

Care and Maintenance Guide for Carbon Fiber Components

INTRODUCTION

It has come to our attention that bicycle dealers do not always receive important consumer information which is provided with individual components or accessories. The documents which should accompany each bicycle are developed to provide specific use, care and maintenance instructions for selected components but are often separated from the bicycle during handling and assembly. As a result, the information is not readily available to the consumer at the point of purchase. Additionally, we receive many calls from dealers requesting information about care and maintenance of carbon components as well as damage inspection of parts involved in accidents.

Your decision to use a high performance carbon fiber fork or component requires a thorough understanding of the requirement for a higher level of care and maintenance. The information in this guide is intended for use by consumers, technicians, dealers and OEM manufacturers. It is provided to remind users regarding basic care of carbon fiber components, proper inspection procedures and what to do if damage is found or suspected. These instructions are intended for use with Alpha-Q products but are generally applicable to other carbon fiber bicycles and components. Please use this information in addition to the instruction pamphlet that is provided with each Alpha-Q component. This information is supplemental to all other notices and/or instructions provided with Alpha-Q products and does not supercede or replace any other information received.

DESCRIPTION

Carbon fiber is being increasingly used in the manufacture of high performance products due to its stiffness, strength and light weight. Your carbon fiber component is a high performance product and requires special care and consideration. Unlike metal, carbon fiber does not permanently bend or dent when overloaded. As a result, it is possible for the component to be severely damaged even if there is no evidence of deformation.

You should carefully inspect your components for scratches, gouges, abrasion and/or damage prior to each ride. If you observe any structural damage, it is highly recommended that you take the component to your Alpha-Q dealer. Additionally, if your bike is involved in any type of accident during storage, transportation, handling or use, you must thoroughly inspect the components for damage. If you do not know how to perform this inspection, seek immediate assistance from your dealer. If any structural damage from either impact or excessive load is observed, you must replace the component. Failure to identify and correct structural damage could result in serious injury up to and including death. No attempt should ever be made to repair any type of structural damage. If structural damage is present, the bike should not be ridden and the component should be removed and replaced.

All bike components naturally undergo fatigue in use depending on rider weight, riding conditions and how often you ride the bike. Fatigue failure can occur when a relatively low load is repeated a very large number of times. Although carbon materials have excellent fatigue strength, it should be expected that lightweight, high performance components require more care in use, and frequent inspection for fatigue cracks, to guard against failure. It is good practice to replace your components periodically depending on type and frequency of riding, especially if the bike is used for endurance events and/or competitive racing. Seek advice from your dealer about appropriate replacement intervals.

FORK INSPECTION GUIDELINES AND PROCEDURE

Carbon fiber forks are more complex than many other bicycle components and require special consideration. The following information is being provided to familiarize the reader with critical fork inspection points and examples of what to look for during inspection. It does NOT cover all types of damage or potential locations where damage may be observed. The proper inspection of your fork or component is critical. If you are not confident in your ability to perform this inspection, you must get assistance from your Alpha-Q dealer. Customers should not assume that their fork will develop the described concern. To determine if the information applies, customers should contact their nearest Alpha-Q dealer.

NOTE: the fork must be completely removed from the bicycle and wheel in order to properly inspect the steerer tube and crown area.

Critical Inspection Points: (Refer to diagram for location)

- Steerer Tube: Stem clamp location and attachment point
- Steerer Tube: Upper head set area and compression ring/bearing location
- Steerer Tube: Crown race, bearing seat and lower head set area
- Crown Area: Brake hole area (front and rear)
- Crown Area: Tire clearance area
- Fork Legs: Leading edge
- Fork Legs: Trailing edge
- Fork Legs: Inner and outer fork leg surfaces
- Dropout Area: Dropout and dropout insertion area

What To Look For During Inspection

- Cracks in the steerer tube, crown area or anywhere on the body of the fork.
- Dents or large dings that distort or damage the fork surface.
- Splits or tears in the carbon fiber material.
- Opaque spots beneath the paint surface resulting from impact damage.
- Delamination or peeling of material.
- Bent or loose dropouts.
- Any rattle or noise coming from inside the fork.
- Scratches and abrasions that penetrate and/or cut the carbon fiber.

CAUTION: IF YOU NOTICE ANY STRUCTURAL DAMAGE, THE BIKE SHOULD NOT BE RIDDEN AND THE FORK OR COMPONENT SHOULD BE INSPECTED AND REPLACED AS NECESSARY.

IF YOU HAVE ANY DOUBTS ABOUT THE SAFETY OF YOUR FORK, OR ANY OTHER COMPONENT ON YOUR BIKE, REPLACE IT!

ALWAYS DESTROY ANY FORK OR COMPONENT THAT HAS BEEN REPLACED DUE TO SAFETY CONCERNS.

Alpha-Q can not accept any liability in the event of failure to comply with these instructions.

For additional information on Alpha Q products and complete installation instructions, visit www.alphaqbike.com.

Fork Diagram

