### The Workshop

he custom framebuilders of this world have a tough challenge: when so many \$500 bikes ride so well, how can custom builders manage to stir customer interest in bare frames costing much more than that?

Dave Moulton, an Englishman transplanted to southern California, showed us how well it could be done with his Special Grand Touring model. Of course, for the price you expect an exquisite ride from the bike, and you get it; but in addition to that, it has an elegance of design and craftsmanship that factory bikes have yet to attain.

First, I should mention one thing: Moulton and I agree that this is no touring bike. He calls it that only because the term "touring" is so abused in his new home country:

"All the people who don't race in this country are called tourists, and that's unfortunate," he said. "This bike is to the racing bike what a sports car is to the

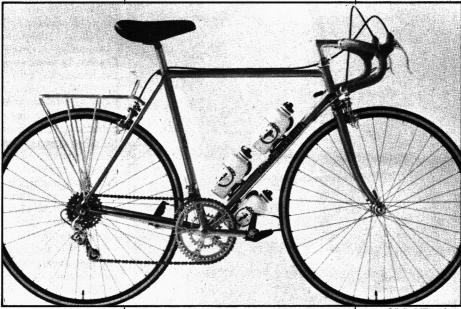
# Dave Moulton **Special Grand**

to 104 inches in tight little steps, so it would accommodate any riding style.)

#### **Three Water Bottles**

For those who really would "tour," presumably in credit-card-and-toothbrush fashion, there are brazed-on bosses for no fewer than three water bottles. There are even attachment points for front and rear racks, although presumably the owner would have the good taste to keep the racks very lightly loaded.

The threaded bosses for attaching racks and fenders are the most eye-catching part of the Moulton frame. This sounds unlikely-brazed-on rack bosses are usually crude-looking little tabs that disrupt the appearance of an otherwise-nice bike. But Moulton's goal was to make them blend into the frame's lines so well that they would look attractive even without anything bolted to them, and he succeeded admirably.



racing car. It's not meant to be a usual touring frame; it's aimed at the fast recreational rider. In England, we would call it a club rider's bike.

Thus, the Special Grand Touring has racing dimensions throughout, and they add up to a scant 391/4-inch wheelbase. The only concession the frame makes to "touring" is an additional five millimeters of clearance under the fork crown and rear brake bridge. This allows you to squeeze fenders between your short-reach brakes and your svelte skinwall wired-on tires. (The 18-speed half-step-plus-granny gearing on our test bike ranged from 24

# The Idea Is to Make It More Elegant

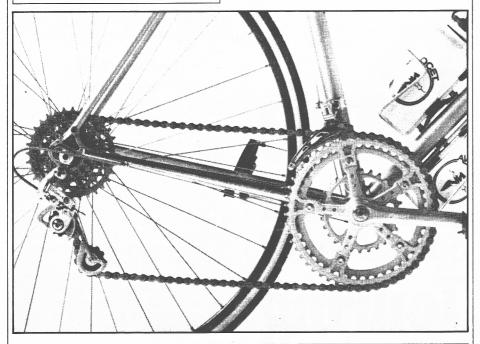
John Schubert

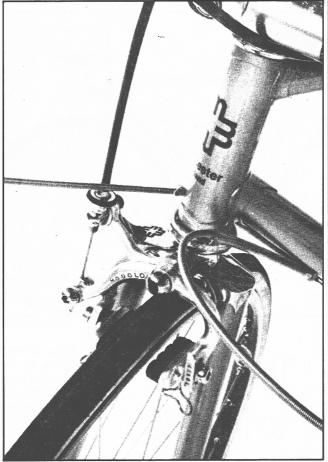
Some of Moulton's bosses are merely as pretty as the best offered in other frames. For example, the trick of setting the rear rack bosses on the inner faces of the seatstays just above the brake bridge has even made it onto mid-priced factory-made bikes. But Moulton does them one better down at the dropouts.

At each wheel there are two pairs of bosses. One is set into the bottom of the seatstay/fork blade, its neatly chromed face peeking out from the rounded contour of the tube. The other is blended into the rear face of the tube wall in an amazingly attractive way.

Watch the March issue of Bicycling for Dave Moulton's first-person account of the framebuilding methods he learned as an apprentice in England a quarter-century

# The Workshop





Dave Moulton's drivetrain (top) sports Avocet cranks, pedals, and hubs, SunTour Cyclone II derailleurs and New Winner freewheel, and a Sedis chain. Note the Mavic G-40 heat-treated rims, three brazed-on water bottle mounts, and the rear rack and fender bosses set into the seatstay. The front of the bike (above) has Cinelli bars and stem, Modolo Professional brakes, and Moulton's own fork crown.

Of course, the filing around the lugs is flawless, and the lugs themselves are hand-sculpted by David's wife Brenda. The paint job is so painstaking that it includes six clear coats of paint over the decals. Moulton's name is pantograph engraved into every bottom bracket shell and neatly painted in contrasting color. Whew! That's the kind of work it takes to sell frames built one-at-a-time at the very top of the scale.

#### **No-Hands Stability**

In the riding department, this bike was a treat. The lightweight frame and fork absorbed more road shock than you'd guess from the short wheelbase, and the bike was rigid enough to make sprinting fun. Handling was the most noticeable plus; the bike exhibited particularly secure no-hands stability, even on bumpy roads, and yet it dived into corners without any hesitation.

The reason why is straight out of the frame geometry cookbook: the bike has a bit more trail than most other frames. With a 73-degree head angle and  $1\frac{1}{2}$  inches of fork rake, the  $2\frac{1}{2}$  inches of trail are just a bit more stable than the two to  $2\frac{1}{4}$  inches found on most other frames.

Naturally, a customer can order a Moulton frame with personalized changes: the frames are built one at a time for individual customers, albeit "from basic models." Brazed-on accessories are entirely negotiable; frame geometry is negotiable within reason. Moulton knows his basic designs work well, and he has been known to refuse customer orders when the customer insisted on a design that would perform less well. In the case of the Special Grand Touring, Moulton adds that longer chainstays are one customer option he'll add without complaint.

Frames of this caliber generally come without decals identifying the tubing manufacturer. One reason is haute class: at this quality level, you know the builder would use only high-quality tubing (in this case, Reynolds 531). Another reason is pragmatic: the decals wither in the oven where Moulton bakes his clear-coat paint. He can add decals at the very end, but they don't weather as well as the rest of the paint job.

#### **Avocet Components**

Moulton sells mostly bare frames; our test bike was fitted out with components by Steve Aldridge of Bud's Bike Shop in Claremont, California. Aldridge, who is well-known for his stints abroad as mechanic for U.S. teams in world and Olympic competition, chose an attractive

assortment that featured Avocet components. Avocet supplied the bike's saddle, seatpost, triple crankset, pedals, and sealed-bearing hubs. Other components included SunTour Cyclone II derailleurs with Bar-Con shift levers, Cinelli bars and stem, and Mavic heat-treated G-40 clincher rims—built into perfectly true wheels by Aldridge himself.

It does cost more to go first-class; the bike is \$1,600 as we tested it, and it would be easy to increase that figure with some component substitutions. The bare frame is \$925, a price which includes \$105 extra for chroming the fork and chainstay.

# The Workshop

("It's expensive, but it's good chrome," Aldridge says.) Even at that, Aldridge has sold plenty of Moulton frames in the four-figure category. Extra chroming, pump painted to match, additional colors, and the owner's name painted on the top tube are all popular extra-cost options. Base prices for Moulton road and criterium frames are \$725 and \$755 respectively.

All in all, the Moulton is a fine bike for the discriminating customer. But the builder who can command this level of respect still hasn't finished letting the world know what he's about.

"Could you do me a favor?" he asks. "Could you please mention in your article that I'm not the Moulton who built the small-wheel bicycle with the suspension? He's Alex Moulton, and there's no relation."

Indeed . . . they're both fine builders but who could confuse the two?

#### DAVE MOULTON SPECIAL GRAND TOURING

Built by: Dave Moulton P.O. Box 1075 San Marcos, CA 92069

SUGGESTED RETAIL PRICE: \$1,600, bare frame: \$925; all frames built to customer order; all sizes available; frame dimensions vary with frame size

SIZE TESTED: 211/2 inches

**WEIGHT:** 23 pounds, 1.5 ounces without racks or water bottle cages; bare frame without fork: 4 pounds, 8.5 ounces; fork only: 1 pound, 9.5 ounces

**FRAME:** Reynolds 531 tubing; brazed-ons bosses for three water bottle cages, front and rear rack mounts, rear fender, shift lever stop, chain hanger, and top tube cable guides; Campagnolo dropouts

Wheelbase 391/4 inches
Top tube 213/8 inches
Chainstays 16½ inches
Head tube angle 73 degrees
Seat tube angle 75½ degrees
Bottom bracket height 105% inches
Fork rake1½ inches
Trail 23/8 inches
WHEELS
Rims Mavic G-40 heat-treated clincher 700C
Hubs Avocet Mod II small-flange
Spoking 36 spokes, 15-gauge, laced cross-three
Tires Wolber Super Rally 700 $\times$ 22C,
90 psi, Presta valves
DRIVETRAIN
Derailleurs SunTour Cyclone II
front and rear with SunTour Bar-Con ratchet type levers
Chain

 Chain
 Sedis

 Crankset
 Avocet Triple

 Crankarm length
 170 mm

 Freewheel
 SunTour New Winner

COMPONENTS
Pedals \_\_\_\_\_\_ Avocet Mod III platform pedal

with adjustable toe clip and Avocet toe strap
Seatpost \_\_\_\_\_\_ Avocet one-bolt microadjust,

27.2 mm diameter, 210 mm long
Saddle \_\_\_\_\_ Avocet Touring II leather over foam on

plastic base
Handlebars \_\_\_\_\_ Cinelli maes bend, 40 cm wide,
engraved, covered with foam backed leatherette tape;

Cinelli stem, 9 cm long
Brakes \_\_\_\_\_\_ Modolo International sidepull
with hooded levers

#### **GEARING IN GEAR INCHES**

	28	46	50
13	58	96	104
15	50	83	90
18	42	69	75
21	36	59	64
26	29	48	52
 32	24	39	42

