
BRIDGESTONE

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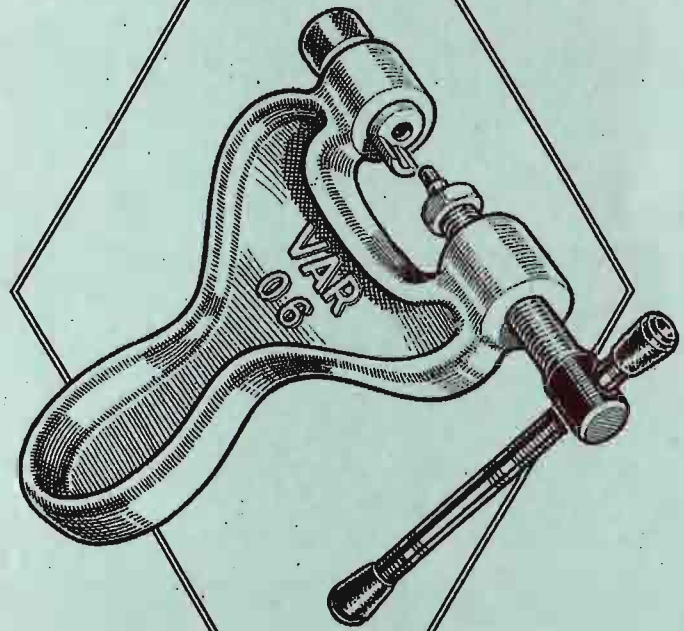



# Assembly Manual 1993

# INTRODUCTION

Bridgestone bikes are a little different from other brands. This manual is intended to supplement your own shop assembly guidelines and help you focus on the small but important details that, with your care, will make your Bridgestone bikes ride and feel better from the first test ride.

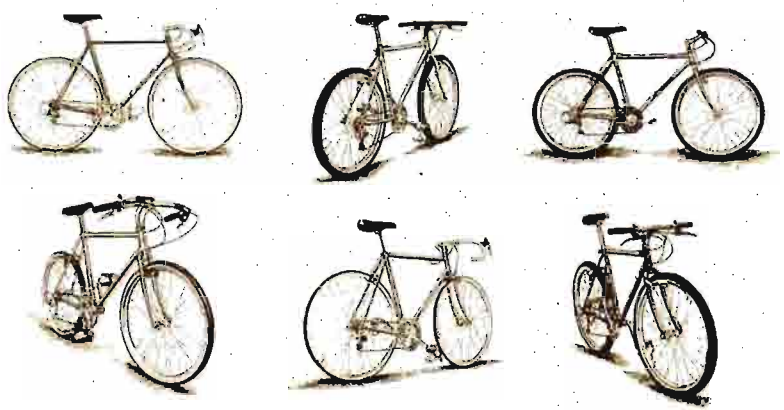
In addition to set-up tips, we have included a lot of space for your notes. We urge you to customize this manual to your personal or shop style and to compare notes with your fellow mechanics. We also recommend that you read the other publications on Bridgestone bikes: the point-of-purchase consumer brochures, the retail manuals written for your colleagues in the sales department, and, of course, the 1993 Bridgestone Bicycle Catalogue.

But don't stop there. Let us know what you think of this manual. If you discover an essential assembly procedure that we may have overlooked, please get on the phone or the fax and let us know. We want to share useful information with all our dealers.

Thanks for reading.

*Front and back cover illustrations of chain tool and spoke wrench courtesy of Var. Illustrator: Daniel Rebour*

# Set-Up Tips for All Models



*Some set-up tips apply to all Bridgestone models. We've listed them below. The "Notes" page at the right is open for your own general set-up guidelines.*

### Saddle and stem height

The saddle should be level. Its height depends on the size of the bike—smaller sizes tend to show less seatpost. Proper stem height also depends on the size of the bike and other elusive factors. Just make sure the stem and seatpost are inserted safely below the max-height line.

### Crank-arm tightening

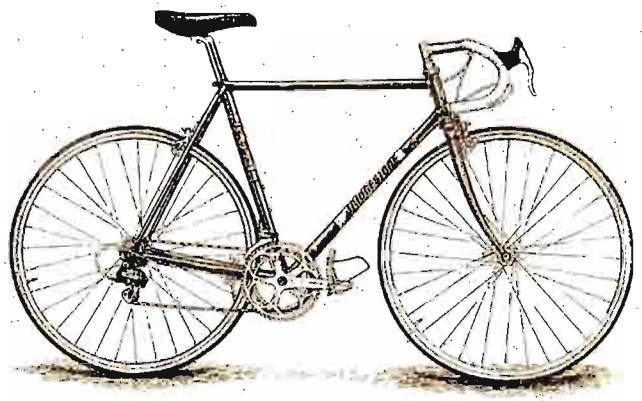
When you're re-installing crank arms after adjusting the bottom bracket, tighten the left arm first. Tightening the right one last will help the chainrings run "truer" (less risk of wobble).

### Spoke tension

Pre-stress the spokes, then re-tighten them (don't forget to re-true the wheel). We prefer the "screwdriver-handle method." To do this, stick the handle of a screwdriver (or use a QuickStik) between the spoke crossings closest to the hub flange (not counting the ones that cross on the flange). Push down hard, toward the hub. This "sets" the outer spoke bend so that when you re-tension the spokes, the wheels will stay truer longer. **Do this with all new wheels.**

# Notes

# Set-Up Tips, RB-1, RB-2



### Please don't file off the dropout eyelets!

For the first time ever, we've put single eyelets on the dropouts. Racing snobs scoff, but this harmless addition lets you mount racks or fenders. Give consumers the choice. (It used to be that all race bikes were this practical).

### Handlebar adjustment

The handlebars should be angled down very slightly, so that an imaginary line from the lower portion of the drops intersects the seatstays between the rear brake and seat cluster.

### Pedals

The RB-1/8 comes with Shimano Ultegra clipless pedals. No problem setting these up; just be sure to save the cleats in case the customer does not already have Look-compatible shoes. The RB-1/7 comes with MKS aluminum track pedals. Be sure to use the stock Christophe steel toe clips and MKS laminated leather toe straps.

# Notes

# Set-Up Tips, XO-1

### Handlebars

Flip the bars over. Someone goofed at the factory. Sorry.

### Brake levers

Mount the brake levers so the rubber tips are 12cm apart and the levers are nearly flat (on the same plane with the bars).

### Bar padding

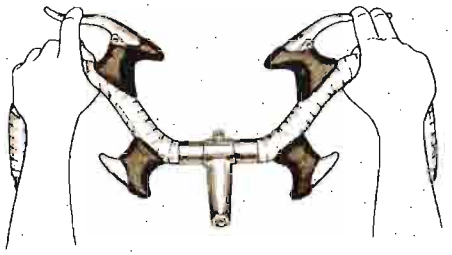
Consider adding padding, either on top of the rearmost portion of the bar or inside the curve, or both. We've never found additional padding necessary, but if someone wants it, the green "leaves of banana" that come in the box are insufficient. Use light closed-cell foam or halved mountain bike grips. Tape over the padding and see if anyone even notices.

One way to customize your Moustache Handlebars is to take this tip from a guy in Florida: Cut short, two-inch sections of PVC pipe in half and fit and tape them in the large radius of the Moustache Handlebar. This is a great tip for those who like Modolo-style comfort without the unattractive Modolo-style flat spot.

### Handlebar angle

We like the rearmost portion to be either dead flat or angled slightly down.

# More Suggestions For The XO-1

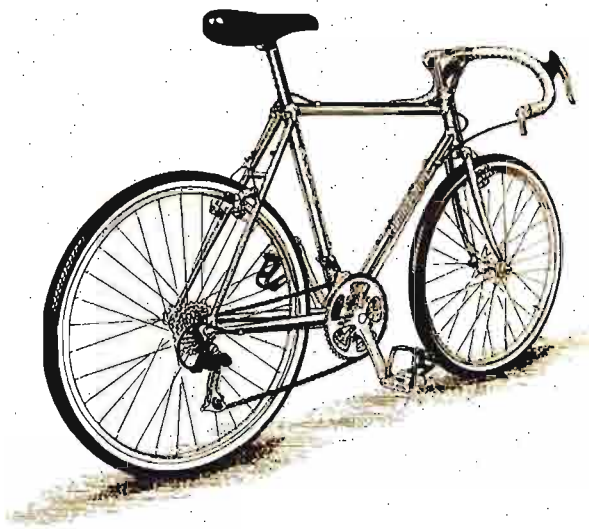


## Fine-tuning

*Because the XO-1 is not a conventional bike, there are a few details that you may have to fine-tune. We've listed a few below.*

| Problem | Solution |
|---|---|
| Rider's knees hit dummy levers | Remove them, saving 8.4 ounces, or take out the metal stub (use a 2mm Allen key) and saw it off. We mention this in the catalogue. |
| Rider wants lower gearing than the stock 38 x 28 offers | Add a third chainring and change the rear cluster to a 13-30 or 13-32. Install a 121.5mm spindle and a long-cage front and rear derailleur. For best shifting, try to keep the chainring spread to no more than 22t. (A Ritchey crank will work on a 119mm spindle.) |
| Rider needs a different stem length or height | In the case of a lower stem, no problem: Just use a high-quality road stem with a 26mm bore diameter. If your customer needs a taller or shorter stem, you don't have many choices, since most taller stems are bored for 25.4mm bars, and we can't officially recommend the simple, obvious solution: stretching. |

# Set-Up Tips, XO-2



### Nitto bars

Cut 15 to 20mm off the Nitto handlebars. The "retrieve" portion of the drop is a bit long for use with bar-end shifters.

### Moustache bars

If the rider wants Moustache Handlebars, use the same ones as on the XO-1. The XO-3's version of the Moustache bars won't accept bar-end shifters. The XO-2's stem has a 25.4mm clamp diameter, and the Moustache bars are 26.0, so it's best to switch to a stem with a 26mm clamp diameter, too. Although "stretching" the stem would also work, we can't officially recommend it here.

### Tires

Consider setting a model up with different tires—something radically different from the stock Ritchey 1.4-inch slick. Get some 1.1 -inch Ritchey Crossbite tires, or any 1.9-inch knobby. Remember how a simple change of tires dramatically extends the bike's range. Show this!

# Notes

# Set-Up Tips, XO-3

☐ Grips
Cut off 10mm or so of grip and scooch everything back (toward the grip). This creates more room for the hands in the forward curve of the bar.

☐ Shifters
Mount the shifters almost vertically, and mount the brake levers on the side ("side-mounts").

☐ Dummy levers or bar ends
Position the dummy levers so that the rubber tips are about 12cm apart and the levers are just about flat (horizontal), on the same plane with the bars. Consider installing bar ends to add a forward aero position.

☐ Cable ferrule
Did you toss the plastic front brake cable ferrule and use the metal one? Do! (We supplied a replacement.)

# Notes

# Set-Up Tips, XO-4

### Grips

Cut off 10mm or so of grip and scooch everything back (toward the grip). This creates more room for the hands in the forward curve of the bar.

### Shifters

Mount the shifters almost vertically, and mount the brake levers on the side ("side-mounts").

### Dummy levers or bar ends

If you have a spare pair of dummy levers (perhaps from an XO-1 or XO-3), mount them on the inner portion of the forward curve. You could also do something creative with bar ends—mount them inboard to provide additional forward hand positions.

### Cable ferrule

Did you toss the plastic front brake cable ferrule and use the metal one? Do! (We supplied a replacement.)

# Notes

# Set-Up Tips, XO-5

### Moustache bars

You must have one set of Moustache Handlebars or drop handlebars or Priest handlebars around. Why not set up one of your XO-5s with these in place of the Arc bars?

### Dummy levers or bar ends

If you have a spare pair of dummy levers (perhaps from an XO-1 or XO-3), mount them on the forward curve of the Arc bars. It works great. An alternative is adding bar ends to provide some forward hand positions.

### Cable ferrule

Did you toss the plastic front brake cable ferrule and use the metal one? Do! (We supplied a replacement.)

### Special commuting set-up

In the winter, set up at least one model with full fenders, panniers and all that winter commuter stuff. Show just how versatile these bikes can be, and they just might attract more interest.

# Notes

# Set-Up Tips, MB-1, MB-2

### Handlebar exchange

Set up one model with the same bar/shifter/brake lever arrangement as the XO-1—but use a shorter, taller stem (this may not be easy to find). If you want to get really custom, cut short, two-inch sections of PVC tubing in half and tape them in place in the handlebar radius. This makes an already comfortable handlebar luxurious.

### Forks and braking

The fork, by design, is more flexible (and more shock-absorbing) than oversized forks, so it chatters a bit if the rim gets sticky. To keep that from happening, make sure the brake pads are toed in sufficiently and then sand the rims to remove all stickum.

### Angle adjustment: brake and shift levers

Angle the stock brake levers and shift levers to about 50 degrees from the horizontal. Angling the shifter this way allows your thumb to move naturally as you push the lever and keeps your wrist straight as you squeeze the brake lever. And besides, if you don't angle the brake levers, you can't angle the shifters.

# Notes

# Set-Up Tips, MB-3, MB-4

### Handlebar exchange

Set up one model with the same bar/shifter/brake lever arrangement as the XO-1—but use a shorter, taller stem (this may not be easy to find). If you want to get really custom, cut short, two-inch sections of PVC tubing in half and tape them in place in the handlebar radius. This makes an already comfortable handlebar luxurious.

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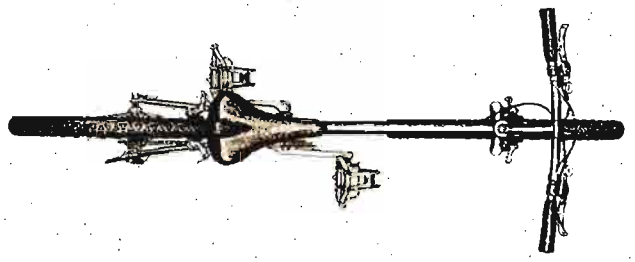
# Notes

# Set-Up Tips, MB-5, MB-6



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☐ Saddle

Put a fatter saddle on either of these bikes. Rob one from an XO-4 or 5 or from inventory. Although the stock saddle is wider than a standard racing saddle and is pretty soft, some of your customers are bound to want a cushier saddle, and we'd hate for the saddle to be the reason they bought something else. Should these bikes come stock with fatter saddles? OK—next year they will.

# Notes

# Set-Up tips, BUB

### Shift lever

Mount the shift lever on the Priest handlebar so that the travel is nearly vertical. In other words, make it a "side-mount."

### Saddle position

Scooch the saddle as far back as possible on its rails. That spring saddle sits far forward on the post—good for triathletes, maybe, but not for the BUB's rider.

### Spokes and wheels

Be sure to true the wheels and tighten the spokes. The spokes seem particularly wobbly.

# Notes

# End Notes: Assembly

### How long should it take to assemble a bike?

Between 1 ½ hours and 2 hours—minimum. Don't hesitate to charge for your labor, don't apologize for it, and do point it out. If you have a consistent assembly procedure, we're interested in hearing about it. Write to us.

### Why isn't more assembly done at the factory?

It's too expensive for what you get. Overseas labor isn't as cheap as it used to be, and it's part of the manufacturer's cost that gets increased with freight, insurance and import duty between the factory and the port. Bicycle manufacturing and bicycle components are not sophisticated enough yet for the kind of assembly reliability and precision that, say, the electronics industry has mastered. For instance, perfect bottom bracket adjustment is practically impossible on an assembly line—it takes too long.

### Note regarding 90-percent assembly:

You are a bicycle mechanic. This is an important job, and requires skill and time far beyond that which any factory in Japan, Taiwan, India, China, or Indonesia can spend. It is hard to resist applauding 90-percent assembly, true, but consider this: If 90 percent is good, is 100 percent better? And then you would do—what?

Our bikes, like any good bike, need the care only a competent and caring mechanic can give. We encourage you to respect your profession by giving each bike your best. You are the last link in the chain, and, in many ways, the most important one.