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**RECYCLABLE PACKAGING**

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***BONTRAGER***<sup>™</sup>

*Race X Lite*<sup>™</sup> Bar Ends • Part Number 263759



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# **BONTRAGER RACE X LITE BAR-ENDS**

## **Owner's Manual**

### **Table of contents**

|   |       |
|---|-------|
| <i>Introduction</i> .....                               | 1-2   |
| <i>Bontrager Race X Lite bar-ends</i> .....             | 3-7   |
| <i>Inspecting bar-ends</i> .....                        | 5     |
| <i>Adjusting bar-ends</i> .....                         | 6-7   |
| <i>Lubricating bar-ends</i> .....                       | 7     |
| <i>Installation instructions</i> .....                  | 8-9   |
| <i>Carbon compatibility</i> .....                       | 10-11 |
| <i>Carbon fiber composite inspection procedures</i> ... | 12-16 |
| <i>Limited Warranty</i> .....                           | 18-19 |

## **Introduction**

*Bontrager wheelsets and components are built to exceed the demands of professionals. Pooling vast resources, Bontrager is able to deliver cutting-edge performance without sacrificing strength or durability.*

*Top level riders, including World Champions, compete on the same product that you can purchase. Whether leading the pack into Paris or double-jumping in Vancouver, Bontrager has you covered.*

***Thanks for buying Bontrager.***

*Please read all of the supplied instructions thoroughly before using your Bontrager gear; the manual contains important safety and maintenance information. Also visit the website for important updates.*

*If you do not understand the information in this manual, or you have a question about your components or wheelset that this manual does not cover, consult your Bontrager dealer, or contact us.*

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*<http://www.bontrager.com>*

## **Bontrager Race X Lite bar-ends**

*These bar-ends (Figure 1) have ergonomic HCM carbon extensions which increase comfort and control.*

*These high-performance bar-ends offer these features:*

- *High-compression molded carbon construction: an incredibly strong structure also allowing for a comfortable, ergonomic shape*
- *Forged 6061 alloy clamp: strong, light, and safe for use on carbon handlebars*
- *Low weight: just 110 grams per pair*



*Figure 1: Bar-ends*

*Bar-ends provide a secondary hand position on a mountain-style handlebar. Bar-ends are designed for climbing only. Be careful when riding with bar-ends in brushy areas, or narrow trails. Never allow your bar-ends to come in contact with objects which may cause you to lose control of your bicycle.*

*If you crash your bike, remove the bar-ends and inspect the bar-ends and the ends of the handlebar. Replace the handlebar or bar-ends if there is any sign of damage.*



*Figure 2: Bar-end clamp bolt*

## ***Inspecting bar-ends***

*If you are unsure of the safety of your handlebar system, do not ride the bicycle; take the bicycle to your dealer for adjustments.*

*Once a month check your bar-ends. Push down on them to make sure they cannot rotate on the handlebars. If the bar-ends slip, follow the procedures in Adjusting bar-ends.*

*Ensure the bar-ends face forward and away from you, at an angle not less than  $15^{\circ}$  from parallel to the ground.*

*Check that all bolts are tight according to the torque specifications:*

- *Bar-end clamp bolts (Figure 2): 40-60 lb•in (4.5-6.8 Nm).*

*If your bicycle has any carbon fiber parts, also follow the carbon fiber composite inspection procedures on page 13.*

## *Adjusting bar-ends*

*Bar-end position, the angle of the bar-ends to the ground, is largely a matter of personal preference blending comfort, efficiency, and balance. Your hands should be comfortable, and able to easily grasp the bar-ends when either seated, or standing on the pedals.*

### **WARNING**

**Improperly adjusted or tightened bar-ends can cause you to lose control and fall. Make sure the bar-ends are positioned and tightened properly before riding the bike.**

## ***To adjust the angle of the bar-ends***

- 1. Loosen the handlebar clamp bolt(s) just enough that the bar-ends can be rotated on the handlebar.*
- 2. Position the bar-ends to the desired angle.*
- 3. Tighten as shown in Inspecting bar-ends.*

*If the bar-ends slip on the bar, remove the bar-ends, clean the handlebar and bar-ends with rubbing alcohol, and follow the inspection and adjustment procedures to re-position the bar-ends.*

## ***Lubricating bar-ends***

*Once a year, lubricate the bar-end clamp bolts.*

## **Installation instructions**

*These instructions explain the steps to install new Bontrager bar-ends. The correct installation of bar-ends is critical to the rider's safety, so this work should be performed only by an experienced mechanic. If you are not sure of your ability to correctly install these bar-ends, have them installed by your Bontrager dealer.*

*Check all parts for compatibility and condition before installing*

*The bar-ends interface the handlebar and grips. These parts must be compatible and the correct diameters for the bar-ends to function correctly. If you are not sure if these bar-ends are compatible with your bicycle, consult your dealer.*

*Make sure the handlebar is in good condition before installing bar-ends. Look for any dents, bending, or other deformation. Bar-ends can increase the force placed on a handlebar, and could cause it to fail.*

*If any component is made of carbon fiber composite, make sure the connecting parts are carbon-compatible (see page 11).*

## **To install bar-ends**

*1. Make room on the handlebar for the bar-ends.*

*Remove the grips, slide the controls, and reinstall the grips. If necessary, install new grips with open ends.*

*2. Remove any oil, grease, or dirt from the handlebar.*

*For carbon bars, clean with rubbing alcohol and a shop rag; clean until the rag shows no discoloration.*

*3. Slide the bar-ends onto the handlebar and set the angle position.*

*4. Install handlebar plugs.*

*5. Follow the inspection procedures and tighten the handlebar clamp bolts.*

## **Carbon compatibility**

*Carbon fiber composite can be damaged by sharp edges or clamping mechanisms which cause a point load, or a high pressure area. Before installing any carbon fiber part, or attaching any component to an existing carbon fiber part, follow these procedures to make sure the parts or components are carbon-compatible.*

*If the part is used, also make sure the part is in good condition by following the carbon fiber composite inspection procedures.*

*These procedures apply to any part interfacing a carbon part. As an example, a carbon handlebar interfaces the stem, brake levers, shift levers, and possibly bar-ends. All of the clamps of these parts should be inspected for carbon compatibility. If any part fails the inspection, either fix the problem or replace the part.*

### **Clamp style inspection**

*Make sure the clamp is carbon-friendly. The clamp must*

*draw together smoothly, and not pinch. The clamp bolt must be perpendicular to the radius of the clamped item, and should be as close to the surface of the clamped item as possible (Figure 3).*

### ***Surface inspection of clamping parts***

*Visually inspect the edges and surfaces of the interfacing parts for burrs or deformation that might mar the carbon part.*

*With your finger, again check the part. Any roughness or sharp edges could mar the carbon part.*



*Figure 3: Clamp bolt perpendicular to radius*

## **Carbon fiber composite inspection procedures**

*Carbon fiber is among the strongest materials used in bicycle manufacture. However, carbon has unique qualities, different from metal parts, and must be inspected carefully for damage.*

### **Inspecting carbon fiber composite parts**

*Unlike metal parts, carbon composite parts that have been damaged may not bend, bulge or deform; a damaged part may appear to be normal to a cursory glance.*

## **WARNING**

**A damaged carbon fiber part can fail suddenly, causing serious injury or death. Inspect a carbon fiber bicycle, or parts, for damage frequently. If you suspect a carbon fiber part is damaged, replace the part before riding or take the bike to your dealer for service.**

*After any high force load, like a crash, or other impact to your bicycle, thoroughly inspect all the parts of your bike, and use the following procedures to inspect carbon composite parts.*

- *Check for scratches, gouges, or other surface problems.*
- *Check the part for loss of rigidity.*
- *Check the part for delamination.*

*These tests may not be conclusive. The following tests are difficult to describe, so if you have any doubts about the integrity of a part, do not ride the bicycle.*

*Be very careful when handling carbon fiber parts that are suspected of damage. When a composite part is damaged, there is a possibility that individual fibers may be exposed. Carbon fibers are thinner than a human hair, but quite stiff. If the point of one of these fibers is pressed against your skin, it could pierce your skin like a needle.*

## *To check a part for surface problems (visual test)*

- 1. Clean the part thoroughly with a damp cloth.*
- 2. Look closely for problems:*
  - scratches*
  - gouges*
  - cracks*
  - loose fibers (which will appear like thin hairs)*
  - other surface flaws*

*If the part has any problems, do not ride the bike.*

*Take the bike to your dealer for replacement or further inspection.*

## *To check a part for loss of rigidity (flex test)*

*Use the part in a normal manner (without actually riding) while someone watches carefully for unexpected movement.*

*As an example, if you suspect a composite seatpost has been damaged, sit gently on the saddle while someone watches to see if the seatpost flexes.*

*If the helper sees the part flex unexpectedly, or if the part feels less rigid than it should be, do not ride the bike. Take the bike to your dealer for replacement or further inspection.*

## *To check a part for delamination (tap test)*

- 1. Clean the part thoroughly with a damp cloth.*
- 2. With a nickel or other coin, tap the part near any possible damage, and places where the part is known to be in good condition (or use a similar part).*
- 3. Listen carefully for variations in sound, especially a hollow sound, "dead" tone, or any sound indicating that the part is not solid.*

*If the part makes any noise other than a hard, solid tap sound, do not ride the bike. Take the bike to your dealer for replacement or further inspection.*



## **Limited Warranty**

*Bontager warrants each new Bontrager component or wheelset against defects in workmanship and materials:*

*For the lifetime of the original owner-*

- *Bontrager forks*

*For one year-*

- *All Bontrager parts*

*This warranty does not cover-*

- *Normal wear and tear*
- *Improper assembly*
- *Improper follow-up maintenance*
- *Installation of parts or accessories not originally intended for, or compatible with, the Bontrager components or wheelsets as sold*
- *Damage or failure due to accident, misuse, abuse, or neglect*
- *Labor charges for part replacement or changeover*

*This warranty is void in its entirety by any modification of the wheelset, or components.*

*This warranty is expressly limited to the repair or replacement of a defective item and is the sole remedy of the warranty. This warranty extends from the date of purchase, applies only to the original owner, and is not transferable. Bontrager is not responsible for incidental or consequential damages. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.*

*Claims under this warranty must be made through an authorized Bontrager dealer. Proof of purchase is required.*

*This warranty gives the consumer specific legal rights, and those rights may vary from place to place. This warranty does not affect the statutory rights of the consumer.*