

3. Fit

NOTE: Correct fit is an essential element of bicycling safety, performance and comfort. Making the adjustments to your bicycle which result in correct fit for your body and riding conditions requires experience, skill and special tools. Always have your dealer make the adjustments on your bicycle; or, if you have the experience, skill and tools, have your dealer check your work before riding.

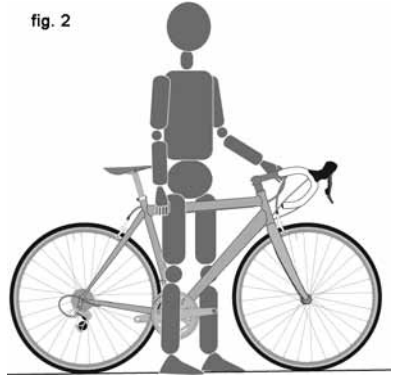
⚠ WARNING: If your bicycle does not fit properly, you may lose control and fall. If your new bike doesn't fit, ask your dealer to exchange it before you ride it.

A. Standover height

1. Diamond frame bicycles

Standover height is the basic element of bike fit (see fig. 3). It is the distance from the ground to the top of the bicycle's frame at that point where your crotch is when straddling the bike. To check for correct standover height, straddle the bike while wearing the kind of shoes in which you'll be riding, and bounce vigorously on your heels. If your crotch touches the frame, the bike is too big for you. Don't even ride the bike around the block. A bike which you ride only on paved surfaces and never take off-road should give you a minimum standover height clearance of two inches (5 cm). A bike that you'll ride on unpaved surfaces should give you a minimum of three inches (7.5 cm) of standover height clearance. And a bike that you'll use off road should give you four inches (10 cm) or more of clearance.

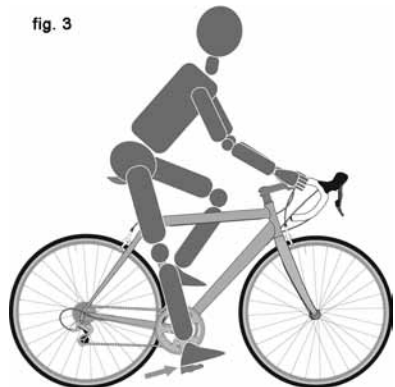
fig. 2



2. Step-through frame bicycles

Standover height does not apply to bicycles with step-through frames. Instead, the limiting dimension is determined by saddle height range. You must be able to adjust your saddle position as described in **B** without exceeding the limits set by the height of the top of the seat tube and the "Minimum Insertion" or "Maximum Extension" mark on the seat post.

fig. 3



B. Saddle position

Correct saddle adjustment is an important factor in getting the most performance and comfort from your bicycle. If the saddle position is not comfortable for you, see your dealer.

The saddle can be adjusted in three directions:

1. Up and down adjustment. To check for correct saddle height (fig. 3):

- sit on the saddle;
- place one heel on a pedal;
- rotate the crank until the pedal with your heel on it is in the down position and the crank arm is parallel to the seat tube.

If your leg is not completely straight, your saddle height needs to be adjusted. If your hips must rock for the heel to reach the pedal, the saddle is too high. If your leg is bent at the knee with your heel on the pedal, the saddle is too low.

Ask your dealer to set the saddle for your optimal riding position and to show you how to make this adjustment. If you choose to make your own saddle height adjustment:

- loosen the seat post clamp
- raise or lower the seat post in the seat tube
- make sure the saddle is straight fore and aft
- re-tighten the seat post clamp to the

recommended torque (Appendix D or the manufacturer's instructions).

Once the saddle is at the correct height, make sure that the seat post does not project from the frame beyond its "Minimum Insertion" or "Maximum Extension" mark (fig. 4).

NOTE: Some bicycles have a sight hole in the seat tube, the purpose of which is to make it easy to see whether the seat post is inserted in the seat tube far enough to be safe. If your bicycle has such a sight hole, use it instead of the "Minimum Insertion" or "Maximum Extension" mark to make sure the seat post is inserted in the seat tube far enough to be visible through the sight hole.

If your bike has an interrupted seat tube, as is the case on some suspension bikes, you must also make sure that the seat post is far enough into the frame so that you can touch it through the bottom of the interrupted seat tube with the tip of your finger without inserting your finger beyond its first knuckle. *Also see NOTE above and fig. 5).*

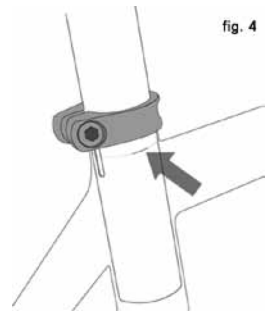


fig. 4



fig. 5

⚠ WARNING: If your seat post is not inserted in the seat tube as described in B.1 above, the seat post may break, which could cause you to lose control and fall.

2. Front and back adjustment. The saddle can be adjusted forward or back to help you get the optimal position on the bike. Ask your dealer to set the saddle for your optimal riding position and to show you how to make this adjustment. If you choose to make your own front and back adjustment, make sure that the clamp mechanism is clamping on the straight part of the saddle rails and is not touching the curved part of the rails, and that you are using the recommended

torque on the clamping fastener(s) (Appendix D or the manufacturer's instructions).

3. Saddle angle adjustment. Most people prefer a horizontal saddle; but some riders like the saddle nose angled up or down just a little. Your dealer can adjust saddle angle or teach you how to do it. If you choose to make your own saddle angle adjustment and you have a single bolt saddle clamp on your seat post, it is critical that you loosen the clamp bolt sufficiently to allow any serrations on the mechanism to disengage before changing the saddle's angle, and then that the serrations fully re-engage before you tighten the clamp bolt to the recommended torque (Appendix D or the manufacturer's instructions).



WARNING: When making saddle angle adjustments with a single bolt saddle clamp, always check to make sure that the serrations on the mating surfaces of the clamp are not worn. Worn serrations on the clamp can allow the saddle to move, causing you to lose control and fall.

Always tighten fasteners to the correct torque. Bolts that are too tight can stretch and deform. Bolts that are too loose can move and fatigue. Either mistake can lead to a sudden failure of the bolt, causing you to lose control and fall.

Note: If your bicycle is equipped with a suspension seat post, the suspension mechanism may require periodic service or maintenance. Ask your dealer for recommended service intervals for your suspension seat post.

Small changes in saddle position can have a substantial effect on performance and comfort. To find your best saddle position, make only one adjustment at a time.



WARNING: After any saddle adjustment, be sure that the saddle adjusting mechanism is properly seated and tightened before riding.

A loose saddle clamp or seat post clamp can cause damage to the seat post, or can cause you to lose control and fall. A correctly tightened saddle adjusting mechanism will allow no saddle movement in any direction. Periodically check to make sure that the saddle adjusting mechanism is properly tightened.

If, in spite of carefully adjusting the saddle height, tilt and fore-and-aft position, your saddle is still uncomfortable, you may need a different saddle design. Saddles, like people, come in many different shapes, sizes and resilience. Your dealer can help you select a saddle which, when correctly adjusted for your body and riding style, will be comfortable.



WARNING: Some people have claimed that extended riding with a saddle which is incorrectly adjusted or which does not support your pelvic area correctly can cause short-term or long-term injury to nerves and blood vessels, or even impotence. If your saddle causes you pain, numbness or other discomfort, listen to your body and stop riding until you see your dealer about saddle adjustment or a different saddle.

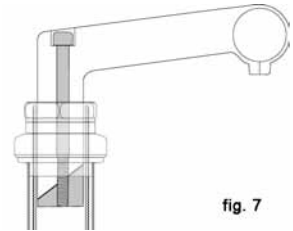
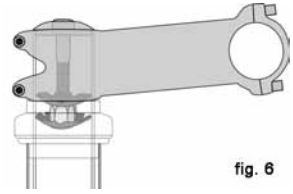
C. Handlebar height and angle

Your bike is equipped either with a “threadless” stem, which clamps on to the outside of the steerer tube, or with a “quill” stem, which clamps inside the steerer tube by way of an expanding binder bolt. If you aren’t absolutely sure which type of stem your bike has, ask your dealer.

If your bike has a “threadless” stem (fig. 6) your dealer may be able to change handlebar height by moving height adjustment spacers from below the stem to above the stem, or vice versa. Otherwise, you’ll have to get a stem of different length or rise. Consult your dealer. Do not attempt to do this yourself, as it requires special knowledge.

If your bike has a “quill” stem (fig. 7) you can ask your dealer to adjust the handlebar height a bit by adjusting stem height.

A quill stem has an etched or stamped mark on its shaft which designates the stem’s “Minimum Insertion” or “Maximum Extension”. This mark must not be visible above the headset.



⚠ WARNING: A quill stem’s Minimum Insertion Mark must not be visible above the top of the headset. If the stem is extended beyond the Minimum Insertion Mark the stem may break or damage the fork’s steerer tube, which could cause you to lose control and fall.

⚠ WARNING: On some bicycles, changing the stem or stem height can affect the tension of the front brake cable, locking the front brake or creating excess cable slack which can make the front brake inoperable. If the front brake pads move in towards the wheel rim or out away from the wheel rim when the stem or stem height is changed, the brakes must be correctly adjusted before you ride the bicycle.

Some bicycles are equipped with an adjustable angle stem. If your bicycle has an adjustable angle stem, ask your dealer to show you how to adjust it. Do not attempt to make the adjustment yourself, as changing stem angle may also require adjustments to the bicycle’s controls.

⚠ WARNING: Always tighten fasteners to the correct torque. Bolts that are too tight can stretch and deform. Bolts that are too loose can move and fatigue. Either mistake can lead to a sudden failure of the bolt, causing you to lose control and fall.

Your dealer can also change the angle of the handlebar or bar end extensions.

⚠ WARNING: An insufficiently tightened stem clamp bolt, handlebar clamp bolt or bar end extension clamping bolt may compromise steering action, which could cause you to lose control and fall. Place the front wheel of the bicycle between your legs and attempt to twist the handlebar/stem assembly. If you can twist the stem in relation to the front

wheel, turn the handlebars in relation to the stem, or turn the bar end extensions in relation to the handlebar, the bolts are insufficiently tightened.

D. Control position adjustments

The angle of the brake and shift control levers and their position on the handlebars can be changed. Ask your dealer to make the adjustments for you. If you choose to make your own control lever angle adjustment, be sure to retighten the clamp fasteners to the recommended torque (Appendix D or the manufacturer's instructions).

E. Brake reach

Many bikes have brake levers which can be adjusted for reach. If you have small hands or find it difficult to squeeze the brake levers, your dealer can either adjust the reach or fit shorter reach brake levers.



WARNING: The shorter the brake lever reach, the more critical it is to have correctly adjusted brakes, so that full braking power can be applied within available brake lever travel. Brake lever travel insufficient to apply full braking power can result in loss of control, which may result in serious injury or death.