 2-3 and Reynold's 853, page 7). Combined with Greg's geometry, these bikes give an awesome ride. It's no wonder the Zurich has been our most popular model.

The outstanding ride qualities of these frames are a smooth, comfortable ride and a wonderful balance and stable feeling.

They are very predictable in corners, even allowing a rider to 'push' the bike around a turn. These qualities make the steel LeMond bikes particularly fine bikes for smaller riders, although we know lots of big riders who swear by the feel of steel.

Frame details

Starting with the butted tubeset, we've put the stiffness and strength where it needs to be. The material, wall thicknesses, and butting reduced the overall weight to make these very light steel framesets.

853 Designer Select

The Buenos Aires, Tourmalet, and Nevada City share a frameset built from round 853 Designer Select tubes. This tubeset combines an 853 main triangle with Reynolds 525 stays. 853 and 525 have the same modulus (stiffness), but 853 has a greater tensile strength. In the main triangle, the higher strength of 853 allows us to use thinner, lighter tubes. With the stays, there's a limit on how thin the metal can be that's not determined by strength, but weldable thickness. If the material were any thinner, it would be extremely difficult to make a reliable weld. Since the 525 stays are already stronger than they need to be, there's no performance advantage to using 853 in the stays, just added cost. For the rider looking for LeMond performance at a more affordable price, we didn't feel it wise to use a more expensive material just to upgrade the frame sticker.

853 Pro

On Maillot Jaune and Zurich, the tubing is shaped to tune the ride. The down tube is bi-axial, meaning it is ovalized in two planes. (Fig. 12) The upper end is taller than wide. The lower end is wider than tall.

The stiffness of a tube in a given direction is determined by the length of the axis in the plane in which the force is applied (Fig. 13). By using an oval shape, the tube gains stiffness in the plane where its wider, and the smaller axis across the oval has a decrease in

| | Frame sizes | 49 | 51 | 53 | 55 | 57 | 59 | 61 |
|-------------------------|--------------|------|------|------|------|------|------|--------|
| | Head angle | 72.0 | 72.5 | 73.0 | 73.5 | 73.5 | 74.0 | 74.0 |
| | Seat angle | 74.0 | 73.8 | 73.3 | 73.0 | 72.5 | 72.5 | 72.0 |
| $\dot{\mathbf{N}}$ | | | | | | | | |
| MILLIMETERS | Standover | 752 | 754 | 772 | 790 | 808 | 831 | 848 |
| H | Seat tube | 517 | 537 | 557 | 576 | 596 | 616 | 636 |
| $\overline{\mathbb{Z}}$ | Head tube | 85 | 100 | 116 | 133 | 151 | 175 | 195 |
| ij | Eff top tube | 519 | 532 | 545 | 565 | 576 | 591 | 606 |
| | Chainstays | 412 | 415 | 415 | 415 | 415 | 417 | 417 |
| \geq | BB height | 266 | 266 | 266 | 266 | 266 | 270 | 270 |
| | Offset | 47 | 47 | 47 | 45 | 45 | 43 | 43 |
| | Trail | 61 | 58 | 55 | 54 | 54 | 53 | 53 |
| | Wheelbase | 967 | 980 | 984 | 995 | 1000 | 1013 | 1021 |
| | | | | | | | | |
| | Standover | 29.6 | 29.7 | 30.4 | 31.1 | 31.8 | 32.7 | 33.4 |
| ES | Seat tube | 20.3 | 21.1 | 21.9 | 22.7 | 23.5 | 24.3 | 25.0 |
| INCHES | Head tube | 3.3 | 3.9 | 4.6 | 5.2 | 5.9 | 6.9 | 7.7 |
| \tilde{Z} | Eff top tube | 20.4 | 20.9 | 21.5 | 22.3 | 22.7 | 23.3 | 23.9 |
| Τ | Chainstays | 16.2 | 16.3 | 16.3 | 16.3 | 16.3 | 16.4 | 16.4 |
| | BB height | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.6 | 10.6 |
| | Offset | 1.9 | 1.9 | 1.9 | 1.8 | 1.8 | 1.7 | 1.7 |
| | Trail | 2.4 | 2.3 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| | Wheelbase | 38.1 | 38.6 | 38.7 | 39.2 | 39.4 | 39.9 | 40.2 |
| | | | | | | | | |
| | | | | 11 | | . 1 | 1 7 | 1 14.4 |

stiffness This allows us to tune the ride. In addition, stiffness in a structure like a bike frame can also add to its strength, since stiffness is resistance

to deflection, and you must deflect the frame before you can bend it. By ovalizing the down tube at the head tube junction, we've added frontal impact strength to these frames.

In addition to the performance increase of our design, shaping the tubes has other benefits. Tubes shaped in this way provide a greater weld area, directly increasing the frame strength.

All LeMond road bikes have 2 water bottle mounts.

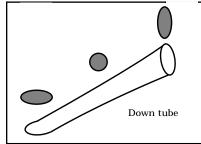


Fig. 12

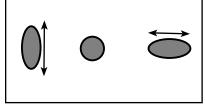


Fig. 13

LeMond for Women

New for 2002

Greg LeMond created his own geometry during his racing days. Over those years he rode many bikes, and often rode them to success. To maximize his own results, Greg made a study of what makes a bike perform; fit, function, handling, comfort, aerodynamics, low weight, and durability.

Now we've applied those lessons to the needs of a woman, a woman who still wants to achieve racing success. These are not 'comfort' bikes, they are thoroughbreds. But they are thoroghbreds designed to interface with a woma's proportions and ergonomics.

Geometry

These bikes ride really, really well. Our goal was to create a geometry that provided similar benefits to a woman that Greg's classic geomtry provides to a man; smoother profile, more powerful pedaling, and predictable cornering manners ideal for long road races and stage races.

Ride

Steel is famous for two things: durability and ride quality. Combined with Greg's new Women's geometry, these bikes give an awesome ride.

The outstanding ride qualities of these frames are a smooth, comfortable ride and a wonderful balance and stable feeling. They are very predictable in corners, even allowing a rider to 'push' the bike around a turn. These qualities make the steel LeMond bikes particularly fine bikes for smaller riders, although we know lots of big riders who swear by the feel of steel.

Frame details

Starting with the butted tubeset, we've put the stiffness and strength where it needs to be. The material, wall thicknesses, and butting reduced the overall weight to make these very light steel framesets.

853 Designer Select

The Tourmalet frameset is built from round 853 Designer Select tubes. This tubeset combines an 853 main triangle with Reynolds 525 stays. 853 and 525 have the same modulus (stiffness), but 853 has a greater tensile strength. In the main triangle, the higher strength of 853 allows us to use thinner, lighter tubes. With the stays, there's a limit on how thin the metal can be that's not determined by

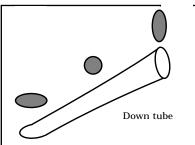


Fig. 12

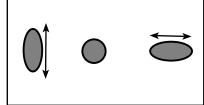


Fig. 13

strength, but weldable thickness. If the material were any thinner, it would be extremely difficult to make a reliable weld. Since the 525 stays are already stronger than they need to be, there's no performance advantage to using 853 in the stays, just added cost. For the rider looking for LeMond performance at a more

| Frame sizes | 45 | 49 | 53 |
|--|------|------|------|
| Head angle | 71.0 | 72.0 | 72.5 |
| Seat angle | 75.0 | 74.5 | 73.8 |
| Standover Seat tube Head tube Eff top tube Chainstays BB height Offset Trail Wheelbase | 725 | 756 | 784 |
| | 477 | 517 | 554 |
| | 85 | 100 | 116 |
| | 498 | 510 | 530 |
| | 412 | 415 | 415 |
| | 266 | 266 | 266 |
| | 47.0 | 47.0 | 47.0 |
| | 67 | 61 | 58 |
| | 968 | 970 | 979 |
| Standover Seat tube Head tube Eff top tube Chainstays BB height Offset Trail Wheelbase | 28.5 | 29.8 | 30.9 |
| | 18.8 | 20.3 | 21.8 |
| | 3.3 | 3.9 | 4.6 |
| | 19.6 | 20.1 | 20.9 |
| | 16.2 | 16.3 | 16.3 |
| | 10.5 | 10.5 | 10.5 |
| | 1.9 | 1.9 | 1.9 |
| | 2.6 | 2.4 | 2.3 |
| | 38.1 | 38.2 | 38.5 |

affordable price, we didn't feel it wise to use a more expensive material just to upgrade the frame sticker.

853 Pro

On the Zurich, the tubing is shaped to tune the ride. The down tube is bi-axial, meaning it is ovalized in two planes. The upper end is taller than wide. The lower end is wider than tall.

The stiffness of a tube in a given direction is determined by the length of the axis in the plane in which the force is applied. By using an oval shape, the tube gains stiffness in the plane where its wider, and the smaller axis across the oval has a decrease in stiffness. This allows us to tune the ride. In addition, stiffness in a structure like a bike frame can also add to its strength, since stiffness is resistance to deflection, and you must deflect the frame before you can bend it. By ovalizing the down tube at the head tube junction, we've added frontal impact strength to these frames.

In addition to the performance increase of our design, shaping the tubes has other benefits. Tubes shaped in this way provide a greater weld area, directly increasing the frame strength.

All LeMond road bikes have 2 water bottle mounts.

| FRAMESET | 1 | | | | | | | | Mail | lot Jaune |
|---------------|-------------------|-----------------------------------|---------------|---|----------|-----|----------------|------------|----------------|----------------------------|
| | Reynold | | | | | | | | Maii | ot Jaulie |
| STAYS | Reynold | ls 853 Pro ne weight | | 3.3 lb (1.50 kg) | | | | | | |
| FORK | Air Rail | ne weigm | | 3.3 W (1.30 kg) | | | | | | |
| | | vel, mm | | | | | | | | |
| | | -crown length, m | | 371 | | | | | | |
| HEADSET | Dia-Con | • | adset, alloy | | | | | | | |
| | Size | | | 25.4/34.0/30.0 | | | | | | |
| | Staci | k height, mm | | 27.1 | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| CONTROLS | | | | | | | | | | |
| HANDLEBAR | 3T Zepp | | | 21.75 | | | | | | |
| STFM | 3T Zepr | np diameter, mm | | 31.75 | | | | | | |
| 31LW | | rer clamp height, i | mm | 34.0 | | | | | | |
| SHIFT LEVER | S Shiman | | | | | | | | | |
| | RS Integrat | | | , | | | | | | |
| | Powerco | | | | | | | | | |
| DRIVETRAI | N | | | | | 1 | Why I all | and leads | the peloto | n· |
| 7 | UR Shiman | o Dura-Ace | | | | | 3 | | the below | 11. |
| | | le routing | | Down pull | | | Rider: Ra | cer | | |
| | | chment | Braze-on typ | e w/31.8mm clamp | | F | rameset | | | |
| | UR Shiman | | | | | | LeMo | nd geome | try | |
| CRANKSET . | Shiman | | 3/39 | 120 | | | Reyno | olds 853 P | ro tubeset- | steel feel and durabil- |
| DD. | Shiman | hole circle, mm | | 130 | | | | low weig | | |
| BB | | ll x axle, mm | 68 x 109 ° | 5, Splined, Shimano | | ١, | | O | | |
| CHAIN | Shiman | | 00 % 109.5 | o, opinica, ommano | | ' | Vheelset | ъ | 37 7 1 | 111 1 1 1 |
| | | in type | | 9 speed | | | | | X-Lite- inc | redibly light, yet strong |
| | | in length (links) | | 108 | | | with PS | | | |
| CASSETTE . | Shiman | o Dura-Ace 1 | 2-23, 9spd | | | | | nental Gra | and Prix 30 | 00 tires- super fast roll- |
| WHEELSET | | | | | | | ing | | | |
| FRONT WHEE | L Bontrag | | te, 20° | | | 10 | Componer | nts | | |
| | | D., mm | | 592 | | | | vel- Dura- | -Ace. 3T | |
| FDONT TIDE | Contine | strip | riv 3000 | Velox 16mm | | | | | , - | |
| FRONT TIKE | Tire | | 11X 3000 | 700 x 23c | | | | | | |
| REAR WHEEL | Bontrag | | te, 24° | , | | | | | | |
| | | D., mm | | 595 | | | | | | |
| | | strip | | Velox 16mm | | | | _ | | |
| REAR TIRE . | Contine | | rix 3000 | 700 22 | GEA: | RIN | G | | | |
| CDOKEC | Tire | | (Aara D sid | 700 x 23c | | 39 | 53 | | | |
| SPURES | | nution 14/176 nt, mm | (Aeio R Siu | e rear), ar mps 279, Radial | 12 | 86 | 117 | | | |
| | | m, mm | | 271/271, 2x | 13 | 79 | 108 | | | |
| INNER TUBES | S Presta v | valve, 48mm | stem | | 14 | | 100 | | | |
| OTHER | | | | | 15 | | 93 | | | |
| | LeMond | l, 2014 allov | | | 16 | | 88 | | | |
| | Out | er diameter, mm | | 27.2 | | | | | | |
| | SSM Era | | | | 17 | | 82 | | | |
| | Shiman | | | | 19 | | 74 | | | BIKE WEIGHT |
| PEDALS | not sup | | | | 21 | | 67 | | | 17.1 lb. |
| CEAT DINIDED | | diameter | | 9/16" | 23 | 45 | 61 | | | 7.76 kg. |
| JEAI DINDER | R Alloy w | rintegrai boit Er diameter, mm | • | 31.9 | COL |)DC | , | | | |
| ADDITIONALS | S 2 water | | nts (1 bottle | | COL | | | Black/Dod | /Yellow decals | Black fork |
| | ot on 47, 49, 51) | | | // | "" | | i enowy iteu ' | DidCK/ REU | , renow decals | , Didention |
| | • | | | | | | | | | |
| FIT | | | | | | | | | | |
| Frame | Size | 49 | 51 | 53 | 55 | | 57 | 59 | 61 | |
| Rider height | Inches | 49 66 | 67 | 53 68 | 55 71 | | 72 | 59 74 | 76 | |
| ittaer neight | Cm | 168 | 171 | 174 | 180 | | 182 | 188 | 194 | |
| Handlebar | Width, mm | 420 | 440 | 440 | 460 | | 460 | 460 | 460 | |
| Stem | Length, mm | 100 | 100 | 100 | 110 | | 110 | 120 | 130 | |
| | Angle | 10 | 10 | 10 | 10 | | 10 | 10 | 10 | |
| Crank | Length, mm | 170 | 172.5 | 172.5 | 175 | | 175 | 175 | 175 | |
| Seatpost | Length, mm | 250 | 250 | 250 | 250 | | 250 | 250 | 250 | |
| Steerer | Length, mm | 182.1 | 197.1 | 213.1 | 229.6 | 5 | 248.1 | 272.1 | 292.1 | |
| | | | | | | | | | | |

| FRAMESET | | 1 | | | Zuric | h |
|--|---------------------------------|----------------------|----------------------------------|----------------------|-------------------------|---------------|
| MAIN TUBES Reynolds 853 Pro STAYS Reynolds 853 Pro | | | | | Zuiic | > |
| Frame weight FORK Air Rail Travel, mn | 3.3 lb (1.50 kg) | | | | | |
| Axle-crown length, mm HEADSET Cane Creek S-2 Aheadse | 371 t | | | | | |
| Size Stack height, mm | 25.4/34.0/30.0 26.5 | | | | | |
| CONTROLC | | | | | | |
| CONTROLS HANDLEBAR 3T Forgie XL | | | | | | |
| Clamp diameter, mm | 31.75 | | | | | |
| Steerer clamp height, mm SHIFT LEVERS Shimano Ultegra STI, Flit BRAKE LEVERS Integrated brake/shift GRIPS Powercork | 41.0 te Deck compatible | When | I aMarad land | a the pelet | | |
| DRIVETRAIN | | | LeMond lead | s the peloto | on: | |
| FT DERAILLEUR Shimano Ultegra Cable routing | Down pull | Fram | | | | |
| Attachment RR DERAILLEUR Shimano Ultegra | 31.8 mm/ 1 1/4" | | LeMond geom Revnolds 853 | · · | - steel feel and durabi | il- |
| CRANKSET Shimano Ultegra 53/39 Bolt hole circle, mm | 130 | ity | , very low wei | | | |
| BB Shimano Ultegra Shell x axle, mm 6 CHAIN Shimano HG-92 | 8 x 109.5, Splined, Shimano | | | ce Lite whee | ls- aero for speed, | |
| Chain type Chain length (links) | 9 speed 108 | , | Continental G | | 000 tires- super fast r | oll- |
| CASSETTE Shimano Ultegra 12-25, 9 | 9spd | ing | | | | |
| WHEELSET | | | onents | | | |
| FRONT WHEEL Bontrager Race Lite Roa E.R.D., mm Rim strip | d, 20° 592 Velox 16mm | l at | Race level- Ult an affordable | tegra group price | gives Pro performano | ce |
| FRONT TIRE Continental Grand Prix 3 | | | | | | |
| REAR WHEEL Bontrager Race Lite Roa E.R.D., mm | 595 | | | | | |
| Rim strip REAR TIRE Continental Grand Prix 3 Tire size | Velox 16mm 5000 700 x 23c | GEARING | | | | |
| SPOKES DT Aero, alloy nipples Front, mm | 278, Radial | | | | | |
| Rear, mm INNER TUBES Presta valve, 48mm ster | 291/291, 2x | 13 79 108 | | | | |
| OTHER | | 14 74 100 | | | | |
| SEATPOST LeMond, 2014 alloy Outer diameter, mm | 27.2 | 15 69 93 17 61 82 | | | | |
| SADDLE SSM Era, CrMo/leather | | 19 54 74 | | | | |
| BRAKES Shimano Ultegra PEDALSnot supplied- | | 21 49 67 23 45 61 | | | BIKE WEIGHT 19.0 lb. | |
| Axle diameter SEAT BINDER Alloy w/integral bolt | 9/16" | 25 41 56 | | | 8.63 kg. | |
| Inner diameter, mm ADDITIONALS 2 water bottle mounts (1 pump peg (not on 47, 49, 51) | 31.9 bottle on 47, 49), | COLORS | nad Silver • Silve | r/Blue decals • | Chad Silver fork | |
| FIT | | | | | | |
| | 49 51 | 53 5 | 55 57 | 59 | 61 | |
| Rider height Inches 65 | 65 67 | 68 | 71 72 | 74 | 76 | |
| | 166 171 120 440 | | 81 182 60 460 | 189 460 | 194 460 | |
| • | 440 90 100 | | 60 460 10 110 | 460 120 | 460 130 | |
| , · | 10 10 | | 0 10 | 10 | 10 | |
| , · | 170 172.5 | | 75 175 | 175 | 175 | |
| , | 250 250 38.5 203.5 | | 50 250 6.0 254.5 | 250 278.5 | 250 298.5 | |
| | | | | | | |

| FRAMESET | | | | | | | | | 7 | Zurich T |
|---------------------|--------------------------|--------------------------------|--------------|---|--------------|-------------|--------------------------|---------------------|------------|------------------------|
| l . | Reynold | | | | | | | | _ | -uiicii i |
| SIAYS | Reynold | s 853 Pro 1e weight | | 3.3 lb (1.50 kg) | | | | | | |
| FORK | Air Rail | ic acigni | | 5.5 to (1.50 kg) | | | | | | |
| | Trave | el, mm | | | | | | | | |
| | | -crown length, mm | | 371 | | | | | | |
| HEADSET | Cane Cr | eek S-2 Ahea | dset | | | | | | | |
| | Size | 1.1.1. | | 25.4/34.0/30.0 | | | | | | |
| | Stack | k height, mm | | 26.5 | | | | | | |
| CONTROLS | | | | | | | | | | |
| | 3T Forgi | ie XI | | | | | | | | |
| HANDLEDAN | - | np diameter, mm | | 31.75 | | | | | | |
| STEM | 3T Forgi | | m | 41.0 | | | | | _ | |
| | S Shimano | o Ultegra STI, | Flite Dec | | | Why I | LeMond l | eads the pe | eloton: | |
| | RS Integrat | | | , | | Rider | : Racer | | | |
| | Powerco | | | | | Frame | | | | |
| DRIVETRAI | IN | | | | | | eset eMond ge | ometry | | |
| - | UR Shimano | Ultegra T | | | | | _ | ŭ | | |
| · · DENAILLE | | le routing | | Down pull | | | | | eset- stee | el feel and durabil- |
| | | chment | Braze-on tv | pe w/31.8mm clamp | | ity, | very low | weight | | |
| RR DERAILLE | EUR Shimano | | 91 | . · · · · · · · · · · · · · · · · · · · | | Wheel | leet | | | |
| | Shimand | | 42/30 | | | 1 | | Daco I ita | hools a | ore for speed |
| | Bolt i | hole circle, mm | | 74/130 | | l B | ontrager ong with l | Kace Lite w | neers- ae | ero for speed, |
| BB | Shimano | o Ultegra | | | | | O | | | |
| | Shell | x axle, mm | 68 x 11 | 8, Splined, Shimano | | C | ontinenta | ıl Grand Pri | x 3000 t | ires- super fast roll- |
| CHAIN | Shimano | | | | | ing | | | | |
| | | in type | | 9 speed | | Comp | onents | | | |
| CACCETTE | | in length (links) | . O | 108 | | | | Illtowno was | ~! | . Dua nanfannana |
| | Shimano | o onegra 12-2 | .s, 9spa | | | | ace level- in afforda | | oup gives | s Pro performance |
| WHEELSET | | | | | | ata | iii aiioi ua | ble price | | |
| FRONT WHEE | EL Bontrag | | Road, 20° | | | | | | | |
| | | D., mm | | 592 Velox 16mm | | | | | | |
| FDONT TIDE | Rim Continer | 1 | iv 3000 | veiox 10mm | | | | | | |
| FRONT TIRE | Tire . | | IX 3000 | 700 x 23c | | | | | | |
| REAR WHEEL | Bontrag | | Road. 24° | | | | | | | |
| | - | D., mm | , = . | 595 | | | | | | |
| | Rim . | | | Velox 16mm | | | | | | |
| REAR TIRE . | Continer | ntal Grand Pr | ix 3000 | | GEA | RING | | | | |
| | Tire . | | | 700 x 23c | 0.2 | 30 42 5 | 52 | | | |
| SPOKES | DT Aero | | S | | 12 | 66 93 1 | | | | |
| | | t, mm | | 278, Radial | 12 | | | | | |
| ININED TUBE | Rear, | | atau- | 291/291, 2x | | 61 85 1 | | | | |
| | S Presta v | aive, 48mm | siem | | 14 | 57 79 9 | | | | |
| OTHER | | | | | 15 | 53 74 9 | 92 | | | |
| SEATPOST . | LeMond, | | | | 17 | 47 65 8 | 31 | | | |
| CARR: = | | er diameter, mm | | 27.2 | 19 | 42 58 7 | | | | |
| | SSM Era | | er | | 21 | 38 53 6 | | | | DIVE WEIGHT |
| | Shimand | - | | | | | | | | BIKE WEIGHT |
| PEDALS | not sup | opiiea- diameter | | 9/16" | 23 | 35 48 6 | | | | 19.3 lb. |
| SEAT BINDER | R Alloy w/ | integral bolt | | | 25 | 32 44 5 | 55 | | | 8.76 kg. |
| ADDITIONAL | S 2 water | r diameter, mm hottle mount | s (1 hottle | 31.9 on 47 49 1 | COL | | ad C!! | "ilyon/Direct | nla - Ct - | I Cilvan fa-l- |
| | ot on 47, 49, 51) | bottle mount | .s (1 bottle | 011 41, 42), | Spe | ea Blue/Cna | ad Silver • S | Silver/Blue dec | ais • Chac | I Sliver fork |
| DIE | | | | | | | | | | |
| FIT | C: | 47 | 40 | F4 | | _ | | - | | -1 |
| Frame | Size | 47 | 49 | 51 | 53 | 55 | | 57 59 | | 51 |
| Rider height | Inches | 65 165 | 65 | 67 171 | 68 174 | 7 | | 2 74 | | 76 24 |
| 11-6-4-7 | Cm | 165 | 166 | 171 | 174 | | | 32 189 | | 94 |
| Handlebar | Width, mm | 420 | 420 | 440 | 440 | | | 50 460 | | 60 |
| Stem | Length, mm | 90 10 | 90 | 100 | 100 | | | 0 120 | | 30 |
| Crank | Angle | 10 170 | 10 170 | 10 173 F | 10 | 10 = 17 | | 0 10 | | 0 |
| Crank | Length, mm | 170 250 | 170 250 | 172.5 | 172.5 | | | 75 175 50 250 | | 75 50 |
| Seatpost Steerer | Length, mm Length, mm | 250 188.5 | 250 188.5 | 250 203.5 | 250 219.5 | | | 50 250 4.5 278.! | | 50 8.5 |
| | ∟cngtii, iiiiii | 100.3 | 100.5 | 203.3 | ۱۶.۵ | | ,.u 25 | 7.5 210. | . 29 | 0.0 |

| FRAMESET | | c 952 D=c | | | | | Zurich 1 | 「women's |
|-------------------|---------------------|-------------------------------------|-----------------|------------------|------|-----------|-----------------------------|-------------------------------------|
| | Reynold | | | | l | | | |
| | • | e weight | | 3.7 lb (1.68 kg) | l | | | |
| FORK | Air Rail | | | . 5 | | | | |
| 1 | | el, mm | | == | l | | | |
| LIEADCET | | crown length, m | | 371 | | | | |
| HEADSEI | Cane Cr | eek 5-2 Ane | | 25.4/34.0/30.0 | | | | |
| | | height, mm | | 26.5 | | | | |
| | | neigni, min | | 20.9 | | | | |
| | | | | | | | | |
| CONTROLS | | | | | | | | |
| HANDLEBAR | 3T Forgi | | | | | | | |
| | | ıp diameter, mm | | 31.75 | | | | |
| SIEM | 3T Forgi | | | 41.0 | | Why LeN | Mond leads the pelot | ton: |
| SHIFT I FVFD | Steen S Shimano | er clamp height, i Nilteara ST | | | | Rider: R | lacer | |
| | RS Integrat | | | ompannie | 1 | Framese | et | |
| | Powerco | | | | 1 | | lond women's geomet | ry |
| DRIVETRAI | | | | | | | • | t- steel feel and durabil- |
| | Shimano | Illteara T | | | | | ry low weight | i- Steer feer and durabil- |
| I DENAILLE | | e routing | | Down pull | | | v e | |
| | | chment | Braze-on type u | /31.8mm clamp | | Wheelse | t | |
| | EUR Shimand | | 21 | 1 | 1 | | trager Race Lite whe | els- aero for speed, |
| CRANKSET . | Shimano | • | /42/30 | | 1 | strong | g with PST™ | |
| | | hole circle, mm | | 74/130 | 1 | Con | tinental Grand Prix 3 | 000 tires- super fast roll- |
| BB | Shimand | - | 60 116 6 | .1: 1 01: | | ing | | F |
| CHAIN | المحادث | x axle, mm | 68 x 118, S | plined, Shimano | | | | |
| CHAIN | | n type | | 9 speed | | Compon | | . D |
| | | n length (links) | | 108 | 1 | | | gives Pro performance |
| CASSETTE . | Shimand | | 25, 9spd | | 1 | | affordable price | |
| WHEELSET | , | | | | | Size | specific- cranks, bars | s, saddle to fit a woman |
| | L Bontrag | er Race Lite | Road, 20° | | | | | |
| | E.R. | D., mm | - | 592 | 1 | | | |
| | Rim | • | | Velox 16mm | 1 | | | |
| FRONT TIRE | Contine | | rix 3000 | 700 23 | | | | |
| BEAD WHEEL | Tire . Bontrag | | Road 240 | 700 x 23c | 1 | | | |
| L WEAR WHEEL | | ет касе ште D., <i>mm</i> | Rodd, 24 | 595 | 1 | | | |
| | Rim | strip | | Velox 16mm | 1 | | | |
| REAR TIRE . | Contine | | rix 3000 | | O.E. | ADING | | |
| | Tire | | | 700 x 23c | GEA | ARING | | |
| SPOKES | DT Aero | | es | a== = : : | l | 30 42 52 | | |
| | Fron. Rear. | t, mm | | 278, Radial | | 66 93 115 | | |
| INNER TURES | Rear, S Presta v | | | 291/291, 2x | 13 | 61 85 106 | | |
| | | G17C | | | 14 | 57 79 98 | | |
| OTHER | Lablace | 2014 allan | | | 15 | 53 74 92 | | |
| SEAIPUSI . | LeMond | r diameter, mm | | 27.2 | | 47 65 81 | | |
| SADDLF | Oasis wo | | her/Cro-Moly | 4/.2 | 19 | 42 58 72 | | |
| | Shimand | | ,o., | | 21 | 38 53 66 | | DIVENCE |
| | not sup | | | | | | | BIKE WEIGHT |
| | Axle | diameter | | 9/16" | 23 | 35 48 60 | | 19.1 lb. 8.67 kg. |
| SEAT BINDER | R Alloy w/ | • | | | 25 | 32 44 55 | | 6.67 kg. |
| ADDITIONAL | | diameter, mm | .4. | 31.9 | COI | LORS | | |
| ADDITIONALS | S 2 water | pottle mour | แร | | | | Silver • Silver/Blue decals | Chad Silver fork |
| | | | | | | | | - :== =::: *: ! *:: ! |
| | | | | | | | | |
| FIT | | | | | | | | |
| Frame | Size | 45 | 49 | 53 | | | | |
| Rider height | Inches | 64 | 65 165 | 67 171 | | | | |
| Handlake: | Cm Width mm | 163 430 | 165 420 | 171 420 | | | | |
| Handlebar Stem | Width, mm | 420 90 | 420 90 | 420 100 | | | | |
| Stelli | Length, mm Angle | 90 10 | 90 10 | 100 10 | | | | |
| Crank | Length, mm | 165 | 170 | 170 | | | | |
| Seatpost | Length, mm | 250 | 250 | 250 | | | | |
| Steerer | Length, mm | 188.5 | 203.5 | 219.5 | | | | |
| | . yy | | | | | | | |

| HEADSET Cane Creek C-1 Aheadset Size 22.2/30.2/2 Stack height, mm 2.5 | 71 |
|--|---|
| BRAKE LEVERS Integrated brake/shift | |
| GRIPS Powercork | Why LeMond leads the peloton: |
| DRIVETRAIN Chimana Illianna | Rider: Racer |
| FT DERAILLEUR Shimano Ultegra Cable routing Down p | dl Frameset |
| Attachment 31.8 mm/ 1 1 | LeMond geometry |
| RR DERAILLEUR Shimano Ultegra CRANKSET Shimano Ultegra 53/39 | Reynolds 853 Designer Select tubeset- steel feel |
| <u>-</u> | and durability, very low weight |
| BB Shimano 105 | Wheelset |
| Shell x axle, mm 68 x 109.5, Splined, Shima CHAIN Shimano HG-72 | bontrager beleet wheels- light for speed, strong |
| Chain type 9 sp | ed with PST™ |
| 8 1 2 | Components |
| CASSETTE Shimano HG70 12-25, 9spd WHEELSET | Race level- Ultegra group |
| FRONT WHEEL Bontrager Select Road, 20° | |
| E.R.D., mm | 22 |
| Rim strip Velox 16n FRONT TIRE Continental Ultra 3000 | m e e e e e e e e e e e e e e e e e e e |
| Tire size 700 x 2 | 3c |
| REAR WHEEL Bontrager Select Road, 32° | |
| E.R.D., mm Rim strip Velox 161 | 03 m |
| REAR TIRE Continental Ultra 3000 | GEARING |
| Tire size 700 x 2 SPOKES DT 14/15G butted stainless | ^{3c} 39 53 |
| Front, mm 278, Rac | |
| Rear, mm 293/294, | |
| INNER TUBES Presta valve, 48mm stem OTHER | 14 74 100 |
| SEATPOST LeMond, 2014 alloy | 15 69 93 |
| Outer diameter, mm 2. | 17 61 82 19 54 74 |
| SADDLE SSM New Millennium, CrMo rails | |
| BRAKES Shimano Ultegra PEDALS Shimano SPD M515, clipless | 21 49 67 BIKE WEIGHT 20.3 lb. |
| Axle diameter 9/. | I I |
| SEAT BINDER Alloy w/integral bolt | |
| Inner diameter, mm 3 ADDITIONALS 2 water bottle mounts (1 bottle on 49), pun | COLORD |
| peg (not on 49, 51) | Metallic Red/Silver - Red/Silver decais - Metallic Red Tork |
| | |
| FIT | |
| Frame Size 49 51 53 Rider height Inches 64 67 68 | 55 57 59 61 71 72 74 77 |
| Rider height Inches 64 67 68 | 181 182 189 195 |
| Handlebar Width, mm 420 440 440 | 460 460 460 |
| Stem Length, mm 80 100 100 | 110 110 120 135 |
| Angle 12 12 12 Crank Length, mm 170 172.5 172.5 | 12 12 12 12 175 175 175 175 |
| Seatpost Length, mm 250 250 250 | 250 250 250 250 |
| Steerer Length, mm 188.5 203.5 219.5 | 236.0 254.5 278.5 298.5 |

| FRAMESET | | | | | | D | eno | c V: | ro | c T |
|-----------------------------------|-------------------------------------|-----------------|-------------------------|------------------|-----------|-----------|-----------------------|--------------|----------|-----------------------|
| MAIN TUBES | . Reynolds 853 | 3 Designer Sel | ect | | | Du | eno: | S AI | re | 5 I |
| STAYS | . Reynolds 853 | 3 Designer Sel | ect | | | | | | | |
| | Frame weigh | | 3.7 lb (1.68 kg) | | | | | | | |
| FORK | | | | | | | | | | |
| | Travel, mm | | 271 | | | | | | | |
| LIEADCET | Axle-crown | | 371 | | | | | | | |
| HEADSET | . Cane Creek C Size | ,-i Aneadset | 22.2/30.2/26.4 | | | | | | | |
| | Stack height | t. mm | 22.2/30.2/20.4 | | | | | | | |
| | outh neight | , | 20.9 | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| CONTROLS | | | | | | | | | | |
| HANDLEBAR | | | | | | | | | | |
| | Clamp dian | | 26.0 | | | | | | | |
| STEM | | | | | | | | | | |
| CHIET I EVEDS | | ıp height, mm | 41.0 | | | | | | | |
| SHIFT LEVERS | | | veck compatible | | | | | | | |
| BRAKE LEVERS | | ake/SNITT | | | Wh | y LeMo | ond leads | the pelot | on: | |
| | . Powercork | | | | , | er: Ra | | • | | |
| DRIVETRAIN | | | | | | | | | | |
| FT DERAILLEUR | | | _ | | Fra | meset | 1 | | | |
| | Cable routir Attachment | 0 | Down pull | | | | nd geomet | v | | |
| | | | on type w/31.8mm clamp | | | Reyno | olds 853 D | esigner Se | elect t | ubeset- steel feel |
| RR DERAILLEUR CRANKSET | | | | | a | | ability, ver | | | |
| CRANNSEI | . Sillillallo Oite Bolt hole cir | • | 74/130 | | | | J | | O | |
| BB | | | /4/130 | | Wh | eelset | ~ 1 | | | |
| DD | Shell x axle, | | x 118, Splined, Shimano | | | | | t wheels- | light f | for speed, strong |
| CHAIN | | | n 110, opuneu, onmuno | | v | vith PS | $T^{\text{\tiny IM}}$ | | | |
| | Chain type | | 9 speed | | Cor | nponei | nts | | | |
| | Chain lengt | h (links) | 108 | | | | | gra/105 gr | coup v | vith 9 speed, Flite |
| CASSETTE | . Shimano HG7 | 70 12-25, 9spd | | | г | Deck re | | gra/100 gr | oup v | vitii o specu, i iite |
| WHEELSET | | | | | ' | CCK IC | auy | | | |
| FRONT WHEEL | . Bontrager Se | elect Road, 20 |) | | | | | | | |
| | E.R.D., mm | | 592 | | | | | | | |
| | Rim strip | | Velox 16mm | | | | | | | |
| FRONT TIRE | . Continental l | Jitra 3000 | | | | | | | | |
| | Tire size | | 700 x 23c | | | | | | | |
| REAR WHEEL | _ | | | | | | | | | |
| | E.R.D., mm | 1 | 603 | | | | | | | |
| REAR TIRE | Rim strip | Iltra 2000 | Velox 16mm | <u></u> | | | _ | | | |
| REAR TIRE | . Continental C Tire size | JILIA 3000 | 700 x 23c | GEA | RING | | | | | |
| SPOKES | | itted stainless | /00 x 23c | | 30 42 | 52 | | | | |
| J. O.K. J | Front, mm | acca stailless | 278, Radial | 12 | 66 93 | | | | | |
| | Rear, mm | | 293/294, 2x | I | | | | | | |
| INNER TUBES | . Presta valve, | 48mm stem | | 13 | 61 85 | | | | | |
| OTHER | | | | 14 | 57 79 | | | | | |
| SEATPOST | LeMond 201 | 4 alloy | | 15 | 53 74 | 92 | | | | |
| JERN USI | Outer diam. | • | 27.2 | 17 | 47 65 | 81 | | | | |
| SADDLE | | | | 19 | 42 58 | | | | | |
| BRAKES | | | | | 38 53 | | | | Г | |
| PEDALS | | | s | 21 | | | | | | BIKE WEIGHT |
| | Axle diamet | | 9/16" | 23 | 35 48 | | | | | 20.6 lb. |
| SEAT BINDER | . Alloy w/integ | ıral bolt | | 25 | 32 44 | - 55 | | | | 9.35 kg. |
| | Inner diame | | 31.9 | COL | ODC | | | | | |
| ADDITIONALS | | e mounts (1 bo | ottle on 47, 49), | | ORS | /Cilve- | Dod/Cil | doode a Mat | allia D | od fork |
| pump peg (not on 47, | 49, 51) | | | I ^{меt} | allic Red | /Silver • | Red/Silver | iecais • Met | aiiic Re | eu iork |
| | | | | | | | | | | |
| | | | | | | | | | | |
| FIT | | | | | | | | | | |
| FIT Size | | 47 /0 | 51 | 22 | | 55 | 57 | 50 | 6 | 1 |
| Frame Size | | 47 49 64 64 | | 53 68 | | 55 71 | 57 72 | 59 74 | 6 7 | |
| Frame Size Rider height Inches | (| 64 64 | 67 | 68 | i | 71 | 72 | 74 | 7 | 7 |
| Frame Size | 1 | | 67 1 171 | | | | | | | 7 5 |

Stem

Crank

Seatpost

Steerer

Length, mm

Length, mm

Length, mm

Length, mm

Angle

188.5

188.5

172.5

203.5

172.5

219.5

236.0

254.5

278.5

| FRAMESET | | | | | | | | A 1: | no di | Циот |
|---|---|---|---|--|--|---|--|--|---|-------------|
| MAIN TUBES | Reynolds | s 853 Design | er Select | | | | | All | he a | Huez |
| STAYS | Reynolds | s 853 Design e weight | er Select | 3.7 lb (1.68 kg) | | | | • | | |
| FORK | Carbon (| | | 3.7 to (1.00 kg) | | | | | | |
| | | l. mm | | | | | | | | |
| | | crown length, mm | | 371 | | | | | | |
| HEADSET | Cane Cre | | lset | 5,- | | | | | | |
| 112,13021 111 | Size | en o i micuc | .500 | 22.2/30.2/26.4 | | | | | | |
| | | height, mm | | 26.5 | | | | | | |
| | | | | 2009 | | | | | | |
| | | | | | | | | | | |
| CONTROLS | | | | | | | | | | |
| | 3T THE | | | | | | | | | |
| | | p diameter, mm | | 26.0 | | | | | | |
| STEM | 3T THE v | w/shim to 25. | | | | | | | | |
| CUIET LEVED | | r clamp height, m | | 41.0 | | | | | | |
| | S Shimano | | | ipatible | I | | | | | |
| | RS Integrate Powerco | | : | | | Why LeM | and leads | the polet | on: | |
| | | | | | I | , | | the perot | 011. | |
| DRIVETRAI | | | | | I | Rider: Ra | cer | | | |
| FT DERAILLE | UR Shimano | | | | I | Frameset | | | | |
| | | routing | | Down pull | I | | nd geome | trv | | |
| l | | hment | | 31.8 mm/ 1 1/4" | I | I | _ | · · | | |
| | UR Shimano | | | | I | | | | elect tubeset | steel feel |
| CRANKSET | Shimano | - | | | I | and du | ability, ve | ry low wei | ght | |
| | | bole circle, mm | | 74/130 | | 1 | · · | · | | |
| BB | Shimano | | | | I | Wheelset | | | | |
| | | x axle, mm | 68 x 109.5, | Splined, Shimano | | | | | ed, machined | l sidewalls |
| CHAIN | Shimano | HG-53 | | | | for smo | oth brakir | ng | | |
| | | n type | | 9 speed | | Committee | ata | | | |
| | | n length (links) | | 108 | I | Compone | | 1 | = | , , |
| CASSETTE | Shimano | HG70 12-25, | 9spd | | I | Perfo | rmance lev | ⁄el- 105 gr | oup with Tia | igra hubs |
| WHEELSET | | | | | I | | | | | |
| | L Shimano | Tiagra hub | 32°, Auror | a rim | I | | | | | |
| | |)., mm | , ,,,,,,,,,, | 610 | I | | | | | |
| | Rim s | | | Velox 16mm | | | | | | |
| FRONT TIRE . | IRC Red | 1 | | | | | | | | |
| | Tire s | | | 700 x 25c | | | | | | |
| REAR WHEEL | Shimano | | 32°. Auror | | | | | | | |
| | | D., mm | , | 603 | | | | | | |
| | | | | Velox 16mm | | | | | | |
| | Rim s | 1 | | | CEA | D.T.1.0 | | | | |
| REAR TIRE | Rim s IRC Red | Storm | | | | יאאוט | | | | |
| REAR TIRE | IRC Red | | | 700 x 25c | GLA | RING | | | | |
| | IRC Red | rize | | 700 x 25c | GLA | 39 53 | 1 | | | |
| | IRC Red <i>Tire s</i> DT 14G s | rize stainless | | | 12 | | | | | |
| | IRC Red | ize stainless s, mm | | 299, 3x | 12 | 39 53 86 117 | | | | |
| SPOKES | IRC Red Tire sDT 14G s Front | ize stainless s, mm mm | | | 12 13 | 39 53 86 117 79 108 | | | | |
| SPOKES | IRC Red Tire sDT 14G s Front Rear, | ize stainless s, mm mm | | 299, 3x | 12 13 14 | 39 53 86 117 79 108 74 100 | | | | |
| SPOKES INNER TUBES OTHER | IRC Red Tire s DT 14G s Front Rear, Presta v | ize stainless s, mm mm alve | | 299, 3x | 12 13 14 15 | 39 53 86 117 79 108 74 100 69 93 | | | | |
| SPOKES INNER TUBES OTHER | IRC Red Tire s DT 14G s Front Rear, Presta v LeMond, | ize stainless s, mm mm alve | | 299, 3x 293/294, 3x | 12 13 14 | 39 53 86 117 79 108 74 100 | | | | |
| SPOKES INNER TUBES OTHER SEATPOST | IRC Red Tire s DT 14G s Front Rear, Presta v LeMond, | tainless , mm mm alve 2014 alloy r diameter, mm | | 299, 3x | 12 13 14 15 17 | 39 53 86 117 79 108 74 100 69 93 61 82 | | | | |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE | IRC Red Tire s DT 14G s Front Rear, Presta v LeMond, Outer SSM Nev | tainless , mm mm alve 2014 alloy e diameter, mm w Millennium | | 299, 3x 293/294, 3x | 12 13 14 15 17 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 | | | | |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES | IRC Red Tire s DT 14G s Front Rear, Presta v LeMond, Outer SSM Nev Alloy due | tainless , mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, carti | | 299, 3x 293/294, 3x | 12 13 14 15 17 19 21 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 | | | | WEIGHT |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES | IRC Red Tire s DT 14G s Front Rear, Presta v LeMond, Outer SSM New Alloy due Shimano | tainless , mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, carti | | 299, 3x 293/294, 3x 27.2 | 12 13 14 15 17 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 | | | BIKE 20.4 I | |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS | IRC Red Tire s DT 14G s Front Rear, Presta v LeMond, Outer SSM Nev Alloy du Shimano | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, carti o SPD M515, c | | 299, 3x 293/294, 3x | 12 13 14 15 17 19 21 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 | | | | b. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS | IRC Red Tire s DT 14G s Front Rear, Presta v LeMond, Outer SSM Nev Alloy du Shimano Axle e Alloy w/i | ize stainless mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, carti o SPD M515, c diameter integral bolt | | 299, 3x 293/294, 3x 27.2 | 12 13 14 15 17 19 21 23 25 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 | | | 20.4 1 | b. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER | IRC Red Tire s DT 14G s Front Rear, Presta v LeMond, Outer SSM Nev Alloy du Shimano Axle c Alloy w/i | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, cartr s SPD M515, c diameter integral bolt diameter, mm | lipless | 299, 3x 293/294, 3x 27.2 9/16" 31.9 | 12 13 14 15 17 19 21 23 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 | | | 20.4 1 | b. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS | IRC Red Tire s DT 14G s Front Rear, Presta v LeMond, Outer SSM Nev Alloy du Shimano Axle e Alloy w/i Inner | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, cartr s SPD M515, c diameter integral bolt diameter, mm | lipless | 299, 3x 293/294, 3x 27.2 9/16" 31.9 | 12 13 14 15 17 19 21 23 25 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 | د • Green/Bla | ack decals • | 20.4 I 9.26 I | b. .g. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS | IRC Red Tire s DT 14G s Front Rear, Presta v LeMond, Outer SSM Nev Alloy du Shimano Axle c Alloy w/i | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, cartr s SPD M515, c diameter integral bolt diameter, mm | lipless | 299, 3x 293/294, 3x 27.2 9/16" 31.9 | 12 13 14 15 17 19 21 23 25 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 | < • Green/Bla | ack decals • | 20.4 I 9.26 I | b. .g. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS pump peg (not | IRC Red Tire s DT 14G s Front Rear, Presta v LeMond, Outer SSM Nev Alloy du Shimano Axle e Alloy w/i Inner | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, cartr s SPD M515, c diameter integral bolt diameter, mm | lipless | 299, 3x 293/294, 3x 27.2 9/16" 31.9 | 12 13 14 15 17 19 21 23 25 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 | α • Green/Bla | ack decals • | 20.4 I 9.26 I | b. .g. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS | IRC Red Tire s IRC Red Tire s Front Rear, Presta v. LeMond, Outer SSM Nev Alloy du Shimano Axle a Alloy w/ri Inner 1 2 water 1 | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, cartr o SPD M515, c diameter integral bolt diameter, mm bottle mount | lipless s (1 bottle d | 299, 3x 293/294, 3x 27.2 9/16" 31.9 on 47, 49), | 12 13 14 15 17 19 21 23 25 COLC Meta | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 ORS | | | 20.4 l 9.26 k Metallic Green | b. .g. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS pump peg (not | IRC Red Tire s DT 14G s Front Rear, Presta v LeMond, Outer SSM Nev Alloy du Shimano Axle e Alloy w/i Inner | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, cartr s SPD M515, c diameter integral bolt diameter, mm | lipless | 299, 3x 293/294, 3x 27.2 9/16" 31.9 | 12 13 14 15 17 19 21 23 25 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 | < • Green/Bla | ack decals • | 20.4 I 9.26 I | b. .g. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS pump peg (not | IRC Red Tire s IRC Red Tire s Front Rear, Presta v. LeMond, Outer SSM Nev Alloy du Shimano Axle a Alloy w/ri Inner 1 2 water 1 | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, cartr o SPD M515, c diameter integral bolt diameter, mm bottle mount | lipless s (1 bottle d | 299, 3x 293/294, 3x 27.2 9/16" 31.9 on 47, 49), | 12 13 14 15 17 19 21 23 25 COLC Meta | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 ORS | | | 20.4 l 9.26 k Metallic Green | b. .g. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS pump peg (not | IRC Red Tire s IRC Red Tire s Front Rear, Presta v. LeMond, Outer SSM Nev Alloy du Shimano Axle a Inner 1 ner 1 ner 1 ner 1 ner 2 water 1 | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, cartr o SPD M515, c diameter integral bolt diameter, mm bottle mount | lipless s (1 bottle o | 299, 3x 293/294, 3x 27.2 9/16" 31.9 on 47, 49), | 12 13 14 15 17 19 21 23 25 COLC Meta | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 ORS allic Green/Black | 57 | 59 | 20.4 I 9.26 k Metallic Green | b. .g. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS pump peg (not | IRC Red Tire s IRC Red Tire s Front Rear, Presta v LeMond, Outer SSM Nev Alloy du Shimano Axle c Alloy w/i Inner To a y water To n 47, 49, 51) Size Inches | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, cartr o SPD M515, c diameter integral bolt diameter, mm bottle mount | s (1 bottle o | 299, 3x 293/294, 3x 27.2 9/16" 31.9 on 47, 49), | 12 13 14 15 17 19 21 23 25 COLC Meta | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 ORS allic Green/Black | 57 72 | 59 74 | 20.4 I 9.26 k Metallic Green 61 77 | b. .g. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS pump peg (not) FIT Frame Rider height Handlebar | IRC Red Tire s IRC Red Tire s Front Rear, Presta v LeMond, Outer SSM Nev Alloy du Shimano Axle c Alloy w/i Inner To n 47, 49, 51) Size Inches Cm Width, mm | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, cartr o SPD M515, c diameter integral bolt diameter, mm bottle mount 47 64 163 420 | 49 64 164 420 | 299, 3x 293/294, 3x 27.2 9/16" 31.9 on 47, 49), 51 67 171 440 | 12 13 14 15 17 19 21 23 25 COLC Meta | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 ORS allic Green/Black | 57 72 182 460 | 59 74 189 460 | 20.4 I 9.26 k Metallic Green 61 77 195 460 | b. .g. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS pump peg (not | IRC Red Tire s IRC Red Tire s Front Rear, Presta v LeMond, Outer SSM Nev Alloy du Shimano Axle c Alloy w/i Inner To n 47, 49, 51) Size Inches Cm Width, mm Length, mm | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, cartr o SPD M515, c diameter integral bolt diameter, mm bottle mount 47 64 163 420 80 | 49 64 164 420 80 | 299, 3x 293/294, 3x 27.2 9/16" 31.9 on 47, 49), 51 67 171 440 100 | 12 13 14 15 17 19 21 23 25 COLC Meta 53 68 174 440 100 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 ORS allic Green/Black | 57 72 182 460 110 | 59 74 189 460 120 | 20.4 I 9.26 Metallic Green 61 77 195 460 135 | b. .g. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS pump peg (not FIT Frame Rider height Handlebar Stem | IRC Red Tire s IRC Red Tire s Front Rear, Presta v LeMond, Outer SSM Nev Alloy du Shimano Axle c Alloy w/i Inner To n 47, 49, 51) Size Inches Cm Width, mm Length, mm Angle | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, cartr o SPD M515, c diameter integral bolt diameter, mm bottle mount 47 64 163 420 80 12 | 49 64 164 420 80 12 | 299, 3x 293/294, 3x 27.2 9/16" 31.9 on 47, 49), 51 67 171 440 100 12 | 12 13 14 15 17 19 21 23 25 COLC Meta 53 68 174 440 100 12 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 ORS allic Green/Black | 57 72 182 460 110 | 59 74 189 460 120 12 | 20.4 I 9.26 Metallic Green 61 77 195 460 135 12 | b. .g. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS pump peg (not FIT Frame Rider height Handlebar Stem Crank | IRC Red Tire s IRC Red Tire s Front Rear, Presta v LeMond, Outer SSM Nev Alloy du Shimano Asle c Alloy w/i Inner To n 47, 49, 51) Size Inches Cm Width, mm Length, mm Angle Length, mm | ize stainless s, mm mm alve 2014 alloy r diameter, mm v Millennium al pivot, cartr o SPD M515, c diameter integral bolt diameter, mm bottle mount 47 64 163 420 80 12 170 | 49 64 164 420 80 12 170 | 299, 3x 293/294, 3x 27.2 9/16" 31.9 on 47, 49), 51 67 171 440 100 12 172.5 | 12 13 14 15 17 19 21 23 25 COLC Meta 53 68 174 440 100 12 172.5 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 ORS allic Green/Black | 57 72 182 460 110 12 175 | 59 74 189 460 120 12 175 | 20.4 I 9.26 Metallic Green 61 77 195 460 135 12 175 | b. .g. |
| SPOKES INNER TUBES OTHER SEATPOST SADDLE BRAKES PEDALS SEAT BINDER ADDITIONALS pump peg (not FIT Frame Rider height Handlebar Stem | IRC Red Tire s IRC Red Tire s Front Rear, Presta v LeMond, Outer SSM Nev Alloy du Shimano Axle c Alloy w/i Inner To n 47, 49, 51) Size Inches Cm Width, mm Length, mm Angle | ize stainless s, mm mm alve 2014 alloy r diameter, mm w Millennium al pivot, cartr o SPD M515, c diameter integral bolt diameter, mm bottle mount 47 64 163 420 80 12 | 49 64 164 420 80 12 | 299, 3x 293/294, 3x 27.2 9/16" 31.9 on 47, 49), 51 67 171 440 100 12 | 12 13 14 15 17 19 21 23 25 COLC Meta 53 68 174 440 100 12 | 39 53 86 117 79 108 74 100 69 93 61 82 54 74 49 67 45 61 41 56 ORS allic Green/Black | 57 72 182 460 110 | 59 74 189 460 120 12 | 20.4 I 9.26 k Metallic Green 61 77 195 460 135 12 | b. .g. |

| FRAMESET | 1 | | | | | | 1 | 11 | AILL T |
|-------------------------|------------------------|---------------------------------|--------------|--------------------|----------|-------------------|------------------|--------------|---------------------------|
| | Reynold | s 853 Desig | ner Select | | | | <i>F</i> | 41pe | d'Huez T |
| | Reynold | | | | | | | • | |
| | | ie weight | | 3.7 lb (1.68 kg) | | | | | |
| FORK | Carbon | | | | | | | | |
| | | el, mm crown length, mn | 10 | 371 | | | | | |
| HEADSET | Cane Cr | | | 3/1 | | | | | |
| I HEADSET | Size | cen o i Anec | iusci | 22.2/30.2/26.4 | | | | | |
| | Stack | height, mm | | 26.5 | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| CONTROLS | | | | | | | | | |
| | 3T THE | | | | | | | | |
| HANDLEBAN | | ıp diameter, mm | | 26.0 | | | | | |
| STEM | 3T THE | | 5.4 | | | | | | |
| | | er clamp height, n | | 41.0 | | Why LeMo | ond leads | the pelot | on: |
| | S Shimano | • | | mpatible | | Rider: Ra | cer | | |
| | RS Integrat | | ft | | | Frameset | | | |
| | Powerco | ork | | | | | nd geomet | trv | |
| DRIVETRAI | | | | | | | | | 1 |
| FT DERAILLE | UR Shimano | | | | | | | | elect tubeset- steel feel |
| | | e routing | | Down pull | | and dur | rability, ve | ry Iow wei | gnt |
| DD DEDAULT | | hment | | 31.8 mm/ 1 1/4" | | Wheelset | | | |
| | EUR Shimano Shimano | | /30 | | | | ra rims- ae | ro for spe | ed, machined sidewalls |
| CRAINASEI . | |) 105 52/42/ hole circle, mm | 50 | 74/130 | | for smo | oth brakir | ng | , |
| BB | Shimand | | | 7 1/150 | | | | O | |
| | | x axle, mm | 68 x 118 | , Splined, Shimano | | Componer | | 1 105 | |
| CHAIN | Shimand | HG-53 | | | | | | | ith Tiagra hubs, triple |
| | | n type | | 9 speed | | Chainrii | ng gearing | g makes u | ne hills a little easier |
| | | n length (links) | - 01 | 108 | | | | | |
| | Shimano | HG/U 12-25 | o, 9spa | | | | | | |
| WHEELSET | | | | | | | | | |
| FRONT WHEE | L Shimano | | , 32°, Auro | | | | | | |
| | E.R.I Rim | D., mm | | 610 Velox 16mm | | | | | |
| FRONT TIRE | IRC Red | • | | veiox 10mm | | | | | |
| | Tire . | | | 700 x 25c | | | | | |
| REAR WHEEL | Shimano | Tiagra hub, | , 32°, Auro | ra RDR rim | | | | | |
| | | D., mm | | 603 | | | | | |
| DEAD TIDE | Rim | • | | Velox 16mm | | | | | |
| REAR TIRE . | IRC Red | | | 700 x 25c | GEA | RING | 1 | | |
| SPOKES | DT 14G s | | | /00 x 23c | 0.2. | 30 42 52 | 1 | | |
| 31 01(23 | | t, mm | | 299, 3x | 12 | 66 93 115 | | | |
| | Rear, | | | 293/294, 3x | | 61 85 106 | | | |
| INNER TUBES | S Presta v | alve | | | 113 | | | | |
| OTHER | | | | | 14 | 57 79 98 | | | |
| | LeMond, | , 2014 alloy | | | 15 | 53 74 92 | | | |
| | Oute | r diameter, mm | | 27.2 | 17 | 47 65 81 | | | |
| | SSM Nev | | | | 19 | 42 58 72 | | | |
| | Alloy du | | | | 21 | 38 53 66 | | | BIKE WEIGHT |
| PEDALS | Shimano | | clipless | | 23 | 35 48 60 | | | 20.7 lb. |
| CEAT DINIDED | | diameter intogral holt | , | 9/16" | 25 | 32 44 55 | | | 9.40 kg. |
| SEAL BINDER | ? Alloy w/ | integral boit r diameter, mm | | 31.9 | | J_ +- JJ | | | |
| ADDITIONALS | S 2 water | | ts (1 bottle | | COL | | | | |
| | ot on 47, 49, 51) | | | // | Met | allic Green/Black | c • Green/Bla | ack decals • | Metallic Green fork |
| , , , , , , , , , , , , | , ,,, | | | | | | | | |
| FIT | | | | | | | | | |
| Frame | Size | 47 | 49 | 51 | 53 | 55 | 57 | 59 | 61 |
| Rider height | Inches | 4 <i>1</i> 64 | 49 64 | 51 67 | 53 68 | | 5 <i>1</i> 72 | 59 74 | 61 77 |
| I Maei Height | Cm | 163 | 164 | 171 | 174 | | 182 | 189 | 195 |
| Handlebar | Width, mm | 420 | 420 | 440 | 440 | | 460 | 460 | 460 |
| Stem | Length, mm | 80 | 80 | 100 | 100 | | 110 | 120 | 135 |
| | Angle | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Crank | Length, mm | 170 | 170 | 170 | 175 | | 175 | 175 | 175 |
| Seatpost | Length, mm | 250 | 250 | 250 | 250 | | 250 | 250 | 250 |
| Steerer | Length, mm | 188.5 | 188.5 | 203.5 | 219. | 5 236.0 | 254.5 | 278.5 | 298.5 |
| | | | | | | | | | |

| FRAMESET | D | (- 052 Davis | C.lt | | | | | | - | Γοι | urmalet |
|---------------|--------------------|--|--------------|------------------------|--------------|----------|--------------|----------------|-----------------|----------|----------------------------|
| | Reynold | | | | | | | | | . • | |
| STAYS | Reynold | is 853 Desigi ne weight | ner Select | 3.7 lb (1.68 kg) | | | | | | | |
| FORK | Aero Cr | | | 3.7 W (1.00 kg) | | | | | | | |
| | | vel, mm | | | | | | | | | |
| | | -crown length, mr | n | 371 | | | | | | | |
| HEADSET | STS Ahe | | | | | | | | | | |
| | Size | k height, mm | | 22.2/30.2/26.4 24.5 | | | | | | | |
| | Staci | t neight, mm | | 24.3 | | | | | | | |
| CONTROLS | | | | | | | | | | | |
| HANDLEBAR | Alloy Er | - | | 26.0 | | | | | | | |
| STEM | 3T THE | np diameter, mm rer clamp height, n | | 26.0 41.0 | | | | | | | |
| SHIFT I EVERS | steer S Shiman | 1 0 | | | | | | | | | |
| BRAKE LEVER | RS Integrat | ed brake/shi | | | | | v | ond leads | the pelot | on: | |
| | | эгк | | | | R | ider: Ra | icer | | | |
| DRIVETRAIN | | | | | | F | rameset | | | | |
| FT DERAILLEU | JR Shimano Cabi | o Tiagra le routing | | Down pull | | | | nd geome | · · | | |
| | | chment | | 31.8 mm/ 1 1/4" | | | | | | | ubeset- steel feel |
| | UR Shimano | | 20 | | | | and du | rability, ve | ry low wei | ght | |
| CRANKSEI | Shimano | o Hagra 53/. hole circle, mm | 39 | 74/130 | | Ιw | heelset | | | | |
| BB | Shiman | | | /4/130 | | | Auroi | ra rims- ae | ro for spee | ed. ma | chined sidewalls |
| 55 | | l x axle, mm | | 68 x 110, Square | | | | oth brakir | | , | |
| CHAIN | SRAM P | C-59 Power | | - | | | omnono | nta | O | | |
| | | in type | | 9 speed | | | ompone | | ual Tiagma | ~ | with O and |
| CACCETTE | Chai | in length (links) | = Oand | 108 | | | offers le | rmance lev | ei- Hagra | group | with 9 speed hoose from |
| | Sillilland | J NG50 12-23 | o, 9spu | | | | oners it | 01 01030 | e-ratio geal | 13 10 0 | noose nom |
| WHEELSET | Allan 0 | D bub 220 | A | | | | | | | | |
| FRONT WHEEL | Alloy, Q | R nub, 32°, . D., mm | Aurora rim | 610 | | | | | | | |
| | | strip | | Velox 16mm | | | | | | | |
| FRONT TIRE . | IRC Red | Storm | | | | | | | | | |
| | Tire | | | 700 x 25c | | | | | | | |
| REAR WHEEL | | D., mm | 32°, Auror | 603 | | | | | | | |
| DEAD TIDE | | strip | | Velox 16mm | | | - | _ | | | |
| REAR TIRE | IRC Red | | | 700 x 25c | GEA. | | | | | | |
| SPOKES | DT 14G | | | 700 x 23t | | 39 | | | | | |
| 0. 0 | | ıt, mm | | 299, 3x | 12 | 86 | 117 | | | | |
| | | ; mm | | 293/294, 3x | 13 | 79 | 108 | | | | |
| INNER TUBES | Presta v | /alve | | | 14 | 74 | 100 | | | | |
| OTHER | | | | | 15 | 69 | 93 | | | | |
| SEATPOST | Alloy mi | • | | | 17 | 61 | 82 | | | | |
| | | er diameter, mm | | 27.2 | 19 | 54 | | | | | |
| | SSM Ne | | 1 | | 21 | 49 | | | | Г | DIVE WEIGHT |
| | Alloy du | | inc and stra | ne | 23 | 45 | | | | | BIKE WEIGHT 21.7 lb. |
| | Axle | diameter | • | 9/16" | 25 25 | 41 | | | | | 9.85 kg. |
| SEAT BINDER | Alloy w/ | lintegral bolt Integral bolt | | 31.9 | COL |)DC | | | | | |
| ADDITIONALS | 2 water | | ts (1 bottle | | COL | | Metallic/S | Silver Metalli | r • Silvar/Rlı | ie decal | ls • Medium Blue |
| pump peg (not | | | • | , , , | | allic fo | · - | onver metani | c · Silvei/ Dic | ie uecai | is - Medidili Bide |
| FIT | | | | | | | | | | | |
| Frame | Size | 47 | 49 | 51 | 53 | | 55 | 57 | 59 | 61 | |
| Rider height | Inches | 64 | 64 | 67 | 68 | | 71 | 72 | 74 | 77 | |
| - | Cm | 162 | 163 | 171 | 174 | | 180 | 182 | 188 | 195 | 5 |
| Handlebar | Width, mm | 420 | 420 | 440 | 440 | | 460 | 460 | 460 | 46 | 0 |
| Stem | Length, mm | 80 | 80 | 100 | 100 | | 110 | 110 | 120 | 135 | |
| C | Angle | 12 | 12 | 12 | 12 | | 12 | 12 | 12 | 12 | |
| Crank | Length, mm | 170 | 170 | 170 | 170 | | 175 | 175 | 175 | 175 | |
| Seatpost | Length, mm | 250 186.5 | 250 186.5 | 250 201.5 | 250 217.5 | | 250 234.0 | 250 252.5 | 250 276.5 | 250 | |
| Steerer | Length, mm | | 126 6 | 2016 | | | | | 7/6 6 | 296 | . 5 |

| FRAMESET | | |] | | |
|----------------------|--|-------------------|--------|-----------|-------------------|
| | Reynolds 853 Designer Sele | ct | | | |
| STAYS | | | | | |
| 31A13 | Frame weight | 3.7 lb (1.68 kg) | | | |
| FORK | | 317 20 (1100 Ng) | | | |
| | Travel, mm | | | | |
| | Axle-crown length, mm | 371 | | | |
| HEADSET | STS Aheadset | | | | |
| | Size | 22.2/30.2/26.4 | | | |
| | Stack height, mm | 24.5 | | | |
| | | | | | |
| CONTROLS | | | | | |
| HANDLEBAR | Alloy Ergo Clamp diameter, mm | 26.0 | | | |
| STEM | 2 | 41.0 | | | |
| SHIFT I EVERS | Shimano Tiagra STI Dual Co | | | | |
| | Integrated brake/shift | | | Why Le | Mond leads |
| GRIPS | | | | Rider: | |
| DRIVETRAIN | | | | | |
| | Shimano Tiagra T | | | Frames | |
| FT DERAILLEUR | Cable routing | Down pull | | Lel | Mond geomet |
| | Cavie routing Attachment | 31.8 mm/ 1 1/4" | | Re | ynolds 853 D |
| RR DERAILLEUR | | 51.0 mm 1 1/4 | | | durability, ver |
| | Shimano Tiagra 52/42/30 Bolt hole circle, mm | 74/130 | | Wheels | · · |
| BB | · · | /4/130 | | Au | rora rims- aeı |
| | Shell x axle, mm | 68 x 113, Square | | for si | mooth brakin |
| CHAIN | | 55 × 115, 59uure | | | • |
| | Chain type | 9 speed | | Compo | |
| | Chain length (links) | 108 | | | rformance lev |
| CASSETTE | Shimano HG50 12-25, 9spd | | | rings | s and 9 speed |
| WHEELSET | | | | choo | se from |
| | Alloy, QR hub, 32°, Aurora r | im | | | |
| | E.R.D., mm | 610 | | | |
| | Rim strip | Velox 16mm | | | |
| FRONT TIRE | 1 | | | | |
| | Tire size | 700 x 25c | | | |
| REAR WHEEL | Shimano Tiagra hub, 32°, A | urora RDR rim | | | |
| | E.R.D., mm | 603 | | | |
| | Rim strip | Velox 16mm | | | |
| REAR TIRE | | | CEAD | INC | |
| | Tire size | 700 x 25c | | | |
| SPOKES | | | | 30 42 52 | |
| | Front, mm | 299, 3x | | 56 93 115 | |
| INNER TUBES | Rear, mm | 293/294, 3x | 13 6 | 51 85 106 | 5 |
| - | riesta vaive | | 14 5 | 57 79 98 | |
| OTHER | | | | 53 74 92 | |
| SEATPOST | | | L | | |
| CARRIE | Outer diameter, mm | 27.2 | | 47 65 81 | |
| SADDLE | | | | 42 58 72 | |
| BRAKES | | | 21 3 | 38 53 66 | |
| PEDALS | Alloy/alloy cage w/clips and | | 23 3 | 35 48 60 | |
| CEAT DIVIDED | Axle diameter | 9/16" | | 32 44 55 | |
| SEAT BINDER | | 2 | ` | JE 44 JJ | |
| ADDITIONALS | Inner diameter, mm 2 water bottle mounts (1 bot | 31.9 | COLO | RS | _ |
| | | .tie Uli 47, 49), | | | c/Silver Metallic |
| pump peg (not on 47, | 49, JI) | | Metall | | |

Tourmalet T

the peloton:

etry

Designer Select tubeset- steel feel ery low weight

ero for speed, machined sidewalls

vel- Tiagra group with triple chaind offers lots of close-ratio gears to

> BIKE WEIGHT 22.0 lb. 9.99 kg.

ic • Silver/Blue decals • Medium Blue Metallic fork

| FIT | | | | | | | | | | |
|--------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Frame | Size | 47 | 49 | 51 | 53 | 55 | 57 | 59 | 61 | |
| Rider height | Inches | 64 | 64 | 67 | 68 | 71 | 72 | 74 | 77 | |
| | Cm | 162 | 163 | 171 | 174 | 180 | 182 | 188 | 195 | |
| Handlebar | Width, mm | 420 | 420 | 440 | 440 | 460 | 460 | 460 | 460 | |
| Stem | Length, mm | 80 | 80 | 100 | 100 | 110 | 110 | 120 | 135 | |
| | Angle | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| Crank | Length, mm | 170 | 170 | 170 | 170 | 175 | 175 | 175 | 175 | |
| Seatpost | Length, mm | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | |
| Steerer | Length, mm | 186.5 | 186.5 | 201.5 | 217.5 | 234.0 | 252.5 | 276.5 | 296.5 | |

| FRAMESET | | Tourmalat T warmania |
|--|------------------------------|---|
| MAIN TUBES Reynolds 853 Designer Select | | Tourmalet T women's |
| STAYS Reynolds 853 Designer Select | | |
| Frame weight | 3.7 lb (1.68 kg) | |
| FORK Aero Cro-Moly | | |
| Travel, mm | | |
| Axle-crown length, mm | 371 | |
| HEADSET STS Aheadset | | |
| Size | 22.2/30.2/26.4 | |
| Stack height, mm | 24.5 | |
| | | |
| CONTROLS | | |
| HANDLEBAR Alloy Ergo | | |
| Clamp diameter, mm | 26.0 | |
| STEM 3T THE | 20.0 | |
| Steerer clamp height, mm | 41.0 | |
| SHIFT LEVERS Shimano Tiagra STI Dual Control | | |
| BRAKE LEVERS Integrated brake/shift | | Why LeMond leads the peloton: |
| GRIPS Powercork | | 1 |
| DRIVETRAIN | | Rider: Racer |
| FT DERAILLEUR Shimano Tiagra T | | Frameset |
| | Down tull | LeMond Women's geometry |
| Cable routing Attachment | Down pull 31.8 mm/ 1 1/4" | |
| RR DERAILLEUR Shimano 105 GS | 51.0 mm 1 1/1 | Reynolds 655 Designer Select tubeset- steel leef |
| CRANKSET Shimano Tiagra 52/42/30 | | and durability, very low weight |
| Bolt hole circle, mm | 74/130 | Wheelset |
| BB Shimano BB-UN40 | | Aurora rims- aero for speed, machined sidewalls |
| Shell x axle, mm | 68 x 113, Square | |
| CHAIN SRAM PC-59 Power | • | |
| Chain type | 9 speed | |
| Chain length (links) | 108 | Terrormance lever Tragita group with triple chain |
| CASSETTE Shimano HG50 12-25, 9spd | | rings and 9 speed offers lots of close-ratio gears to |
| WHEELSET | | choose from |
| FRONT WHEEL Alloy, QR hub, 32°, Aurora rim | | Size specific- componenets selected to optimize a |
| E.R.D., mm Rim strip | 610 Velox 16mm | woman's performance; cranks, handlebars, saddle |
| FRONT TIRE IRC Red Storm | | |
| Tire size | 700 x 25c | |
| REAR WHEEL Shimano Tiagra hub, 32°, Auror | a RDR rim | |
| E.R.D., mm | 603 | |
| Rim strip | Velox 16mm | |
| REAR TIRE IRC Red Storm | 500 25 | GEARING |
| Tire size | 700 x 25c | 30 42 52 |
| SPOKES DT 14G stainless Front, mm | 299, 3x | 12 66 93 115 |
| rioni, mm Rear, mm | 293, 3x 293/294, 3x | l l |
| INNER TUBES Presta valve | 2731274, 38 | |
| | | |
| OTHER | | 15 53 74 92 |
| SEATPOST Alloy micro-adjust | 27.2 | 17 47 65 81 |
| Outer diameter, mm SADDLE Oasis women's | 27.2 | 19 42 58 72 |
| BRAKES Alloy dual pivot | | 21 38 53 66 BIKE WEIGHT |
| PEDALS Alloy/alloy cage w/clips and stra | ns | 23 35 48 60 21.8 lb. |
| Axle diameter | 9/16" | |
| SEAT BINDER Alloy w/integral bolt | 2/10 | 25 32 44 55 9.90 kg. |
| Inner diameter, mm | 31 9 | COLORS |
| ADDITIONALS 2 water bottle mounts | 52.5 | Dark Blue Metallic/Silver Metallic • Silver/Blue decals • Medium Blue |
| | | Metallic fork |
| FIT | | |
| Frame Size 45 49 | 53 | |
| Rider height Inches 63 64 | 67 | |
| Cm 161 163 | 171 | |
| Handlehar Width mm 420 420 | 420 | |

Handlebar

Stem

Crank

Seatpost

Steerer

Width, mm

Angle

Length, mm

Length, mm

Length, mm

Length, mm

420

80

12

170

250

186.5

420

80

12

170

250

201.5

420

100

12

170

250

217.5

| | | | | | 1 | | |
|--------------|------------------------|--------------------------|--------------|------------------|---------------|---------------|-------------------|
| FRAMESET | | | | | | | |
| | Reynold | | | | | | |
| STAYS | Reynold | - | ner Select | 2 = 11 (4 (2 1) | | | |
| EODK | <i>Fran</i> Aero Cr | ne weight | | 3.7 lb (1.68 kg) | | | |
| rokk | | vel, mm | | | | | |
| | | -crown length, mn | ı | 371 | | | |
| HEADSET | STS Ah | | | 5,1 | | | |
| | Size | | | 22.2/30.2/26.4 | | | |
| | Stac | k height, mm | | 24.5 | | | |
| | | | | | | | |
| | | | | | | | |
| CONTROLS | | | | | | | |
| HANDLEBAR | Alloy Er | go | | | | | |
| | Clar | np diameter, mm | | 26.0 | | | |
| STEM | Alloy qι | iick change, o | direct conn | ect | | | |
| | | rer clamp height, n | | 40.0 | | | |
| | S Shiman | | | | | | |
| | RS Integrat | - | rt | | [| Why I el | ond leads t |
| | Powerco | OFK | | | | | |
| DRIVETRAI | | | | | | Rider: R | |
| FT DERAILLE | UR Shiman | | | | | Framese | |
| | | le routing | | Down pull | | LeM | ond geometr |
| | Atta UR Shiman | chment | | 31.8 mm/ 1 1/4" | | Revi | nolds 853 De |
| | Shiman | | /20 | | | | ırability, very |
| CRAINISEI . | | hole circle, mm | /30 | 74/130 | | | 0 0 |
| BB | Shiman | | | 7 17130 | | Wheelset | |
| | | l x axle, mm | | 68 x 113, Square | | | ora rims- aero |
| CHAIN | HG-50 | | | 1 | | for sm | ooth braking |
| | Cha | in type | | 3/32" | | Compone | ents |
| | | in length (links) | | 108 | | | nusiast level- |
| CASSETTE . | Shiman | o HG50 13-26 | 5, 8spd | | | | nd brake wit |
| WHEELSET | | | | | | the lev | |
| FRONT WHEE | L Alloy, Q | R hub, 32°, | Aurora rim | | | 0110 10 1 | 0101 |
| | E.R. | D., mm | | 610 | L | | |
| | | strip | | Velox 16mm | | | |
| FRONT TIRE | IRC Red | | | | | | |
| DEAD WHEEL | Tire | | A | 700 x 25c | | | |
| REAR WHEEL | Alloy, Q | R 11ub, 32°, 1 D., mm | Autora RDR | 603 | | | |
| | | D., mm strip | | Velox 16mm | | | |
| REAR TIRE | IRC Red | 1 | | veion 10mm | | | _ |
| | Tire | | | 700 x 25c | GEARI | NG | |
| SPOKES | DT 14G | | | | | 0 42 52 | |
| | | et, mm | | 299, 3x | 13 6 | 1 85 106 | |
| | | ; mm | | 293/294, 3x | | 7 79 98 | |
| INNER TUBES | S Presta v | /alve | | | | | |
| OTHER | | | | | | 3 74 92 | |
| | Bontrag | er Sport | | | | 7 65 81 | |
| | | er diameter, mm | | 27.2 | 19 4 | 2 58 72 | |
| SADDLE | SSM Ne | w Millennium | 1 | | 21 3 | 8 53 66 | |
| | Alloy dι | • | | | 23 3 | 5 48 60 | |
| PEDALS | Alloy w | clips and str | aps | | | 1 43 53 | |
| | | diameter | | 9/16" | 1 -5 3 | 3 33 | |
| SEAT BINDER | l Alloy w | - | | | | | |
| | | r diameter, mm | | 31.9 | COLOF | 25 | |
| | 5 2 water | bottle moun | ts (1 bottle | on 47, 49), | | | Metallic • Silve |
| pump peg (no | t on 47, 49, 51) | | | | Jiiveri | metanic/ blue | . Metanic - Silve |
| FIT | | | | | | | |
| Frame | Size | 47 | 49 | 51 | 53 | 55 | 57 |
| Rider height | Inches | 64 | 65 | 67 | 69 | 71 | 72 |
| | Cm | 163 | 165 | 170 | 175 | 179 | 184 |
| Handlebar | Width, mm | 420 | 420 | 440 | 440 | 460 | 460 |
| Stem | Length, mm | 85 | 90 | 100 | 110 | 110 | 120 |
| | Angle | 0 | 0 | 0 | 0 | 0 | 0 |
| Crank | Lenath. mm | 170 | 170 | 170 | 170 | 175 | 175 |

Nevada City

the peloton:

esigner Select tubeset- steel feel y low weight

o for speed, machined sidewalls

- Sora group with Dual Control-thout moving your hands from

BIKE WEIGHT 23.0 lb. 10.44 kg.

er/Blue decals • Silver Metallic fork

| FIT | | | | | | | | | | |
|--------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Frame | Size | 47 | 49 | 51 | 53 | 55 | 57 | 59 | 61 | |
| Rider height | Inches | 64 | 65 | 67 | 69 | 71 | 72 | 74 | 76 | |
| | Cm | 163 | 165 | 170 | 175 | 179 | 184 | 188 | 193 | |
| Handlebar | Width, mm | 420 | 420 | 440 | 440 | 460 | 460 | 460 | 460 | |
| Stem | Length, mm | 85 | 90 | 100 | 110 | 110 | 120 | 120 | 130 | |
| | Angle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Crank | Length, mm | 170 | 170 | 170 | 170 | 175 | 175 | 175 | 175 | |
| Seatpost | Length, mm | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | |
| Steerer | Length, mm | 185.5 | 185.5 | 200.5 | 216.5 | 233.0 | 251.5 | 275.5 | 295.5 | |

LeMond Cyclo-cross

For 2002

We first built a Reynolds 853 LeMond in 1996. The Poprad uses this same great material, but in a competition cyclocross design. The frame remains unchanged from its introduction in 2001.

Geometry

The Poprad combines dirt-worthy handling with the advanced ergonomics of Greg's geometry to create a fast, stable ride.

The dirt features of the geometry include a slacker head tube for more trail. This allows the bike to track straighter in rough terrain. The bottom bracket is a touch higher, increasing pedal clearance for ruts and sidehills. The chainstays are longer, so the bike is more comfortable on rough surfaces. There is a lot more tire clearance, for riding bigger tires, or in muddy conditions

Although the function of the bike is different, the rider compartment is within 1 or 2 millimeters of being exactly the same as our road bikes. If you like your LeMond road bike on pavement, you'll love the Poprad in the dirt.

Ride

Steel is famous for two things: durability and ride quality. Combined with Greg's geometry, the Poprad give an awesome ride.

The outstanding ride qualities of this frame is a smooth, comfortable ride and a wonderful reassurance in soft conditions.

Frame details

Starting with the butted tubeset, we've put the stiffness and strength where it needs to be. The material, wall thicknesses, and butting reduced the overall weight to make these very light steel framesets.

853 Designer Select

The Poprad is built from round 853 Designer Select tubes. This tubeset combines an 853 main triangle with Reynolds 525 stays. 853 and 525 have the same modulus (stiffness), but 853 has a greater tensile strength. In the main triangle, the higher strength of 853 allows us to use thinner, lighter tubes. With the stays, there's a limit on how thin the metal can be that's not determined by strength, but weldable thickness. If the material were any thinner, it would be extremely difficult to make a reliable weld. Since the 525 stays are already stronger than they need to be, there's no performance advantage to using 853 in the stays, just added cost.

All LeMond road bikes have 2 water bottle mounts.

| | Frame sizes | 49 | 52 | 55 | 57 | 59 |
|-------------|--------------|------|------|------|------|------|
| | Head angle | 72.0 | 72.0 | 72.5 | 72.5 | 73.0 |
| | Seat angle | 74.0 | 73.5 | 73.0 | 72.5 | 72.5 |
| Ŋ | | | | | | |
| MILLIMETERS | Standover | 776 | 795 | 817 | 833 | 852 |
| Ē | Seat tube | 519 | 549 | 578 | 598 | 618 |
| Ĭ. | Head tube | 85 | 100 | 116 | 133 | 151 |
| ij | Eff top tube | 525 | 542 | 562 | 578 | 590 |
| | Chainstays | 430 | 430 | 430 | 430 | 430 |
| \geq | BB height | 269 | 269 | 269 | 269 | 269 |
| | Offset | 45 | 45 | 45 | 45 | 45 |
| | Trail | 65 | 65 | 62 | 62 | 59 |
| | Wheelbase | 992 | 1004 | 1015 | 1025 | 1033 |
| | | | | | | |
| | Standover | 30.5 | 31.3 | 32.2 | 32.8 | 33.5 |
| ES | Seat tube | 20.4 | 21.6 | 22.8 | 23.5 | 24.3 |
| H | Head tube | 3.3 | 3.9 | 4.6 | 5.2 | 5.9 |
| INCHES | Eff top tube | 20.7 | 21.3 | 22.1 | 22.7 | 23.2 |
| _ | Chainstays | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 |
| | BB height | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 |
| | Offset | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| | Trail | 2.6 | 2.6 | 2.4 | 2.4 | 2.3 |
| | Wheelbase | 39.0 | 39.5 | 39.9 | 40.4 | 40.7 |
| | | | | | | |

| FRAMESET | |] | Danzad |
|---|--|-------------------------------|--|
| MAIN TUBES Reynolds 853 Designer Se | | | Poprad |
| STAYS Reynolds 853 Designer Se | | | - |
| Frame weight FORK StraightBlade Cross | 3.7 lb (1.70 kg) | | |
| Travel, mm | | | |
| Axle-crown length, mm | 405 | | |
| HEADSET STS Aheadset | | | |
| Size | 22.2/30.2/26.4 | | |
| Stack height, mm | 24.5 | | |
| | | | |
| | | | |
| | | | |
| CONTROLC | | | |
| CONTROLS HANDLERAD Bentrager Dags CV | | | |
| HANDLEBAR Bontrager Race CX Clamp diameter, mm | 25.4 | | |
| STEM Bontrager Comp | 25.1 | | |
| Steerer clamp height, mm | 41.0 | Why Le | eMond leads the peloton: |
| SHIFT LEVERS Shimano Sora STI Dual Co | ntrol | Rider: | Racer |
| BRAKE LEVERS Integrated brake/shift | | Frames | set |
| GRIPS Powercork | | | Mond geometry |
| DRIVETRAIN | | 1 | ynolds 853 Designer Select tubeset- steel feel |
| FT DERAILLEUR Shimano Sora | _ | l and | durability, very low weight |
| Cable routing | Down pull | | v v |
| Attachment RR DERAILLEUR Shimano Sora | 31.8 mm/ 1 1/4" | Wheels | |
| CRANKSET Shimano Sora 52/39 | | | rora rims- aero for speed, machined sidewalls |
| Bolt hole circle, mm | 130 | for s | mooth braking |
| BB Shimano BB-UN40 | | | ntrager Jones CX tires- grip designed by a |
| Shell x axle, mm | 68 x 110, Square | mou | ntain bike legend |
| CHAIN HG50 | 0.00 = 11 | Compo | nents |
| Chain type Chain length (links) | 3/32" 112 | | athusiast level- Sora group with 'Cross gearing- |
| CASSETTE Shimano HG50 13-26, 8sp | | wide | range, yet shift accuracy of a double chainring |
| WHEELSET | | 1 | orty 4 brakes- powerful stopping, low clearance |
| FRONT WHEEL Alloy, QR hub, 32°, Auror | a rim | 1 1 | |
| E.R.D., mm | 610 | | tegra bar-end shifters- durable for real 'Cross |
| Rim strip | Velox 16mm | actio | on |
| FRONT TIRE Bontrager Jones CX | | | |
| Tire size | 700 x 32c | | |
| REAR WHEEL Alloy, QR hub, 32°, Auror | a RDR rim | | |
| Rim strip | Velox 16mm | | |
| REAR TIRE Bontrager Jones CX | | an in the | |
| Tire size | 700 x 32c | GEARING | |
| SPOKES 14G stainless | | 39 52 | |
| Front, mm Rear, mm | 299, 3x | | |
| INNER TUBES Presta valve | 293/294, 3x | 14 75 100 | |
| OTHER | | 15 70 94 | |
| SEATPOST Bontrager Sport | | 17 62 83 | |
| Outer diameter, mm | 27.2 | 19 55 74 | |
| SADDLE SSM New Millennium | 27.2 | 21 50 67 | |
| BRAKES Avid Shorty 4 | | 23 46 61 | BIKE WEIGHT |
| PEDALS Shimano SPD M515, cliple | | 26 41 54 | 23.8 lb. |
| Axle diameter | 9/16" | -~ -, ,, | 10.81 kg. |
| SEAT BINDER Alloy w/integral bolt, cable | - | | 10.01 kg. |
| Inner diameter, mm ADDITIONALS 2 water bottle mounts | 31.9 | COLORS | |
| Stem shim from 1" to 1 1/8" | | | ange • White/Gold decals • Gold Metallic fork |
| Front cable hanger | | | |
| • | | L | |
| FIT Size 49 5 | 2 EF | 57 50 | |
| Frame Size 49 5 Rider height Inches 67 6 | | 57 59 73 74 | |
| | | 13 14 | |
| l Cm 169 17 | | 185 190 | |
| Cm 169 17 Handlebar Width. mm 420 44 | 5 179 | 185 189 460 460 | |
| Handlebar Width, mm 420 44 | 5 179 10 460 | 185 189 460 460 120 120 | |
| Handlebar Width, mm 420 44 | 5 179 40 460 95 105 | 460 460 | |
| Handlebar Width, mm 420 44 Stem Length, mm 90 10 | 15 179 10 460 15 105 0 10 | 460 460 120 120 | |
| Handlebar Width, mm 420 44 Stem Length, mm 90 10 Angle 5 10 | 179 140 460 15 105 0 10 15 175 00 300 | 460 460 120 120 10 10 | |

LeMond Hybrid

For 2002

We first built a Reynolds 853 LeMond in 1996. The Poprad uses this same great material, but in a competition cyclocross design. The frame remains unchanged from its introduction in 2001.

Geometry

The Wayzata combines the advanced ergonomics of Greg's geometry with an upright, city-type position to create a fast, stable ride.

The hybrid features of the geometry include a slacker head tube for more trail. The chainstays are longer, so the bike is more comfortable on rough surfaces. There is a lot more tire clearance, for riding bigger tires.

Ride

Steel is famous for two things: durability and ride quality. Combined with Greg's geometry, the Wayzata give an awesome ride. Its very nimble and lively feeling, as well as providing a great amount of comfort.

Frame details

Starting with the butted tubeset, we've put the stiffness and strength where it needs to be. The material, wall thicknesses, and butting reduced the overall weight to make these very light steel framesets.

853 Designer Select

The Wayzata is built from round 853 Designer Select tubes. This tubeset combines an 853 main triangle with Reynolds 525 stays. 853 and 525 have the same modulus (stiffness), but 853 has a greater tensile strength. In the main triangle, the higher strength of 853 allows us to use thinner, lighter tubes. With the stays, there's a limit on how thin the metal can be that's not determined by strength, but weldable thickness. If the material were any thinner, it would be extremely difficult to make a reliable weld. Since the 525 stays are already stronger than they need to be, there's no performance advantage to using 853 in the stays, just added cost.

All LeMond hybrid bikes have 2 water bottle mounts.

| | Frame sizes | 49 | 52 | 55 | 57 | 59 |
|-------------|--------------|------|------|------|------|------|
| | Head angle | 72.0 | 72.0 | 72.5 | 72.5 | 73.0 |
| | Seat angle | 74.0 | 73.5 | 73.0 | 72.5 | 72.5 |
| Ñ | Ü | | | | | |
| MILLIMETERS | Standover | 776 | 795 | 817 | 833 | 852 |
| H | Seat tube | 519 | 549 | 578 | 598 | 618 |
| Ξ | Head tube | 85 | 100 | 116 | 133 | 151 |
| Ţ | Eff top tube | 525 | 542 | 562 | 578 | 590 |
| | Chainstays | 430 | 430 | 430 | 430 | 430 |
| 2 | BB height | 269 | 269 | 269 | 269 | 269 |
| | Offset | 45 | 45 | 45 | 45 | 45 |
| | Trail | 65 | 65 | 62 | 62 | 59 |
| | Wheelbase | 992 | 1004 | 1015 | 1025 | 1033 |
| | | | | | | |
| | Standover | 30.5 | 31.3 | 32.2 | 32.8 | 33.5 |
| ES | Seat tube | 20.4 | 21.6 | 22.8 | 23.5 | 24.3 |
| H | Head tube | 3.3 | 3.9 | 4.6 | 5.2 | 5.9 |
| INCHES | Eff top tube | 20.7 | 21.3 | 22.1 | 22.7 | 23.2 |
| — | Chainstays | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 |
| | BB height | 10.6 | 10.6 | 10.6 | 10.6 | 10.6 |
| | Offset | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| | Trail | 2.6 | 2.6 | 2.4 | 2.4 | 2.3 |
| | Wheelbase | 39.0 | 39.5 | 39.9 | 40.4 | 40.7 |
| | | | | | | |

| FRAMESET | | | | | | | |
|--|------------------|--|--|--|--|--|--|
| MAIN TUBES Reynolds 853 Designer S | elect Cross | | | | | | |
| STAYS Reynolds 853 Designer Select Cross | | | | | | | |
| Frame weight | 3.7 lb (1.70 kg) | | | | | | |
| FORK StraightBlade Cross | | | | | | | |
| Travel, mm | | | | | | | |
| Axle-crown length, mm | 405 | | | | | | |
| HEADSET STS Aheadset | | | | | | | |
| Size | 22.2/30.2/26.4 | | | | | | |
| Stack height, mm | 24.5 | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Wayzata

| CONTROLS | | |
|---------------|----------------------------|------------------|
| HANDLEBAR | Bontrager Select | |
| | Clamp diameter, mm | 25.4 |
| STEM | Bontrager Comp | |
| | Steerer clamp height, mm | 41.0 |
| SHIFT LEVERS | Shimano R440 | |
| BRAKE LEVERS | Avid AD 3L, long pull | |
| GRIPS | Serfas dual density | |
| DRIVETRAIN | | |
| FT DERAILLEUR | Shimano Tiagra T | |
| | Cable routing | Down pull |
| | Attachment | 31.8 mm/ 1 1/4" |
| RR DERAILLEUR | Shimano Tiagra GS | |
| CRANKSET | Shimano Tiagra 52/42/30 | |
| | Bolt hole circle, mm | 74/130 |
| BB | Shimano BB-UN40 | |
| | Shell x axle, mm | 68 x 113, Square |
| CHAIN | SRAM PC-59 Power | |
| | Chain type | 9 speed |
| | Chain length (links) | 106 |
| CASSETTE | Shimano HG50 12-25, 9spd | |
| WHEELSET | | |
| FRONT WHEEL | Bontrager Select Road, 20° | |
| | E.R.D., mm | 592 |
| | Rim strip | Velox 16mm |
| FRONT TIRE | Continental Ultra 3000 | |

Rider: Racer Frameset

LeMond geometry

Reynolds 853 Designer Select tubeset- steel feel and durability, very low weight

Wheelset

Aurora rims- aero for speed, machined sidewalls for smooth braking

Bontrager Jones CX tires- grip designed by a mountain bike legend

Components

Enthusiast level- Sora group with 'Cross gearingwide range, yet shift accuracy of a double chainring Shorty 4 brakes- powerful stopping, low clearance Ultegra bar-end shifters- durable for real 'Cross action

| ı | FRONT TIRE Continental Ultra 3000 | | | |
|---|---|-------------|------|-------|
| ı | Tire size | 700 x 23c | | |
| ı | REAR WHEEL Bontrager Select Road, 24° | | | |
| ı | E.R.D., mm | 603 | | |
| ı | Rim strip | Velox 16mm | | |
| ı | REAR TIRE Continental Ultra 3000 | | CE | ADINI |
| ı | Tire size | 700 x 23c | GE | ARIN |
| ı | SPOKES DT 14/15G butted stainless | | | 30 |
| ı | Front, mm | 278, Radial | 12 | 68 |
| ı | Rear, mm | 293/294, 2x | 13 | 62 |
| ı | INNER TUBES Presta valve, 48mm stem | | 14 | |
| I | OTHER | | | 58 |
| ı | SEATPOST Bontrager Sport | | 15 | 54 |
| ı | Outer diameter, mm | 27.2 | 17 | 48 |
| ı | SADDLE SSM New Millennium | | 19 | 43 |
| ı | BRAKES Avid Single Digit 3, linear pull | | 21 | 39 |
| ı | PEDALS Shimano SPD M515, clipless | | | |
| ı | Axle diameter | 9/16" | 23 | 35 |
| ı | SEAT BINDER Alloy w/integral bolt | | 25 | 32 |
| ı | Inner diameter, mm | 31.9 | | |
| ı | ADDITIONALS 2 water bottle mounts | | COI | LORS |
| ı | Stem shim from 1" to 1 1/8" | | Tita | anium |
| ı | | | İ | |
| ı | | | 4 | |

| | 30 | 42 | 52 | l | |
|--------|----|----|-----|---|--|
| 12 | 68 | 95 | 117 | | |
| 13 | 62 | 87 | 108 | | |
| 14 | 58 | 81 | 100 | | |
| 15 | 54 | 76 | 94 | | |
| 17 | 48 | 67 | 83 | | |
| 19 | 43 | 60 | 74 | | |
| 21 | 39 | 54 | 67 | | |
| 23 | 35 | 49 | 61 | | |
| 25 | 32 | 45 | 56 | | |
| COLORS | | | | | |

BIKE WEIGHT 23.8 lb. 10.81 kg.

n/Pearl White • Black/Titanium decals • Titanium fork

| FIT | | | | | | | | |
|--------------|------------|-------|-------|-------|-------|-------|--|--|
| Frame | Size | 49 | 52 | 55 | 57 | 59 | | |
| Rider height | Inches | 64 | 66 | 68 | 70 | 72 | | |
| | Cm | 161 | 168 | 173 | 179 | 183 | | |
| Handlebar | Width, mm | 600 | 600 | 600 | 600 | 600 | | |
| Stem | Length, mm | 90 | 105 | 105 | 120 | 120 | | |
| | Angle | 5 | 10 | 10 | 10 | 10 | | |
| Crank | Length, mm | 170 | 175 | 175 | 175 | 175 | | |
| Seatpost | Length, mm | 300 | 300 | 300 | 300 | 300 | | |
| Steerer | Length, mm | 171.5 | 186.5 | 202.5 | 219.0 | 237.5 | | |

A Word About Torque Specifications

Torque is a measurement of the tightness of a threaded fastener such as a screw or bolt, determined by using a torque wrench. The torque specifications in this manual are listed to help you determine the correct tightness of parts and their threaded fasteners. More than anything, these should be used to make sure you do not over tighten the fasteners. Applying more than recommended torque to a fastener does not provide extra holding power and may actually lead to damage or failure of a part. For example, over tightening bar ends can crush a handlebar. Once a part is tight enough to stay tight and be safe, it rarely does any good to tighten the part any further.

We offer a range of torque specifications. Similar parts in different bikes may require different torques due to slight differences.

There are simple function tests you should perform to make sure a part is properly tightened. They should be performed whether a torque wrench was used or not and will suffice as a test for proper tightness if you do not have a torque wrench. As an example after assembling a bike you should determine if a stem is properly tightened to the fork. Place the front wheel between your knees and try to rotate the stem by twisting the handlebars from side to side. If the stem does not twist, it is properly tightened. While this test is somewhat subjective, it places a much greater force on the system than is required of the stem clamping force in normal riding.

Torque Specs and Fastener Prep

| Item | LB•IN | Nm |
|--|-----------|-----------|
| Handlebars Handlebar clamp bolt, forged stem Handlebar clamp bolt, welded stem | 150-180 | 17-20.3 |
| 5mm allen wrench | 100-120 | 11.3-13.6 |
| Double clamp bolts, 4mm allen | 45-60 | 5-6.8 |
| Stem expander wedge bolt | 175-260 | 19.8-29.4 |
| Direct connect steerer clamp bolt | | |
| External pinch type | 100-120 | 11.3-13.6 |
| ICON stem w/external bolts | 70-90 | 7.9-10.1 |
| Bar end attaching bolts | 85-125 | 9.8-14.1 |
| Seats | | |
| Single seat attaching bolt w/6mm allen | 125-200 | 14.1-22.6 |
| Double seat attaching w/5mm allen | 95-150 | 10.7-17 |
| Double seat attaching w/4mm allen | 35-55 | 4-6.2 |
| Seat post binder bolt | 50-180 | 17-20.3 |
| Cranks | | |
| Crank arm bolt, Shimano | 310-380 | 35-43 |
| Chainring bolt | 50-70 | 5.7-7.9 |
| Pedal attachment | 350-380 | 40.2-42.9 |
| Shimano cartridge fixed cup | 350-608 | 40-70 |
| Wheels | | |
| Shimano cassette lock ring | 261-434 | 30-50 |
| Derailleurs/Shifters | | |
| Front derailleur clamp bolt, clamp | 25-35 | 2.8-4 |
| Front derailleur clamp bolt, braze-on | 44-60 | 4.9-6.8 |
| Rear derailleur attaching bolt | 70-85 | 7.9-9.6 |
| Front and rear derailleur cable clamp bo | olt 35-52 | 3.5-5.9 |
| Shifter clamp bolt | 44 | 5 |
| Combi shift/brake lever attaching bolt | 53-69 | 6-8 |
| Brakes | | |
| Brake lever attaching bolt, standard | 44-60 | 5-6.8 |
| Integrated shift/brake lever attach bolt | 53-69 | 6-8 |
| Brake caliper attaching bolt | 69-87 | 8-10 |
| Cantilever/direct pull brake attach bolt | 44-60 | 4.9-6.8 |
| Caliper brake pad attaching bolt | 43-61 | 5-7 |
| Cantilever/direct pull brake pad attach r | | 7.9-9 |
| Brake cable clamping bolt | 50-70 | 5.7-7.9 |
| Int'national disc brake adapter, outer bo | | 10.7-13 |
| Int'national disc brake adapter, inner bo | | 5.7-8.5 |
| Rotor attachment bolt | 40-60 | 4.5-6.8 |
| Hayes caliper attachment bolt | 60 | 6.8 |
| Hayes lever clamp bolt | 15-25 | 1.7-2.8 |
| Frame Attachments | | |
| Water bottle attaching bolt | 20-25 | 2.3-2.8 |
| Derailleur hanger attachment bolt | 50-70 | 5.7-7.9 |
| Sugar | | |
| Shock mount bolts | 133-164 | 15-18.5 |
| Pivot bolts | 95-115 | 10.7-13 |
| Linkage bolts | 50-75 | 5.7-8.5 |
| Suspension Forks | | |
| Brake boss | 60 | 6.8 |
| | | |

Loctite Applications

We use Loctite, or similar product, in a variety of applications in fabrication and assembly of Fisher and LeMond bikes, and components on those bikes. Here's a partial list, and the recommended Loctite product:

| 242 Blue |
|-----------|
| 242 Blue |
| 242 Blue |
| 290 Green |
| 242 Blue |
| 290 Green |
| 242 Blue |
| |

Use Loctite carefully. Follow the instructions on the package, avoiding contact with your skin, or inhaling the vapors. As noted on the package, Loctite contains a known carcinogen.

For Loctite to work correctly, the parts must be clean and dry, with no grease, oil, or dirt. Loctite Kleen 'N Prime is an excellent cleaner and will reduce fixture time.

With blue 242 Loctite, apply to the threads prior to assembly. It will set up in 20 minutes, with full cure taking 24 hours. With green 290 Loctite, application is recommended after assembly. However, this can be impractical with hidden threads, like on the rear suspension pivot bolts or rear suspension bushings. 290 is set in 3 minutes, and again requires 24 hours for a full cure. Please do not confuse Loctite 290 with Loctite 640, which is also green, as 640 can make disassembly much more difficult.

Highly Recommended Grease Applications

Most threaded fasteners will benefit from the application of a light grease-type lubricant. This prevents corrosion and galling, as well as allowing a tighter fit with a given torque. For this reason, it's a good idea to lubricate almost all threaded fasteners. But some fasteners and parts interfaces really need grease. Here are a few:

- Seatpost/seat tube interface Grease the seatpost where it inserts into the frame on all aluminum and steel frames (not on LeMond Ti frames).
 Bottom bracket threads We recommend applying grease to all bottom bracket/frame interfaces, as well as the bearing/cup interfaces. This prevents corrosion and will virtually eliminate creaks, a common complaint among riders with cartridge bottom brackets.
- •Stem/steerer interface Grease the quill of conventional stems where they insert into the fork. With Aheadset type stems, a light oil is recommended, as grease may make it difficult to properly secure this type of stem to the steerer.
- •Stem/handlebar/bar end pinch bolts Any and all of these fasteners are small, so corrosion or galling can really cause problems. Its also critically important to the riders safety that they be correctly tightened. Grease both the threads, as well as the bearing surface of the fasteners which rotate against the fixed part.

Places to Avoid Grease

- •With titanium LeMonds, DO NOT grease the seatpost. A fiberglass sleeve bonded into the seat tube prevents corrosion, and any grease may cause the seatpost to slip, even with correct seatpost binder torque.
- •Bottom bracket axle/crank arm interface Avoid greasing the tapered spindle of a bottom bracket, as this may allow the crank arm to insert an incorrect distance onto the bottom bracket spindle. This can cause crank arm clearance problems with the frame, or incorrect chainline with the specified components. A light oil will adequately prevent any unwanted corrosion in most cases.

Sugar Pivot Service

Prepare the bike

- 1. Clamp the frame upright in a workstand by its seatpost with the head tube vertical.
- 2. Remove the rear wheel and right crankarm. Disconnect the rear brake and rear derailleur cable.
- 3. If possible, open the front derailleur cage and remove the chain. Otherwise, remove the rear derailleur..

Remove the rear swingarm

- 1. Remove the upper link bolt and axle (Fig. 14). Be careful not to let the shock swing down and hit a frame tube.
- 2. Remove the lower link bolt and axle.
- 3. Remove the front shock mount bolt.
- 4. Remove the main pivot bolt (Fig. 15).

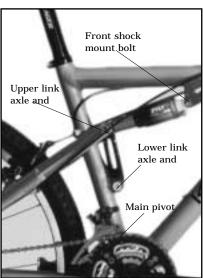


Fig. 14

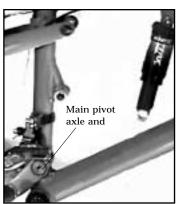


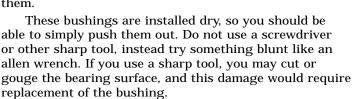
Fig. 15

Separate the parts

1. Remove the main pivot bushing from the frame. This part is held in place with Loktite, so you will probably need to lightly tap it with a hammer to drive it out of the frame (Fig. 16). A socket on an extension makes a good drift. The socket should contact the metal portion of the bushing, barely fitting inside the swingarm and pivot lug.

Do not use heat to loosen the Loktite, as may damage the frame or paint.

- 2. Remove the main pivot bushing "top hats" from the swingarm. These are also installed with Loktite, so again tap them out with hammer using a properly sized socket. Avoid damage to the swingarm by properly supporting it as you drive out the bushings.
- 3. Inspect the bushings from the shock and both linkage axles. If they are in good shape, you can probably leave them. If not, remove them.



Inspect the parts

1. With a clean rag, wipe off all the surfaces. If any part is worn, it should be replaced. Signs of wear on the pivot and link axles are discoloration or a high degree of polish.

Some dark deposits may be left as the bushings and axle 'seat in' to each other. When this happens, some of the bearing material is sort of plated onto the axle. Its normal, and actually makes the pivot run smoother.

The bushings are harder to inspect; some discoloration is normal as the bushings and axle 'seat in' to each other. If wear looks uneven or non-concentric, its best to

replace them.

Note: When in doubt, throw out old parts. Its relatively cheap to replace the parts, and time consuming to perform a rebuild. You do the customer a favor by only tearing their

bike apart once.

Prepare the parts for reassembly

1. Clean the bonding surfaces of the bushings and frame. These surfaces include the outside of the tubular main pivot bushing, the seating surfaces of the main pivot 'top hat' bushings that go into the swingarm, and the parts of the frame and swingarm that the bushings contact. These surfaces should be cleaned with Loktite Kleen 'n Prime.

Be careful no to get Kleen n Prime on the paint or bushing material. It Shock mount bolt

Link bush

Link pivot

Tubular main bush

Main pivot axle

Fig. 17

- will remove paint, and also remove the lubrication in the bushings.
- 2. With the other bushings, simply wipe clean of dust or other debris.
 - 3. Do not lubricate any bushings.
 - 4. Clean the pivot and link bolts with Kleen n Prime.

Install the main pivot bushings

- 1. Check the fit of the bushings in the frame and swingarm by dry-assembling them (practice installation, but without Loktite). Normally the bushings are a light press fit, meaning they are snug but easily go into place with hand pressure. If the parts fit correctly, go to Step 2. If they seem very loose, go to Step 3.
- 2. If the parts fit correctly, apply Loktite 290 to all contact surfaces between the bushings and the frame or swingarm, and install the bushings.
- 3. If the parts seem very loose, Loktite RC680 is required. 290 is a thread locker, and it works best where parts are in tight contact. RC 680 is a filler, so it has the ability to fill larger gaps and securely bond parts that do not fit tightly together.
- 4. After installing the bushings, wipe off any excess Loktite, particularly removing any Loktite that contacts the bearing surface.

Install the main pivot axle.

1. Carefully align the swingarm with the main pivot of the frame. The fit is tight. Avoid contact between the bushings and any residual Loktite.

- 2. Align the swingarm and install the main pivot axle (the long one) from the right side of the bike. Slide it all the way through the frame and swingarm eyes.
- 3. Apply Loktite 290 to the threads of the pivot bolt, and install the bolt from the left side of the bike. Tighten to 61-75 lb•in (6.9-8.5Nm).

Install the link bushings

1. The bushings supporting the link, the swingarm link pivot, and rear shock are all installed dry. Simply press them into place, being careful to keep them aligned during insertion.

Install the lower link pivot axle.

- 1. This axle goes through the link and the frame. Make sure the link is oriented in the way you'd like it (note printing on the side, etc.). Insert the lower link axle from the left side of the bike.
- 2. Apply Loktite 290 to the threads of the pivot bolt, and install the bolt from the right side of the bike. Tighten to 50-75 lb•in (5.7-8.5 Nm).

Install the upper link pivot axle.

- 1. This axle goes through the swingarm, link, and rear shock. Make sure the shock orientation is how you would like it. Insert the upper link axle from the right side of the bike.
- 2. Apply Loktite 290 to the threads of the pivot bolt, and install the bolt from the left side of the bike. Tighten to $15-20\ lb \cdot in (1.7-2.2\ Nm)$.

Install the shock mount bolt.

- 1. Insert the shock mount bolt.
- 2. Apply Loktite 290 to the threads of the pivot bolt, and install the bolt from the right side of the bike. Tighten to 61-75 lb•in (6.9-8.5Nm).

Allow to Dry

Loktite normally requires 24 hours to full set. During this time, the bike should not be ridden. Do not compress the suspension or in other ways disturb the Loktite until is has fully set.