

PRODUCT ANALYSIS

DIAMOND BACK'S TURBO LITE TRANSIT SYSTEM



The Turbo Lite Transit System. 17 pounds, 6 ounces of mega-trick components. It would be easy to dial it down to 14 or 15 pounds.

MEGA-TRICK COMPONENTS FOR THE DINKY DUDES

Bet you guys think that the pros' bikes are the ultimate in high zootness, sano perfection, and technical wizardry, right? WRONG! The trickiest equipment on the track is in the hyper-diaper classes.

Those little squirts have their personal European mechanics spend hour after hour fine-tuning and shaving precious ounces off their mini-racers. With prices nearing the \$1000 range, you can understand why the flyweight flyers get the white glove treatment.

Late last year, we started hearing rumblings that Diamond Back was designing a high-tech, ultra-dialed bike for the dinky dudes, so we

began snooping around the DB pit area trying to find out more.

Says DB's TM, Sandy Finkleman, "For the Turbo Lite series, everything we make will be light or we won't do it. It has to be a better design than what's on the market or it won't be part of the series."

"The original idea started with a frame and fork. Now we're looking at a whole bike over a one or two year period. More and more parts will be available later, stuff that's just being designed now."

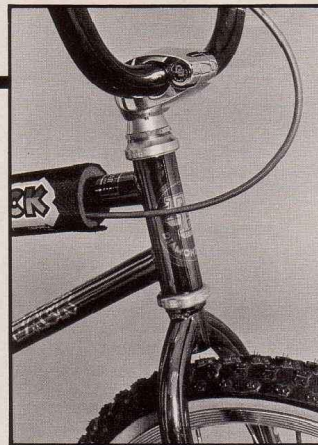
At present, this is a series of parts, not a complete bike. The total group of parts is called the Turbo Lite Transit System.

There is a chassis kit which sells for \$215 that includes the frame, fork, stem, brake, headset, and handlebar. If you want the frame and fork, you'll have to buy the entire kit; you can't purchase them separately. All the rest of the parts in the series, like the wheels, cranks, and suchlike, are available separately.

Let's cruise through each goodie and stick it under our giant microscope for a closer inspection.

FRAME

Sandy let us in on the history of the frame. "Back in 1981, Diamond Back made a first attempt at a mini-frame and it was a bummer. They guessed



Stuff you can see: The hinged handlebar clamp which threads directly on the fork stem, the new 1.5 tire and rim system, the 10-speed head tube and headset. Stuff you can't see: Double-buttet top and down tubes, single-buttet fork legs.

at the design. There was no planning. The biggest problem was that we couldn't get the Japanese to build it light because of liability. They thought that when they put out a product, all sizes of riders would be using it, including the big guys."

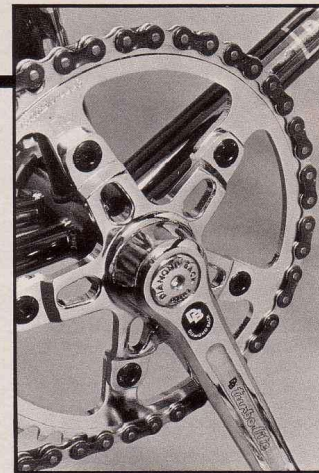
"Finally, we convinced them that we would put a weight limit on the frame and fork so that they could build it lighter." (The Turbo Lite frame and fork has a 100-pound rider weight limit.)

"The current frame design came from Ryan Fien, his dad, and Cozy Yamakashi, who does Diamond Back's R&D and marketing in the U.S., and translates the information back to Japan."

Diamond Back definitely sliced the weight out — it's down to a slim and trim 2 pounds, 12 ounces. 4130 chrome-moly is used. The top and down tubes are double-buttet. The buttet tubing is very thin along most of its length, but thicker near the ends where it's under greater stress. In other words; minimum weight and max strength. Max price, too.

The head tube is the same size as used on 10-speeds, so kiss standard BMX headsets goodbye. In their place, Diamond Back supplies in the kit a Turbo Lite Aero headset by Tange, which is pretty good qual. Not killer, but pretty good.

In the rear, the brake bracket is



Highlights in this photo include the lean Turbo Lite chainwheel — 3/32 of course, the black anodized aluminum chainwheel bolts, and the slim and trim TL crank arms. Ultra spiff stuff. Included with the cranks is a steel spindle bolt so you can torque down on it to seat the crank arms, and two aluminum spindle bolts to hold the crank arms in place once they're seated. Diamond Back has thought of everything.

slotted to allow easy adjustment of the brakes in case you want to use sew-ups.

We won't bother to tell you that the bottom bracket is European-sized — you already expect that on a full-race frame like this.

Finish on both the frame and forks is Turbo Smoke, an opaque black coating over chrome. Very classy lookin'.

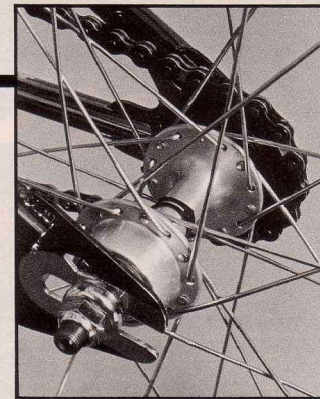
Just in case you're interested, the serial number on our test frame was 3. Diamond Backers Willie Huebner and Sean Alstott have numbers 1 and 2.

FORK

4130 chrome-moly is used here too. The legs are buttet on the upper end where they bend to meet the center shaft.

Fork weight is 1 pound, 4 ounces. Featherlight hardware, for sure.

Sandy says you have to use the axle retention washers that come with the forks or you risk breaking the dropouts off when pulling in the fork legs during front wheel installation. Save yourself the worry by adding a couple of washers to take up the



Can you stand more trickness? Suzue free-ball hubs with oiling hole and clip. Hollow hardened-steel axles. 20 X 1.5, 28-spoke Araya aluminum rims with double-buttet spokes and aluminum nipples. T-rick!

extra space and relieve tension on the dropouts. No mo' pwobwem.

STEMS

That's right — stems. Two different models will be available with the kits. One is a standard type — all chrome-plated with a hinged aluminum bar clamp, an aluminum shaft and wedge, and a chrome-moly expander bolt.

The other version is a prototype that threads directly on the top of the forks and eliminates the stem's center shaft. (Remember the spy photo in the Rumors section of the July issue? This is it.) Still in the preliminary stages of development, it'll soon be available in a limited edition kit. This stem is about five ounces lighter than a normal set-up. High-tech stuff.

HANDLEBAR

Chrome-plated aluminum and weighing about three or four feathers, these bars can be purchased separately from the kit.

BRAKES

You've got your basic Dia-Compe Tech-3 lever, with your not-so-ordinary gum-rubber end cap for it.

The cable is nylon-lined for smoothness. Somewhere down the line the brake kit might come with ultra-light aluminum cable housing. Awright!

The caliper is cool. It's got an extra

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**WILLIE HUEBNER:
TURBO LITE
FRAME NO. 1**

AGE: 6
HOME TURF: Minneapolis,
Minnesota

SPONSOR: Diamond Back
CO-SPONSORS: Simpson, Oakley,
Haro, Aero, Tange, Sugino,
Asahi, Keds, Suzue, Araya, Dia-
Compe, Johar, Comp III (This
little dude is heavy duty!)
DIALIN' IN: BJ's Bike and Ski,
Brooklyn Center, Minnesota

Have you ever been watching someone race and got the feeling that he's totally diggin' it, just having a blast? You get that impression when you catch Willie Huebner on the track. He's about 65 pounds of pure dynamite on wheels.

So how did a kindergartner from Minnesota get the attention of a big sponsor like DB? Sandy Finkleman explains; "I was in Vegas for the Worlds, standing by the finish line, when this little guy wins his race and then crashes at my feet. I looked down, and there was Willie."

Well, that's one way to get noticed. A few more national wins, with Sandy watching, and Willie was in with the Grey and Black Gang.

We had to find out what a factory-sponsored 6 Expert does for training. Willie said; "I kick my dad's butt in ice

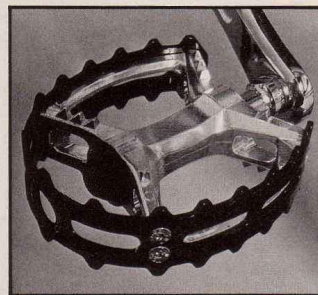
skating." Other training includes wearing five-pound leg weights, but he states, "I hate it." Oh well, so much for training.

Then someone asked if chasing girls was part of his training. "Yeah, I do that. I have two girlfriends. I like Jessica best, but Kelly's prettier. I don't like any other girls — they're all fat and piggy!"

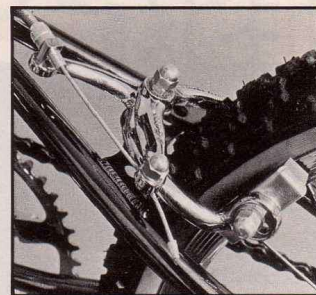
Willie's method for meeting girls is simple. "I sneak up behind 'em and scare 'em."

Like any factory star, Willie's got his racing secrets down into a simple plan. "On the gate, I just tell myself that I'm gonna win. Out of the gate, I try to be first to the first jump. That way, the other kids won't get in my way." ■

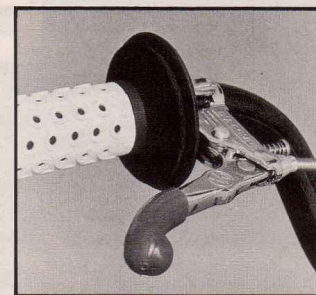
PRODUCT ANALYSIS



The SunTour XC-1 pedals aren't part of the Turbo Lite system. We used them for the buildup of the bike because they are becoming VERY popular with young — and older — riders thanks to their large platforms, great foot-grabbing abilities, and reasonable — \$30 — price.



How come nobody ever thought of this before? The cable arms on the Turbo Lite calipers have been positioned inward to eliminate the possibility of snagging your shoe. Check the welding on the brake bracket. Nice.



The Dia-Compe Tech 3 brake lever, with the addition of a gum rubber sleeve, is part of the Turbo Lite system. This is an excellent lever for the mini-dudes because it can be adjusted down to where their stubby little fingers can reach it.

short reach (800mm), so it can be used with either sew-ups or 20 inch wheels. Eddy King even runs a set on his bike. The cable arms are tucked inward so that they hide behind the frame and don't catch on your tennies. Mega-trick. Diamond Back's riders had complained about other shoe-grabbing models and DB listened. The brake set is also available separately from the kit.

CRANKS

Here's Sandy again with some background on the cranks. "All the alloy cranks we've seen on kids' bikes are about the same weight, and nothing has changed in years. I asked Sugino, through Diamond Back, to build us some Turbo Lites. They're basically the Sugino Mighty Tour cranks from 10-speeds with the unnecessary material shaved from the backs of the arms and under the spider. They're lighter than other cranks, but they're still stiff."

You've got two options with the cranks. You can buy a complete set — two chrome-plated pedal arms, sealed-bearing chrome-moly spindled bottom bracket, aluminum adjusting cups, chrome-plated 44-tooth Turbo Lite chainwheel, five aluminum bolts, one steel spindle bolt to mount the arms, and two aluminum spindle bolts to go racin' with — all for around \$100.

Or if you like, you can get the pedal

arms by themselves for about \$50. They're available in 165, 170, and 175mm lengths. At 175mm both arms weigh in at 13¼ ounces.

CHAINWHEELS

You can buy the chrome-plated aluminum Turbo Lite sprockets in sizes 41-46 teeth.

RIMS AND TIRES

These babies are trick, trick, trick. Hang on, I've gotta take a deep breath before I start rattling off all these goodies. Okay, here we go — all new size 20 X 1.5 chrome-plated 28-spoke Araya aluminum rims, double-butted Asahi stainless steel spokes, aluminum nipples, and free-ball Suzue hubs with hollow hardened-steel axles. Oops, I almost forgot the new Mitsuboshi 20 X 1.5 Comp III tires. How does all that grab ya?

Ready again, Sandy? Take it away. "Most kids get off sew-ups around age 8 or 9. We feel that moving up to the 20 X 1.5 is a better step than going to a 20 X 1½, 1¾, or 1.75 from the sew-ups."

These are strictly race wheels, gang. DB has put a 120 pound weight limit on 'em. Sandy tells us that if a rider is out thrashing, the axles can, and will, bend.

16 X 1¾ inch tubes are what Diamond Back recommends for these wheels, and are what almost every-

one on the DB team uses, including Harry.

Psst. Don't tell anyone, but a latex rubber tube that's about ⅓ the weight of a standard innertube is another product that the DB dudes are workin' on.

Both wheels together, without the tires, tubes, and rear freewheel, tip the scales at 3 pounds, 3 ounces. Holy chrome-moly! That's light!

Oh yeah, the wheels go for \$90 frogskins a pair.

LET'S PACK UP THIS SHOW AND HIT THE ROAD

That's the latest dirt on the Turbo Lite parts, at least for now.

Keep your eyes peeled though. You just might see a new super-thin seat post clamp, a freewheel with aluminum teeth, or a lighter chain. There's also a possibility of a lighter seat, seat clamping hardware, and seat post. Who knows?

One more thing before we jam. Just for kicks we put together a bike using all the Turbo Lite parts we've mentioned in this article, and whatever other parts were necessary to make a complete bike. We wanted to see what the thing would weigh. Hooking it up to the outstandingly accurate BMXA official scale, it came in at 17 pounds, 6 ounces. Not bad for a bike that hasn't yet been breathed on by a top European mechanic. ■