



Aerospace composite bonded to an AMP suspension

Tempe, Arizona, is hardly the first mountain bike mecca to come to the tip of a rider's tongue, but Viatch is trying to change that with the High Zoot. The *MBA* gang knew about High Zoot's aftermarket components, but out of the blue, *MBA* received a gorgeous carbon fiber monocoque suspension bike (in the mail). The High Zoot is based on a fully active AMP B-3 Mac-strut rear suspension kit, hooked up to Viatch's very sleek composite front section. Its AMP-designed linkage fork has High Zoot carbon fiber legs, and its handlebar and seatpost are, of course, High Zoot composite items as well. The entire bike bristles with expensive aftermarket components.

Is the High Zoot Talon light? The paradox of most carbon fiber bikes is that they are not. Fiber flyers always have a little extra material added as a failsafe. The Talon actually fulfills the lightness promise that most of its woven brethren

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have reneged on. It tips the scales at 22 pounds.

Is the Talon stiff? "I don't trust carbon fiber handlebars," said one test rider after a quick glance (obviously he remembers the Aaron Cox incident of 1988). He shouldn't have worried. The High Zoot handlebars have internal webs that prevent the bar (and seatpost) from failing catastrophically. Viatch, High Zoot's parent company, has a patented molding technique that uses heat-expandable inserts that impart lots of internal pressure. This process makes thinner, stronger carbon structures (whether frames or components) with only a smidgen of those nasty little air bubbles that composite manufacturers call "voids."

How does it work? Since the *MBA* test crew is already familiar with the AMP Research suspension's performance, test riders played "rock, paper, scissors" to be the first to take the High Zoot for a ride.

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Frame type: Carbon fiber monocoque with AMP MacPherson-strut suspension; TIG-welded, 6061 aluminum rear section; molded carbon fiber composite front section; H₂O mount on down tube.

Frame geometry: Size tested—19" (calculated); top tube—23"; wheelbase—41"; chainstays—16.7"; bottom bracket height—12"; head angle—71.5°; seat angle—73°.

Shock: AMP B-3 coil-over/hydraulic; 1.5" stroke; thru-shaft.

Rear wheel travel: 2.75".

Fork: AMP F-3 linkage type with High Zoot composite blades; 2.375" stroke.

Weight: 22 lb. (frame only—5.5 lb.)

Sizes available: 20" (19" calculated).

Components: Front derailleur—'95 Shimano XTR (top pull); rear derailleur—'95 XTR; shift controls—GripShift X-ray; crankset—TNT forged alloy with TNT chainrings (22/32/42); hubs—TNT (32-hole front and rear); cogs—Deore XT (11-28, eight-speed); wheels—Sun CR-17A rims; 14/15-gauge spokes; tires—Onza Rip 1.9" (rear) and Rail

1.9" (front); stem—American Classic, TIG-welded, two-bolt (135mm extension, 0° rise); handlebar—High Zoot carbon fiber (3°); brakes—TNT low-profile (front and rear); brake levers—TNT CNC-machined alloy; saddle—SDG Ti-rail; seatpost—High Zoot carbon fiber two-bolt (27.2mm).

Price: \$4390 as-tested (\$1695 frame only).

Contact: Viatch/High Zoot, 1700 Drake Dr. #4, Tempe, AZ 85283; (602) 730-4300.



ALIBIE

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Dream weavers: The High Zoot Talon's frame and fork are turned out in beautiful, clear-coated, carbon fiber. The high-pressure composite molding process that High Zoot uses makes for an ultra-light chassis (unusual for most carbon fiber off-road bikes). AMP's new 2.375" travel fork is far superior to its previous efforts.

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sufficient in the middle of the cross-country speed range and softened average trail terrors, it would blow through its travel over big jumps. In the back, the Talon had a titanium shock spring that performed well on smaller impacts, like braking ripples, but was too stiff to make the full travel of the shock available (with the possible exception of a 30-mph encounter with a railroad tie). Nevertheless, The High Zoot was capable of sucking up pretty huge hits before it would bottom out. Different rate springs are readily available for AMP shocks, and the units are easily serviced at home with simple tools. High Zoot was astute in choosing the simple approach to their full-suspension bike, but they should spec a slightly stiffer spring up front and a softer one in the rear.

HIGH ZOOT CLIMBING PERFORMANCE

The Talon is a very light-feeling cross-country bike. Its stem/saddle-height/frame-size proportions were spot-on, and that alone did a world of good when the time came to pound the pedals up a long ascent. We wondered why there were no High Zoot bar ends on the Talon. Given the bike's light weight and brisk feel under power, we think climbing aids would have made the Zoot even better.

When you combine AMP's world-renowned active suspension system with aggressive tires and a 22-pound rolling weight, the result is a singletracking fool. Touchy, steep ascents were child's play—until we got into the gravel. Here, the Onza Rip and Rail 1.9-inch tires met their match. For skinny treads, the Onzas were fast and sticky on all but gravel or deep sand.

The stiff suspension setup made the bike ride hard, but it also enhanced how the Talon felt when its rider hammered out of the saddle. The Talon's rear suspension didn't bob very much at all under power. In-the-saddle climbing, however, was less inspiring—probably the result of a very steep seat angle.

Under maximum climbing power, some test riders depressed the rear suspension enough to cause the rear derailleur housing to flex and to make the derailleur ghost shift. Perfectly tuning the GripShift unit helped alleviate the bothersome situation, which surfaced on the steepest section of many climbs.

HIGH ZOOT CORNERING PERFORMANCE

The Talon's steering was a balance between stable, straight-line adroitness and point-and-shoot singletrack style. Test riders found that the High Zoot wanted to be steered with the handlebar around rocks and the like. In the Talon's favor, the Onza Rip and Rail tires were surprisingly good in a wide range of soils. In dubious traction, however, the bike's front

end would push if its rider didn't consciously weight the outside handlebar or pedal. However, when we said you had to steer the Talon, we didn't mean oversteer! A little twist of the bars and this bike will carve a hard arc in any direction. Leaning was the best cornering technique above 20 miles an hour. If there's such a thing as a powerful finesse rider, the Talon's cornering style would be a perfect match.

HIGH ZOOT AT SPEED

Unless its rider weighed in above the 180-pound mark, the Talon was very choppy through the rough. Beyond the bike's stiff springs and compression damping, the High Zoot required a light touch at the handlebar and cranks to keep its tires in constant contact with the undulating earth. The Talon could be ridden very fast on fire road and singletrack alike, but it was not comfortable as a downhiller. Instead of attacking a descent, test riders chose to relax and let the ground pass beneath them. Thanks to the Talon's light weight and stiff suspension, the bike could be bunnyhopped at speed over trail obstacles—a very nice trait for trail riders.

The Talon's brakes, unfortunately, were well off the mark—but not beyond the "acceptable" level. The bike's short brake levers felt firm, but the command to stop wasn't translated to the bike's low-profile cantilevers. The Talon's active suspension did its best to keep the tires glued to the ground so that a rider could go in deep (even with less-than-awesome stoppers).

HIGH ZOOT SYNOPSIS

If the MBA wrecking crew had outfitted the 'Zoot, we would have chosen more powerful stoppers, switched to AMP's long-travel F-4 fork, changed the rear shock spring and thrown on some bar ends. Those changes, which are easy to do, would make the Talon a very good cross-country racing platform—it's light enough, rigid enough and has that racer "feel." The Talon is a blend of proven, off-the-shelf AMP Mac-strut suspension and cutting-edge thermoset composite technology.

HIGH ZOOT RIDER PROFILE

An ex-roadie turned cross-country racer who rode with short bursts of power and continuously hopped in and out of the saddle would love this bike. Transitioning from seated to standing was almost automatic. To pilot this bike through most technical stuff, smart test riders would downshift, pop out of the saddle and hammer. They let their muscles do the work and the Talon's active suspension sorted out the difficulties. With a few minor setup changes, the Talon would make a great transition bike for a Category II road racer who wanted to go dirt racing. That does not exclude "real" mountain bikers—the Talon just plays better to a more anxious crowd. As a trail bike, though, the Talon's suspension would need more taming. □

HIGH ZOOT SUSPENSION PERFORMANCE

Like most B-3 derivatives, the High Zoot Talon was stiffly sprung at both ends, and the thru-shaft AMP dampers were firm on compression. After the first few cross-country trials were complete, it was obvious that the AMP shocks were dialed in on rebound damping—especially at low to mid amplitudes. Surprisingly, the Talon's B-3 rear suspension seemed laterally stiffer than any of us had remembered that version of the AMP ever being (lateral stiffness is why the AMP B-4 was born). The increased rigidity was due to the Talon's beefy box section up front, but it was not so strong that beefy riders couldn't still flex the monocoque by twisting the frame at the seatpost (almost all frames will flex in a similar manner).

Although AMP has worked hard to eliminate the hiss that we call "AMPhy-sema," both the front and rear dampers quickly developed a minor rebound hiss (caused by small air bubbles moving back and forth through the internal orifices of the shock piston). Our test High Zoot was equipped with the old-style AMP shocks. The '96 AMP shocks have compensator pistons built-in to pressurize the shock oil and keep the air bubbles in suspension. We expect that future High Zoots will have them as well.

While the AMP/Zoot linkage fork was