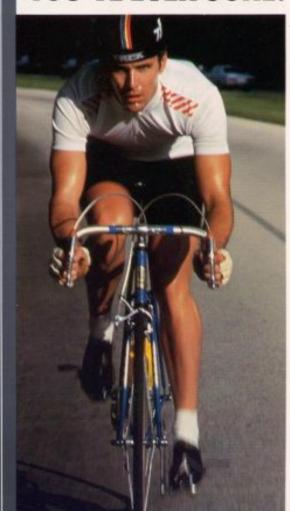
Trek Bicycle Corporation, 1984 Brochure, Part 1 - Racing Bicycles



Cover Page

# TREK. FURTHER THAN YOU'VE EVER GONE.



Trek cannot boast of a decades-old heritage. Nor of a single yellow jersey in the Tour de France.

Not yet.

Rather, Trek has been content with developing, in a quiet Wisconsin town, the most highly-evolved cycling machines that technology will allow.

Their philosophy is not one of merely slapping trendy components onto the requisite set of steel-alloy tubing. To Trek, a bike's performance is as much a product of advanced thinking as it is the sum of its parts.

And that thinking begins with the frame.

#### FRAME DESIGN: A LESSON IN ADVANCED GEOMETRY.

The frame is truly the heart and soul of a fine bicycle. If it is meticulously engineered, with every angle and tube dimension displacing the proper forces, it will be the single greatest factor contributing to the performance of the machine as a whole. If the frame is compromised, then no amount of sophisticated componentry can save it.

All frames will look somewhat similar at first inspection. Yet look closer, and you'll see the subtle variations that make a Trek "function specific" — that is, uniquely suited for particular kinds of riding.

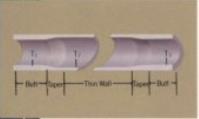
Of the hundreds of design parameters, wheelbase is perhaps the most obvious. A short wheelbase (notice the tight clearance between the rear wheel and the seat tube) tells you that the frame was intended for fast riding and racing over relatively smooth surfaces. By tightening the geometry, most of the frame tubes get shorter, the angles get steeper, and

the bicycle will feel extra responsive, almost skittish, at high speeds.

But there is a trade-off. These bicycles are particularly "stiff" and absorb little shock, in an effort to direct all the rider's power, without loss, directly to the rear wheel.

Conversely, where comfort and capacity are of primary concern, the wheelbase is drawn out considerably, for a more stable touring platform. And results in plenty of extra length for panniers, handlebar packs. and other necessary take-alongs. The shallower angles also let the rider sit more upright, as a streamlined body tuck is

not required at slower touring speeds. Trek's selection of quality bikes, 18 in all, guarantees that there is a selection of frames within this spectrum to suit your particular riding style.



Double-butted tubing maximizes a frame's strength by "butting" or thickening the tubing at the ends where it is subject to the greatest stress, then tapering to a lighter, thinner cross-section in the center.

#### **TUBING WALL THICKNESS**

(in mm) Reynolds 753 R and 531P 0.7 0.8 Reynolds SIIIC and SIIICS 018 0:5 0.6 1.0 0.5 Reynolds 900 09 06 09 0.9 06 0.9 0.6 Tange 2001 and 1000 0.7 10 07 1.0 0.7 Reynolds 538AT and 508AT 0.7 12 09 12 12 0.9 12 1.0



Trek does not believe in resting on laurels. A case in point – this prototype bicycle built entirely from thin-gauge stainless-steel tubing

#### MATERIALS: THE BEST THE WORLD HAS TO OFFER.

The most advanced bicycle frame consists of some simple elements – normal diameter

tubes, narrower gauges (called "stays"), and a precision-made assortment of lugs, bridges, and shells to join them together.

Every Trek has a frame composed of double-butted tubing. Tubing with walls thicker at the ends than



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Trek was the first American bicycle manufacturer to be

certified by T.I. Reynolds as a Master Framebuilder.

in the center, to reduce overall weight without sacrificing strength.

T.I. Reynolds Ltd. of England is perhaps the best-known maker of these tubesets. But as great as their reputation is, only in the right hands can this manganese steel alloy be transformed into a Trek.

Trek steadfastly refuses to use the same tube formulation to fit every frame. Revnolds 501, 531, and the superlight 753 are used where appropriate.

Reynolds has also certified Trek as a master in the use of their materials, the only major U.S. manufacturer to earn such a distinction.

Finally, Trek has pioneered the extensive use of investment-cast frame components in their line. The excellent detail and finer molecular structure obtained by this expensive process has enabled our builders to produce frames to closer tolerances than ever before.

#### MELTING THE FRAMEBUILDING MYTH.

All too often, mass production of bicycle frames dictates the need for fast, high-temperature brazing.

Yet metallurgical physics demands that

brazing be accomplished at the lowest possible temperature to maintain tensile strength.

Naturally, Trek refuses to compromise. Which is why they employ many of the same low-temperature techniques usually reserved for custom builders.

After precise mitering of the tubes, the lugs are slowly and evenly heated by a series of strategically-placed jets. Brass or silver solder is injected into the gap, filling it completely.

Every braze is scrutinized.

Alignment is confirmed using a complex series of mechanical and optical checks. Only then is the frame ready for a relatively primitive, but still unsurpassed step called craftsman-with-a-fine-file.

#### A FITTING FINISH.

Every Trek frame receives what is widely considered to be the most durable finish available. One that resists the corrosive

A thorough six-step finishing process ensures that each Trek will weather the elements for years without losing its lustre



effects of outside exposure while maintaining a like-new lustre for years.

First, Trek frames are dipped into four different chemical baths for cleaning and corrosion-proofing. Then a thick primer coat is sprayed on. Finally, DuPont Imron hard enamel is applied using electrostatically-charged paint particles to ensure perfect adhesion.

The result must be flawless, in both performance and appearance, or it will never wear a Trek decal.

#### COMPONENTS: A MATCHED SET OF SENSIBILITIES.

In viewing the bicycle as a total entity, Trek has specified component groups which mesh logically with the frame's function.

Weight is always an important criterion. But so is reliability, interchangeability, styling, and of course, superior mechanical design.

FRAME MATERIAL YIELD STRENGTHS (PSI)

Minimal loss of tensile strength in Trek frames is achieved through Trek's low-temperature brazing methods.



## TREK RACING BICYCLES. BUILT FOR SPEED, VERY SLOWLY.

Long weeks sitting at a drawing board, devising better ways to build a machine that must weigh as little as possible, yet still must withstand the stress of hundreds of pounds of force.

Then hours behind a mask, skillfully wielding a torch that must make dozens of precision brazes in the assembly of a tight, responsive racing frame.

And finally, the painstaking finishing and assembly of the machine in such a way that the components don't just bolt on together, they practically harmonize.

But when the time is taken, and nothing is rushed, the result can be one of the few Americanmade bicycles to ever win the Coors Classic.

Just like a Trek did last year.

#### A LESSON IN ADVANCED GEOMETRY.

Naturally, a Trek racing frame is going to have some relatively acute frame angles.

A short wheelbase for stiffness and acceleration. A steep head tube for riding close to the edge in corners and descents. And a well-pitched saddle angle to optimize body alignment. All of these variables are interdependent.

There is more to the art, however.

Beyond all proportions, a Trek design must provide an almost synergetic link between cycle and cyclist. A balance of forces and function that will return every ounce of energy and sweat invested. Regardless of whether your style leans towards rhythmic climbing or straightout hammering.

Reaching this goal is Trek's highest ambition.

#### FAST COMPANY.

This year, Trek's line of high-performance racing bikes includes 6 models for every cyclist at every level of USCF or Triathlon competition.

Because of their response and extra stiffness, however, they are also the bicycles of choice for those athletes starting to hone their cycling skills, including the great number of people who are hanging up their jogging shoes for a better, less bone-jarring workout.

This wide-selection of racing bikes also makes extensive use of the most widely-acclaimed tubing. Together with a carefully chosen group of racing equipment known for their precision, their consistency and their ability to bounce back from the occasional spill.

New for this year, the Trek 460 offers true short-wheelbase racing geometry together with some very lightweight components, including a featherweight price-tag. Also features new Shimano quick-shifting derailleurs, Z-505 narrow alloy presta rims and high-pressure tires. An excellent starting point for the rider interested in serious training or the competitive athlete who's new to cycling.



The new SR asymmetrica crankset



Black-accent short-reach brakeset reacts swiftly and surely.



Finally, a racing bike for under \$500 that won't get laughed off the starting line. The 560 was designed for fast club riding, triathlons, or Category IV racing. It boasts a genuine Reynolds 501 racing frame, which meshes perfectly with a group of all-alloy racing componentry—including SR's newly styled cranks, Aero handlebars and Matrix black-anodized wheels for lighter weight and lightning-quick reflexes.



Narrow-profile Aero Gran Compe sidepulls.



Sleek aero-style handlebars and brake levers.



A well-composed racing bicycle with contributions from the world's finest component makers. From England, Reynolds 531 frame tubing. From Italy, Campagnolo cranks and derailleurs with Modolo brakes. From France, Maillard's revolutionary Helicomatic freewheel-hub. And from the United States, an Avocet R-1 saddle, Matrix hard-anodized rims, and the Trek technology that puts it all together.



The 660's drivetrain: Campagnolo Nuovo Record



The 660's transmission Campagnolo's legendary quick-shifting design.



A high-performance Reynolds 531 road-racing frame equipped with Sun Tour's Superbe Pro componentry. Investment-cast lugs and bottom-bracket shell are utilized for superlative fit and finish. The addition of the new Avocet Turbo saddle and hard-coat tubular wheels with Wolber sew-ups give the 760 no serious competition at anywhere near the price.



Reynolds 531 fork blades and an investment-cast crown



SunTour's Superbe Pro group – streamlined, and efficient.



The same stiff, tightly-responsive frame as the Trek 760, but with Campagnolo's best Super Record gruppo bolted on. Fitted with Super Champion's "Aspen" tubular wheels and Wolber Pro 84 tires, the bicycle weighs in at just over 20 pounds. A bicycle capable of taking you all the way to Category I.



Close tolerance investmentcast bottom bracket shell



The 770 "gruppo" – nothing less than Campagnolo's Super Record throughout.

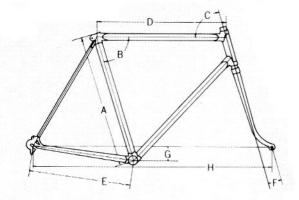




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#### TREK 1984 RACING FRAME GEOMETRY

Model	Size	A Seat Tube Length	B Seat Tube Angle	C Head Tube Angle	D Top Tube Length	E Chain Stay Length	F Fork Offset	G Drop	H Wheel Base
460	22.5"	56.0	73.5°	73.0°	56.0	41.5	4.5	7.2	99.7
560	22.5*	56.0	73.5°	73.0°	56.0	41.5	4.5	72	99.7
660	22.5"	56.0	73.5°	73.0°	56.0	41.5	4.5	7.2	99.7
760	58cm	57.0	74.0°	73.5°	57.0	41.2	3.8	7.2	99.2
770	58cm	57.0	74.0°	73.5°	57.0	41.2	3.8	7.2	99.2
170	58cm	57.0	74.0°	73.5°	57.0	41.2	3.8	72	99.2



#### RACING SPECIFICATIONS

#### 460

#### Frame:

Main Tubes: Tange 1000 Chro-Moly Double Butted Fork & Stays: Tange High Tension Headset: Tange MA-60 Black

Fork Crown: Tange CCL Semi-Sloping Bottom Bracket: Nikko w/Trek

Cable Guides Lugs: Nikko Short Point Seamless Drop-Outs: Suntour GS Forged Seat Post Binder Bolt: Sugino

Special Braze Ons: Top Tube Cable Guides 2 Water Bottle Mounts. Chain Hanger, Top Tube Pump Peg Frame Sizes: 19," 21," 22.5," 24," 25.5" Color: Race Blue

#### Components:

Crank: SR CRC-101 Forged Alloy

Pedals: SR-SP-150SE Alloy Quill Derail: Shimano Z505 Rear, Z206 Front Lever. Shimano Z-408

FW: Atom Helicomatic 13-24 6-sod Chain: Sedisport

Brakes: Dia Compe QS 400N Black w/Hooded Aero Levers

Bar/Stem: Belleri Racing/Belleri Aero Stem

Hubs: Atom Sport Helicomatic

Rims: Matrix Strada 13-20 Alloy Black Anodized Tires: Trek 700x25c Skinwall

Saddle: Avocet

Chain: Sedisport

Seat Post: SR-P5E Laprade Type Forged Alloy Extras: Lapize Toe Clips & Straps

#### 560

#### Frame:

Main Tubes: Reynolds 501 Cromalloy Double Butted Fork & Stays: Tange 2001 Mangallov

Headset: Stronglight B-10 Black

Fork Crown: Tange 1175 Aero Bottom Bracket: Nikko w/Trek Cable Guides

Lugs: Nikko Short Point Seamless Drop-Outs: Tange TR Forged w/Adjustors

Seat Post Binder Bolt: Sugino Special Braze Ons: Top Tube

Cable Guides, 2 Water Bottle Mounts, Chain Hanger, Top Tube Pump Peg, Shift Lever Bosses Frame Sizes: 19," 21," 22.5," 24," 25.5"

Color: Black

Special Braze Ons: Top Tube

#### Components:

Crank: SR CRC-101 Forged Alloy Pedals: SR SP-100 Black Alloy Quill Derail: Suntour Cyclone MK II Short Cage Rear, Cyclone MK II Front Lever: Suntour LD 3350 Braze-on FW: Atom Helicomatic 13-24

Brakes: Dia Compe AC 300G Aero Black w/Hooded Aero Levers Bar/Stem: Belleri Aero Alloy Hubs: Atom Sport Helicomatic QR

Alloy Rims: Matrix Strada 13-20 Allov Black Anodized

Tires: National Panaracer High Extra 700x25c Saddle: Avocet Racing I

Seat Post: SR P5 Laprade Forged Alloy

Extras: Lapize Toe Clips & Straps, Bottle & Blackburn Cage

#### 660

#### Frame:

Main Tubes: Reynolds 531-CS Double Butted Fork & Stays: Reynolds 531-CS Headset: Stronglight B-10 Black Bottom Bracket: Nikko w/Trek Cable Guides Lugs: Nikko Short Point Seamless Drop-Outs: Tange TR Forged

Fork Crown: 1175 Aero

w/Adjustors Seat Post Binder Bolt: Integral Cable Guides, 2 Water Bottle Mounts. Chain Hanger, Top Tube Pump Peg. Shift Lever Bosses Frame Sizes: 19," 21," 22,5," 24," 25,5'

#### Color: Race Red Components:

Crank: Campagnolo New Record 52/42

Pedals: SR SP-12 Aero

Derail: Campagnolo New Record Lever: Campagnolo New Record Braze-On

F.W.: Maillard 700 Helicomatic 13-24

6-spd Chain: Sedisport Silver Brakes: Modolo Speedy Black w/Hooded Black Levers Bar/Stem: SR World Custom/SR

Aerox Alloy Hubs: Maillard 700 Helicomatic QR

Rims: Matrix Strada 13-20 Anodic Black

Tires: National Panaracer High Extra 700x25c

Saddle: Avocet R-I Seat Post: SR P5 Laprade Forged Alloy

Extras: SR Aero Toe Clips/ Christophe Toe Straps, Bottle & Blackburn Cage

Rims: Wolber/Super-Champion

#### 760\*

Delrin

#### Frame:

Main Tubes: Reynolds 531P Double Butted

Fork & Stays: Reynolds 531P Headset: Stronglight A-9 Alloy Fork Crown: Tange C-14 Investment

Bottom Bracket: Trek Investment Cast w/Integral Cable Guides Lugs: Trek Investment Cast Seat Lug. Tange Cast Short Point

Drop-Outs: Campagnolo 1010B Seat Post Binder Bolt: Sugino

Special Braze Ons: Top Tube Cable Guides, 2 Water Bottle Mounts, Chain Hanger, Shift Lever Bosses, Top Tube Pump Peg

Frame Sizes: 50, 52, 54, 56, 58, 60.62cm Color Purole

\*Also available as a Frameset only.

#### Components:

Crank: Suntour Superbe CW-1000 52/42

Pedals: Suntour Superbe Pro PL-4000 Sealed Bearing Derail: Suntour Superbe Pro

Lever: Suntour Superbe Pro 3250 Braze-On

FW: Suntour New Winner Ultra 12-21 7-spd.

Chain: Sedisport Silver Brakes: Suntour Superbe Pro CB-3000 w/Hooded Levers Bar/Stem: Cinelli 64/Cinelli 1/A Hubs: Suntour Sprint S.F. Sealed Bearing QR

Aspen Hard Coat Tubular Tires: Wolber Neo Pro 260g Tubular Saddle: Avocet R-II Turbo Seat Post: SR P5 Laprade Forged Allov

Extras: Christophe Clips & Straps. Bottle & Blackburn Cage, Wolber Tubular Cement

#### 770\*

Main Tubes: Reynolds 531P Double Butted

Fork & Stays: Reynolds 531P Headset: Campagnolo Super Record Fork Crown: Tange C-14 Investment Cast

Bottom Bracket: Trek Investment Cast w/Integral Cable Guides Lugs: Trek Investment Cast Seat Lug. Tange Cast Short Point

Drop-Outs: Campagnolo 10108 \*Also available as a Frameset only. Seat Post Binder Bolt: Sugino

Special Braze Ons: Top Tube Cable Guides, 2 Water Bottle Mounts. Chain Hanger, Shift Lever Bosses, Top Tube Pump Peg Frame Sizes: 50, 52, 54, 56, 58, 60.62cm Color: Green

#### Components:

Crank: Campagnolo Super Record 52/42

Pedals: Campagnolo SL Black Derail: Campagnolo Super Record Lever. Campagnolo Record Braze-On F.W.: Suntour New Winner Ultra 12-21 7-snd.

Chain: Sedisport Silver Brakes: Campagnolo Super Record

Bar/Stem: Cinelli 64/Cinelli 1/R Hubs: Campagnolo Record. S.F. Rims: Wolber/Super Champion Aspen Hard Coat Tubular Tires: Wolber Pro 84 230g Tubulars Saddle: Avocet Racing II Turbo

Seat Post: Campagnolo Super Record Extras: Campagnolo Alloy Toe Clips, Binda Super Straps, Bottle & Blackburn Cage, Wolber

#### 170\*

Main Tubes: Reynolds 753R Double Butted Fork & Stays: Reynolds 753R Headset: Campagnolo Super Record Fork Crown: Tange C-14 Investment Cast

Bottom Bracket: Trek Investment Cast w/Integral Cable Guides Lugs: Trek Inv. Cast Seat Lug, Tange Short Point

Drop-Outs: Campagnolo 1010B Seat Post Binder Bolt: Sugino

Special Braze Ons: Top Tube Cable Guides, 2 Water Bottle Mounts, Shift Lever Bosses, Chain Hanger, Top Tube Pump Peg Frame Sizes: 50, 52, 54, 56, 58,

Color: Special \*Also available as a Frameset only

60.62 cm

#### Components:

Crank: Campagnolo Super Record w/Record BB 52/42 Pedals: Campagnolo Super Record Titanium Derail: Campagnolo Super Record

Lever: Campagnolo Record Braze-On

F.W.: Campagnolo Titanium/Alloy 12-20 6-speed Chain: Sedisport Silver Brakes: Campagnolo Super Record

Bar/Stem: Cinelli VIP Suede Covered/Cinelli 1R Hubs: Campagnolo Record S.F. w/Quick Release

Tubular Cement

Tires: Not Included Saddle: Cinelli VIP Suede Covered Seat Post: Campagnolo Super Record Extras: Campagnolo Alloy Clips & Binda Super Straps, Bottle & Blackburn Cage, VIP Tubular Bag

Rims: Not Included

Trek bicycles consist of thousands of component parts and materials made by Trek or purchased from sources around the world. Changes in customer demand or availability occasionally necessitate temporary or permanent substitution of parts specified. If substitution is made, the new parts will be of comparable or superior quality and performance to those originally specified. Every link bicycle is equipped with safety reflectors required by federal faw. All specifications are subject to change without notice