R&D Q&A

CUTTING CARBON NUMBER FIVE

CLEAN CUT CARBON

So you want to take a little width off those carbon handlebars? You cut down your old aluminum bars — no problem — but you spent a bundle on those new carbon bars. Here are some tips for safely trimming off a little exotic material from your handlebars…or your seatpost.

Carbon tubing (i.e. handlebars, seatpost, fork steerer tubes, etc.) can be quite easily cut using a standard hacksaw. There are, however, some precautions that must be taken to prevent damage to the component, and harm to yourself.

Here's a step-by-step guide to carbon handlebar trimming. If you don't feel confident following these instruction, there's no shame in taking your bar to a qualified bicycle mechanic. (You might want to take these directions along with you.)

STEP 1
You'll need a sharp, fine tooth blade (32 teeth per inch) appropriate for cutting metals.

STEP 2
Wrap the bar with several layers of masking tape in the area of the cut. This will ensure a clean cut with minimal unraveling of the carbon fibres.

STEP 3
Determine the amount of material to be removed. The cut line can be marked with a pen or pencil directly on the masking tape. Make sure you remove the same length of material from both ends of the bar. (Unless you like to lean to one side while your riding.)

"Double check your measurements! It's easier to measure twice than to buy a new bar twice."

STEP 4
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STEP 1



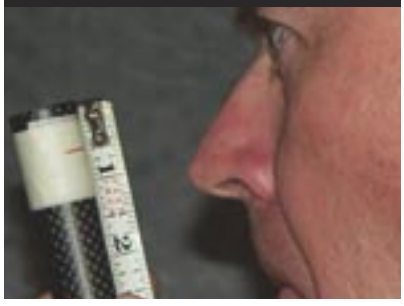
STEP 2



STEP 3



STEP 4



continued

CUTTING CARBON

STEP 5
For the best results the bar should be clamped securely in a vice for cutting. To accommodate this without cracking the bar, the bar should be held in a tubing fixture. You can make this fixture quite easily by boring a 7/8" hole in a 4" section of a 2" x 4" and then cutting the block in half as shown.

"When it comes to composite components, it is critical that any fixture that clamps them is free of sharp edges and burrs."

STEP 6
The two blocks can then be placed into a vice holding the bar firmly in place. Be careful not to overtighten the vice however, if you hear a crack, you're buying a new bar twice.

In a pinch, you can cut your bar while it is mounted on the bike. Make sure your handlebar is installed properly in your stem. Then secure the front wheel to the down tube or have someone straddle the wheel to steady the bar as you cut it.

STEP 7
Start cutting along your marked line with slow, smooth, even strokes. Take care not inhale any of the carbon dust! (As with any project of this nature, we recommend taking proper safety precautions. Please wear safety googles, gloves and a dust mask.) Take care at the end of the cut to avoid splintering the material.

STEP 8
After cutting, any burrs can be carefully sanded off with fine emery paper. Do not inhale or touch the shavings or dust.

STEP 9
Clean off the dust using a damp cloth and discard immediately.

Installation of bar ends
Be sure to follow manufacturer's recommendations concerning the installation of bar ends on carbon fiber handlebars. Some handlebars (including Easton's MonkeyLite riser bars) are not designed to accommodate bar ends. Easton's carbon fiber flat bars are designed with thicker material at the ends for clamping of bar ends. The riser bars do not have this extra material and will break if you mount bar ends.

continued

STEP 5



STEP 6



STEP 7



STEP 8



STEP 9



Partial post

Seat posts can be trimmed using the same step-by-step procedure as described for handlebars. There are, however, some additional considerations when shortening your seat post.

First, it is important that the seat post be inserted into the seat tube a MINIMUM of 70 mm (2.75 inches) for proper post life. Further, many frames require more than the minimum 70 mm of insertion.

The seat post must be inserted deep enough into the frame to ensure that the bottom of the seat post extends past the bottom edge of the top tube. (See FIGURE 1. This additional amount of insertion is necessary so that the frame is not overstressed at the top tube joint.

Smooth over Burrbreath

It is critical that any fixture that clamps carbon composite components is free of sharp edges and burrs. The integrity of a composite component can be seriously compromised by scratches and nicks.

With handlebars, it is important to inspect the stem carefully prior to installing the bar. Sharp edges and burrs can be easily removed using a fine emory paper.

With seatposts, it is important to inspect the seat tube carefully. Burrs and sharp edges can be sanded off with emory paper. When inserting the seat post into the seat tube, do not apply grease to the carbon quill. You should also clean any grease out of the seat tube. Because carbon does not tend to freeze and lock into the seat tube like aluminum and steel posts, grease is not necessary. In fact, applying grease to a carbon seat post might force you to overtighten the seat tube clamp in an effort to prevent the seat post from slipping. Finally, when you insert the post into the seat tube, do not use a rotating motion. This can scratch the seat post quill.

"Applying grease to a carbon seat post might force you to overtighten the seat tube clamp in an effort to prevent the seat post from slipping."

Carbon fiber is one of the strongest, lightest materials available for leading edge bicycle components today. If treated with care, it will Following these directions along with a little common sense will insure a long, dependable life from your high-performance composite components.

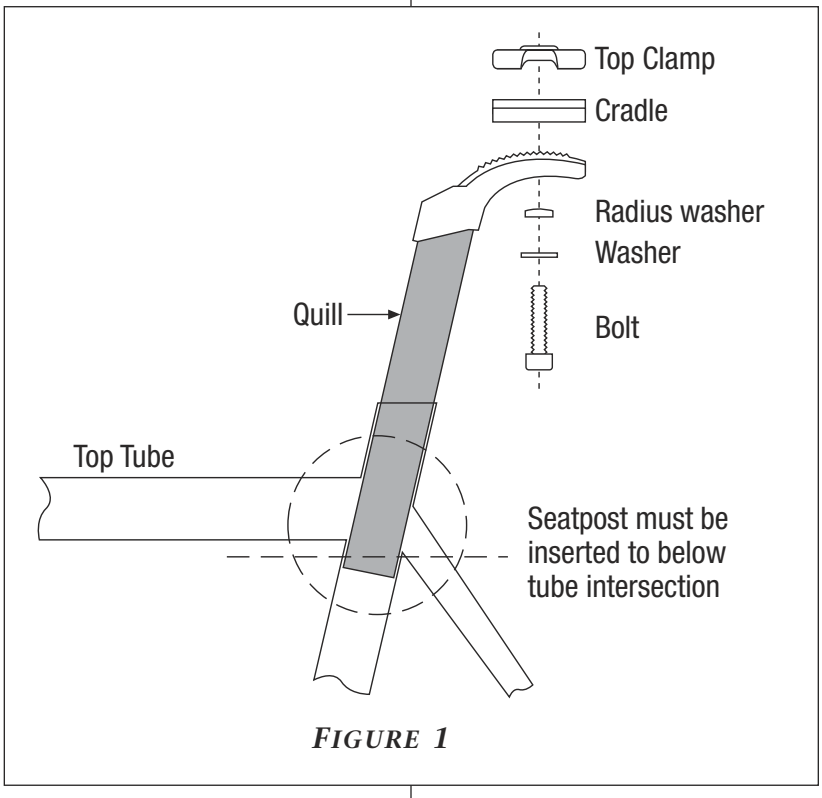


FIGURE 1