MOUNTAIN BIKE ACTION TEST

DIAMOND BACK AXIS TT

Just like the bike Dave Wiens rides

Times have definitely changed. Who would have ever thought the day would come when a high-end titanium racing bike would be considered dull? Once the regal subject of endless amounts of attention and desire, basic titanium bikes have now been relegated to the category of bikes that could be called . . . well, basic. Where once the mere rumor that a titanium bike would be arriving at the plush *MBA* offices would create a logjam of stretched necks vying for a glimpse, it now barely elicits a response. What has happened in the last few seasons that would make titanium bikes as sought-after as a Vanilla Ice CD collection? Simple. Everyone is too busy checking out all the new suspension bikes that arrive on a weekly basis.

So the Diamond Back Axis TT was initially relegated to a ho-hum status with the wrecking crew. It wasn't until we finished testing one wild prototype suspension bike (and discovered that it didn't qualify as the ultimate bike after all) that we slowly returned to our normal, less jaded ways and began to lay eyes all over the top-of-the-line Diamond Back. In the midst of our suspension fever, we forgot how genuinely enjoyable a simple, well-designed, rigid, titanium bike could be.

◄ *Titanium flight: The Axis TT well represented the Diamond Back Racing concept with its light 23-lb. weight and the steep 72° head angle. This will be the same bike used by the Diamond Back team for cross-country events.*

AXIS ORIGINS

The Diamond Back Axis TT is available in three different versions: as a frameset for $1500, complete with a Shimano LX gruppo for $1995, or built up with a top-of-the-line Shimano XTR gruppo for $2800. We tested the latter model and this is what we found.

Diamond Back Product Manager Brad Hughes told us that when they decided to sell a titanium bike, their first job was to pay a visit to all of the big-name manufacturers to discuss the project and see what was available to them. They finally decided to go with Sandvik Titanium Sports. Sandvik has one of the country's three mills where titanium tubes are made. The Kennewick, Washington-based company first got into mountain

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bike manufacturing after seeing what was possible with titanium tubing used to make golf club shafts.

Although Sandvik makes bikes for almost 20 different companies, the bike they make for Diamond Back is unique. Both the top tube and seat tube are ovalized at the seat tube and bottom bracket respectively to enhance the frame's stiffness. To maximize rear wheel clearance the chainstays are ovalized, as well as being tapered from 7/8-inch at the bottom bracket to 3/4-inch at the dropout.

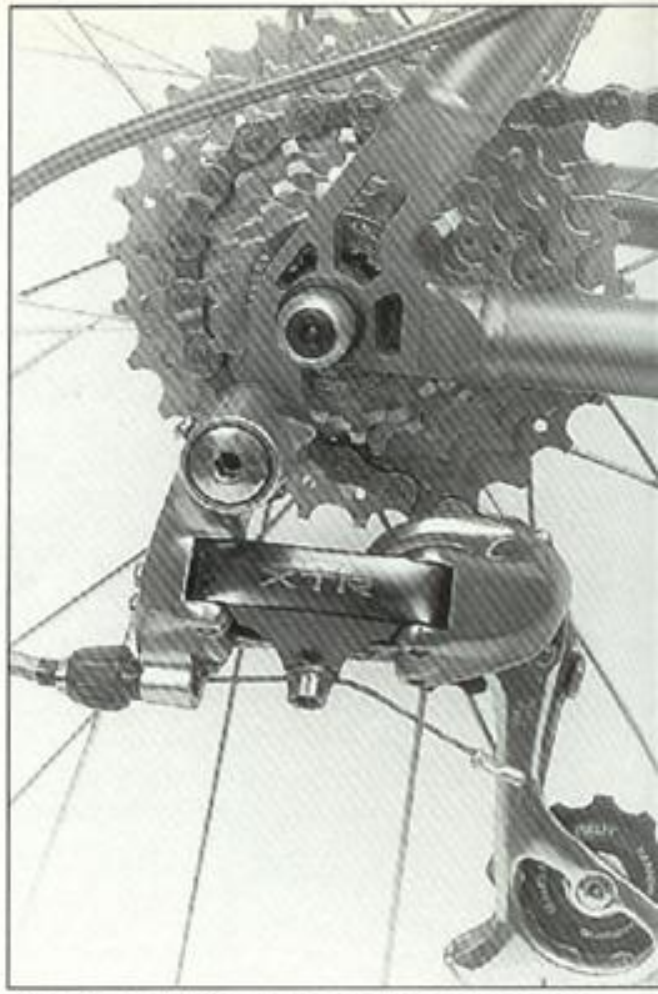
SANDVIK SPEAK

The one thing that Diamond Back wanted us to know was that this was not just an off-the-shelf frame they bought from Sandvik. Sandvik's top engineer, Steve Meredith, elaborated on the Diamond Back's design and construction. "Diamond Back came to us and said they needed some tubes that were stiffer and lighter than what we offered with our Sports Grade selection of tubes. We make 600 different sizes of tubes, and we carry both our Sports Grade as well as aerospace-certified tubing, so that if I need to get something that we don't have in our Sports Grade batch, I can just go and get it out of our aerospace bins. That's what I did with the Diamond Back; it uses both types of tubes.

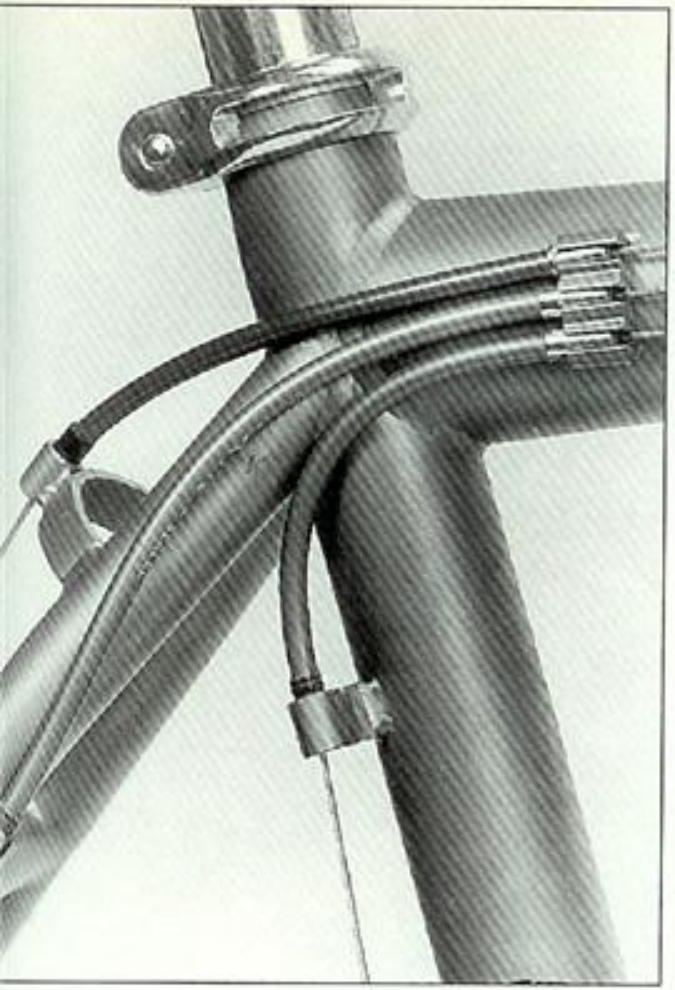
"The thing that people should understand is that even our Sports Grade tubing is certified. The AMS-certified tubes used by Merlin only meet the AMS [Aerospace Materials Specifications] standard, which is just a standard, generic specification used in the industry. There are a lot of different specifications; in fact, Boeing even has its own standard which the tubing they use must meet. Whether a tube is aerospace-certified or not misses the point that they are still the same tube. The critical requirement for aerospace tubes is that they resist internal pressure from the hydraulics flowing through them—that just isn't a beneficial application for bicycle frames. Both types of tubes have to pass the same chemical and physical tests. There's no sense trying to make a distinction between Sports Grade or certified. The important thing to consider is how the frame is made."

WHAT ABOUT THE AXIS?

Diamond Back makes the Axis in 16-, 18- and 20-inch sizes. Our 18-inch test bike weighed 23 pounds. Our 18-inch model had an 11.9-inch-high bottom bracket, 16.75-inch-long chainstays, a 23.5-inch-long top tube, and 42.5-inch-long wheelbase. A steep 72-degree head angle was matched by a 73-degree seat angle.



Titanium artistry: Diamond Back uses the stronger 6/4 titanium for the Axis' dropouts and cable guides. The rear drops are made all the more noticeable due to the window treatment that's courtesy of Sandvik. As fine a race bike as the Axis is, the 12-28 rear cluster makes little sense—don't product managers ever climb steep hills?



Three versions: Diamond Back is making their titanium frame available either as a frameset, or complete with a Shimano LX/XT gruppo, or with a Shimano XTR gruppo. Manufactured by Sandvik, the bike has many design features, like the ovalized top tube, seat tube and tapered chainstays that are custom for the Diamond Back Racing group.

Frame construction was impressive, and Diamond Back's own waterjet-cutout rear dropouts and sculpted top-tube cable guides add a touch of class. The front triangle on the Axis uses a 1.5-inch down tube and top tube and a 1.25-inch seat tube.

Among the nicest additions to the Axis are the handbuilt wheel assemblies, courtesy of Wheelsmith. Using the new Araya RM-395 Pro rims and double-butted spokes, the Axis sports a 32-spoke wheel in the rear and a 28-spoke wheel up front. Both front and rear tires are Tioga Psychos. Another impressive spec was the Tange Super Ultralight, triple-butted Prestige fork. Diamond Back's own in-house accessory company, Avenir, is responsible for the seatpost and titanium-railed saddle.

THE AXIS POWER

"Crisp," "Swift" and "Sweet" were the words that three test riders used to describe the Diamond Back's ride. It seems that for many riders, a rigid titanium bike is as close to being the ultimate bike as anything else on fat tires. In its rigid state, the bike is able to prosper from both its light weight and the feeling that can only be described as "the titanium ride." The steep head angle and lack of rear dropout eyelets tell you that the Axis was intended to be a race bike. It may be expensive, and unflattering with its unpainted finish, but all that hype you hear about how well a titanium bike rides didn't come about due to marketing. Between the geometry and the Tioga tires, the Axis steered where it was pointed, carved inside lines beautifully and flew over the tops of the stutter bumps. Even the rigid ride could be relished on the Axis.

Complaints were few, but included cries to ditch the 12-28 rear gear spread for a 12-32, quickly replace the quick-release skewers for some that work and to lessen the clutter of the downtube stickers. With the Axis and full-suspension Dual Response, Diamond Back is trying to create a new level of bikes that fall under the Diamond Back Racing banner. Fine; leave the DBR stickers and give us back more of the titanium finish we are paying top dollar for!

DO WE HAVE A DEAL?

If you are in the market for a titanium bike (be sure to look at the titanium bike buyer's guide elsewhere in this issue), the Axis TT should be on your list. The $1500 frameset price is a good deal and it could get you into the world of titanium a bit easier just by swapping parts from your old bike. The folks at Diamond Back say that with the DBR series of bikes, they are trying to create a mood similar to what the Acura sports car line adds to the Honda marque. The Axis barks performance, elegance, and it's on the pricey side—sounds like an Acura to us. ❑