



# FUSO LUX

IF THERE IS AN "OLD SCHOOL" OF FRAMEBUILDERS, Dave Moulton must be on its board of directors.

This is Moulton's 11th year of framebuilding in the United States. While that's more experience than most American builders have, it's just recent history for this 52-year-old transplanted Englishman who's been building professionally for 32 years. Even before that, as a 15-year-old budding racer, Moulton hung around the frame shop of legendary British builder H.P. "Pop" Hodges.

Today, Moulton's flagship—the Fuso Lux with Columbus TSX tubing—commands a price of \$3,895 (with Campagnolo C-Record equipment). Moulton does most of the work himself. He's helped by his wife, Brenda, and 2 others who prepare the tubes and paint the frames. Moulton brazes all the main triangles. This requires long hours, which is

ironic, because Moulton says he started framebuilding in 1957 so he could have time to ride.

"I wanted to be a world champion bike racer," says Moulton. "By working for someone in the bike business, I could get time off to train. I had no desire originally to be a framebuilder."

Moulton went on to start his own business and began exporting frames to the U.S. during the bike boom of the '70s. But eventually, he became frustrated by frequent English labor strikes. In '79, when a work stoppage by suppliers of oxygen and acetylene gas almost put him out of business, he decided to start fresh in the U.S.

Moulton's first job in America was an 18-month stint building Paris Sport bikes in the back of a bike shop in Ridgely Park, New Jersey. His second was building Masi frames in San Marcos, California. This ended abruptly in January '82, when he was laid off because of excess inventory.

As he stood in line to apply for unemployment, Moulton asked himself, "What the hell am I doing here? I

## An Eloquent Expression of The Steel Framebuilder's Art

By John Kukoda





The refined mastery of Moulton's work transcends the need for a gaudy, multi-hued finish.

didn't come 6,000 miles for this." The realization prompted him to start building frames under his own name. At first he rented equipment and space at Masi, then moved to his own shop the following year.

"I built a good dealer network," he says. "I'd build the frame the same week I'd get the order, so a customer could get a custom frame in three weeks. That was unheard of."

In response to a growing market, Moulton introduced Fuso limited-production frames in '84. These are usually built in batches of 5 with standard frame dimensions, but each has the same craftsmanship as a custom model. The name Fuso means "molten" in Italian, a play on the builder's name.

### Conservative Design

Moulton says he settled on his current frame geometry about 15 years ago based on his cycling experience and feedback from other riders.

"In England in the mid '70s there was a trend toward steep bikes," he says. "But whenever I was tempted to steepen the head angle—even by half a degree—my repeat customers would always come back and say, 'This one doesn't handle as well as the last one.'"

Moulton says Italian manufacturers first began using a steep head angle of 74 degrees for a more lively feel. "My bikes are based around a 73-degree head angle, with the fork rake a little short—one-and-three-eighths inches. This gives more trail than average—around two-and-a-half inches—as opposed to a lot of Italian production bikes with around two inches."

Moulton says these dimensions result in a lively feel. The longish trail increases stability at speed and on rough roads without the wheel flop of bikes with more fork rake. "In a race the rider has enough to think about and should only have to concentrate on getting the pedals around," he says.

Moulton also uses a shorter-than-average top tube (54.5 cm for our 56-cm test bike), and a long stem (12 cm). This puts more of the rider's weight over the front wheel. Moulton says this makes the bike feel just as lively when standing or sprinting as one with a steeper head angle.

Despite the short top tube and wheelbase (38.4 inches), our test bike had no front wheel/toe clip overlap—a shortcoming we thought unavoidable in a lively racing bike. The bike had absolutely neutral handling—neither twitchy nor sluggish.

The Fuso Lux is designed for all types of fast riding, including road races, criteriums, triathlons, and centuries. Moulton will build a criterium frame on request that has a steeper 74-degree head

angle and a scant 1<sup>1</sup>/<sub>8</sub>-inch fork rake. This provides about the same trail as his standard design.

Moulton uses Columbus SLX or TSX tubing for the Fuso Lux frames. Our test bike was one of the first TSX versions. Both types of tubing are double-buttressed chrome-moly steel with 5 internal spiral ridges reinforcing the chainstays and down, top, seat, and steerer tubes.

As opposed to SLX's ridges, which extend only a few inches into the tubes, TSX's go the entire length of the down and top tubes. This added reinforcement allows a reduction in wall thickness at the butted ends of these 2 tubes. (TSX measures 0.8 mm for the butted portion and 0.6 mm for the center segment. SLX is 0.9 and 0.6 mm, respectively.) The spiraling in both models ends a few inches above the bottom bracket to permit insertion of the seatpost. The other TSX tubes are identical to SLX.

According to Columbus, a TSX tube-set weighs 21 grams less than SLX yet is just as rigid. This stiffness was confirmed by BICYCLING's Tarantula frame-testing apparatus, which showed no significant difference in lateral, in-line, or fork splay deflection between the TSX Fuso and an SLX De Rosa frame.

Our riding impressions jibe with the Tarantula data. On the road, the Fuso Lux felt lively and efficient without being harsh and unyielding. It's got the backbone for hard efforts in criteriums, yet is comfortable enough for long hours in the saddle. ▶

## FUSO Lux

**Distributed by:** Dave Moulton Bicycles  
Box 2246  
Temecula, CA 92390

**Country of Origin:** U.S.

**Suggested Retail Price:** \$3,895; TSX frame, about \$1,400; SLX frame, \$1,299

**Sizes Available:** 49–64 cm (center-to-top) in 1-cm increments; 56 cm tested; special orders up to 66 cm

**Weight:** Frame, 4.7 lbs.; fork, 1.5 lbs.; complete bike, 21.8 lbs.

**Frame:** Columbus TSX double-buttressed chrome-moly; Cinelli investment-cast bottom bracket and brake bridge, investment cast fork crown and lugs, Columbus dropouts

Wheelbase \_\_\_\_\_ 97.5 cm; 38.4 in.  
Seat tube \_\_\_\_\_ 56 cm; 22 in.  
Top tube \_\_\_\_\_ 54.5 cm; 21.5 in.  
Head angle \_\_\_\_\_ 73 degrees  
Seat angle \_\_\_\_\_ 74 degrees  
Chainstays \_\_\_\_\_ 40.6 cm; 16 in.  
Bottom bracket height \_\_\_\_\_ 27.3 cm; 10.75 in.  
Fork rake \_\_\_\_\_ 3.5 cm; 1.38 in.  
Trail \_\_\_\_\_ 6.7 cm; 2.65 in.

### Wheels:

Hubs \_\_\_\_\_ Campagnolo C-Record low-flange, quick release, 126-mm rear axle spacing  
Spokes \_\_\_\_\_ 32, 14-gauge stainless, 3-cross

Rims \_\_\_\_\_ Campagnolo Sigma Pave chrome tubular, 410 gr.  
Tires \_\_\_\_\_ Vittoria Corsa CX tubular, 240 gr.

### Drivetrain:

Derailleurs \_\_\_\_\_ Campagnolo C-Record with Syncro II, braze-on front  
Chain \_\_\_\_\_ Regina America Superleggera, silver  
Crankset \_\_\_\_\_ Campagnolo C-Record, 170-mm crankarms  
Bottom bracket \_\_\_\_\_ Campagnolo C-Record  
Freewheel \_\_\_\_\_ Campagnolo alloy, narrow

### Components:

Brakes \_\_\_\_\_ Campagnolo C-Record Delta  
Pedals \_\_\_\_\_ Campagnolo Triple Bearing, alloy clips, laminated leather straps  
Headset \_\_\_\_\_ Campagnolo C-Record  
Seatpost \_\_\_\_\_ Campagnolo C-Record one-bolt  
Saddle \_\_\_\_\_ Sella San Marco Girardi Regal, white perforated leather  
Bar/stem \_\_\_\_\_ Cinelli 64 bar, 42-cm width; Cinelli 1R 12-cm stem

### Gear Inches

	42	53
13	x	110
14	81	102
15	76	95
16	71	89
17	67	84
19	60	75
21	54	x



Even an all-out uphill sprint induced no detectable top tube flex. While this 170-pound rider could induce enough bottom bracket sway to make the chain rub on the front derailleur, we've ridden only a few bikes that were totally unyielding in a sprint. Moreover, such frames might be great for 4-sprint-per-lap criteriums, but we wouldn't choose any of them for long rides.

### **C-Record Components**

With the exception of the Syncro II indexing, which we never got working perfectly, the C-Record componentry functioned flawlessly. Campy's new quill pedals accept standard toe clips and feature 3 sets of bearings, removable cages, and improved cornering clearance. We think it is the best Campy pedal since the venerable Record and Super Record models.

The Fuso Lux sports Vittoria Corsa CX cotton sewups on Campy's strong 410-gram Sigma Pave rims. These have a hard chrome finish to resist abrasion from brake pads. The shiny silver rims complement the equally bright C-Record parts, which in turn are flattered by the frame's light lavender metalflake Imron paint. Compared to the gaudy, multi-colored test bikes in our shop, the elegant monotone Fuso Lux stood out like royalty at a weenie roast.

Complete Moulton bikes and frames are available through bike shops. A frame with Columbus TSX tubing sells for about \$1,400. The SLX version is \$1,299. Our test bike's staggering price is due largely to the C-Record components, including Delta brakes and a narrow 7-speed Campy alloy freewheel that alone costs \$310. The freewheel and hollow-pin Regina America Superleggera narrow chain keep the bike's total weight to a reasonable 21.8 pounds.

To us, the Fuso Lux is the epitome of a handcrafted steel racing bike. Buzzwords such as rigidity, agility and comfort all apply, yet none of these ride characteristics are flaunted at the expense of the others.

At its best, a bicycle becomes not a mechanical conveyance powered by muscle and sweat, but an extension of the rider's legs, lungs, and reactions. This feeling is what drives otherwise sane people to spend thousands of dollars on a bike that's really no faster than one costing a tenth of the price. If you've ridden such a bike, you know what I mean. If not, a description won't convey the feeling of oneness experienced on a masterpiece of the framebuilder's craft. The Fuso Lux is such a bike. ■