

TRACING

Mountain BIKING PRODUCT TEST

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Inventor Bill Paxton puts the F-26 through its paces. The tapered rectangular aluminum frame and semi-hydraulic single shock front suspension is a simple and very effective alternative to front suspension.

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When we first saw a Hawk mountain bike, it was last year at the Anaheim Interbike convention. Tucked away in one of the side halls, in a small un-adorned booth, were two funny looking square tubed aluminum bikes with what appeared to be integral front suspensions. The person attending the booth didn't know much about the frames, because the guy who was supposed to be there, was on a break. We gave him a business card and told him to call us if he wanted to have the bike tested. Of the dozens of cards we gave out to smaller companies at the show, only a few called back. Bill Paxton of Hawk was one of them.

Bill enthusiastically detailed the bike over the phone, reminding us that this design had just won the world BMX championships (yes, BMX is getting pretty heavy into front suspension, too). We agreed to meet with Bill and test the Hawk.

SQUARE AT FIRST SIGHT

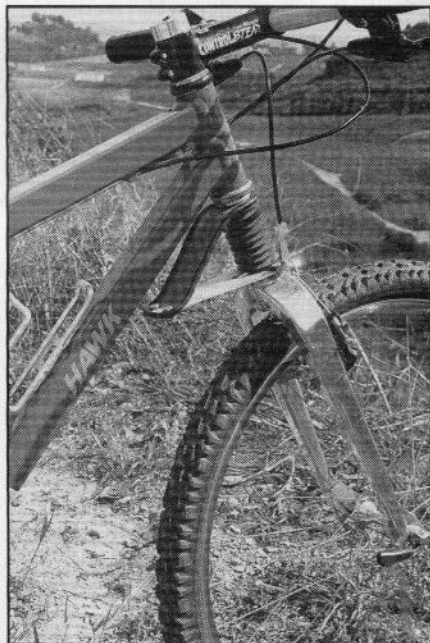
When we got to the test site, Bill, an aerospace engineer, was ready and waiting with a couple of bikes that looked even stranger than we had remembered. The square (or "tapered rectangular" as Bill insisted) aluminum tubing, which would have looked totally out of place a few years ago, is a stark contrast to today's round tubing, and even more so compared to some of the sculpted carbon fiber frames we've been seeing. Bill explained that the aerospace industry had stopped using round tubes as truss members 50 years ago, and that a bicycle frame is nothing more than a very simple truss. The rectangular shape helps minimize frame flex, especially at the bottom bracket, where as little as 3/8 of an inch of crank-induced frame flex can mean as much as four percent power loss. It also looked weird because the head tube was so high, the height needed to incorporate the internal "semi-hydraulic" suspension.

The 6061 T6 tubing is custom formed by Hawk, except for the top tube, which is extruded. The frame is TIG welded, with the stays getting a "C-channel" configuration—two halves of aluminum with overlapping edges, one fitting just inside the other and then welded together—and the massive downtube and fork blades are formed and seam welded. The seat tube is the only one that isn't rectangular because it's relatively non-stress bearing.

Construction is very good on the F-26, with attention to detail that could only come from people who have an aerospace engineering background.



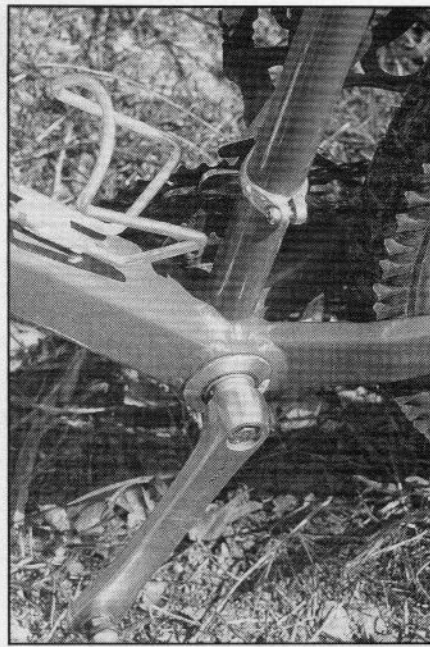
Say "square tubes" and Paxton cringes. The tapered rectangular members are stronger than conventional round tubes. The suspension unit uses a tube within a tube and a high-tech rubber spring made of Buna-L, from the aerospace industry. The hinge is to control rotation so that more complicated internal splines don't have to be used.



Dedicated to Suspension



You get your choice of two drop out positions with the aluminum Hawk fork; one for tighter handling, and one for higher speed straight line handling.



The CQP precision sealed bottom bracket and top pull derailleurs come standard with the F-26. The only tube on the bike that isn't tapered rectangular is the seat tube as it is a non-stress bearing tube.