

# HEADSHOK® CARBON LEFTY™ OWNER'S MANUAL SUPPLEMENT

Congratulations and thanks for your purchase of the new super-lightweight carbon fiber Lefty. The Carbon Lefty is the latest and most innovative single sided front suspension system in the world. Even lighter than the already impressive aluminum version of the Lefty fork, it is designed as a cross-country fork with 85mm of travel. It can also be adjusted to a more race-oriented 75mm or 65mm of travel using kit **HD010/**. Like the full line of HeadShok forks, it offers maximum adjustability and absolute steering precision.

***Please note** that this manual is meant to supplement, not replace, your complete bicycle owner's manual and the HeadShok Lefty Owner's Manual Supplement. Those two pieces contain valuable information regarding safe operation, adjustment, and maintenance of your bicycle and your Lefty fork, as well as more complete warranty information. Please read the bicycle owner's manual, the HeadShok Lefty Owner's Manual Supplement, and this supplement thoroughly before riding your bicycle, and keep all of these materials for future reference. If you did not receive all of these documents, please download and print them from the Cannondale website Tech Center ([www.cannondale.com/tech](http://www.cannondale.com/tech)) or call one of our customer service lines listed on the last page to have one sent to you.*

## REQUIRED TOOLS:

Metric hex wrench set  
Plastic mallet  
Park CRS-1 crown race setting tool  
Torque wrench  
Diagonal cutters  
Replacement ELO switch zip tie (**HD302/**)

## FORK PRE-RIDE CHECKLIST

Be sure to read and understand the Pre-Ride Checklists printed on the back cover of the Cannondale Owners Manual and in the HeadShok Lefty Owner's Manual Supplement. These include important information about the use of helmets and evaluation of brakes, stem bolt tightness, wheel attachment, and more.

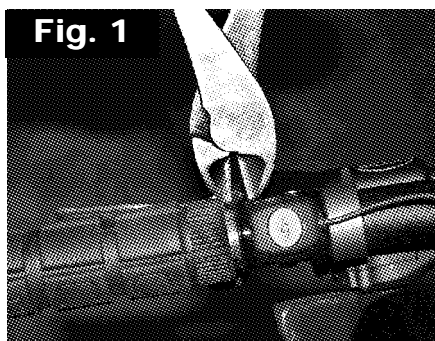
IF YOU HAVE ANY REASON TO SUSPECT THAT YOUR BICYCLE IS NOT FUNCTIONING PROPERLY, DO NOT RIDE IT. INSTEAD, HAVE IT INSPECTED BY YOUR AUTHORIZED CANNONDALE RETAILER.

## CARBON LEFTY REMOVAL AND INSTALLATION INSTRUCTIONS

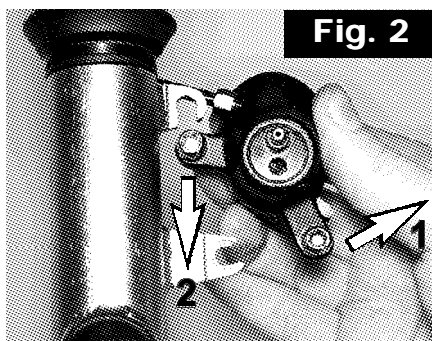
**CAUTION:** Do not attempt to loosen the small hex head bolts that screw into the carbon leg of the Carbon Lefty. These have been installed as part of the construction of the leg and are not meant to be removed under any circumstances. Removal of these fasteners will void your warranty and may result in the failure of the Carbon Lefty with risk of injury or death.

- Unlike all other HeadShok forks in which the lower headset bearing is pressed onto the bottom of the fork's steerer tube, installation of the Carbon Lefty requires that both headset bearings be pressed into the head tube before the fork can be installed.
- Because the Carbon Lefty's clamps are permanently attached to the Lefty's leg, removal and installation are different than for the standard aluminum Lefty. Additionally, the clamps cannot be individually replaced.

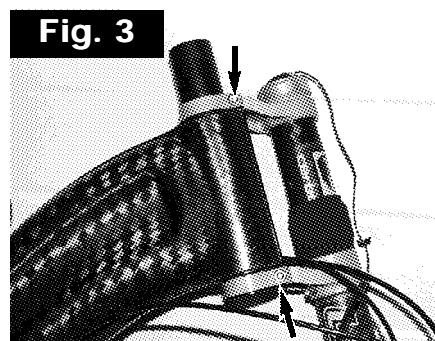
## CARBON LEFTY REMOVAL



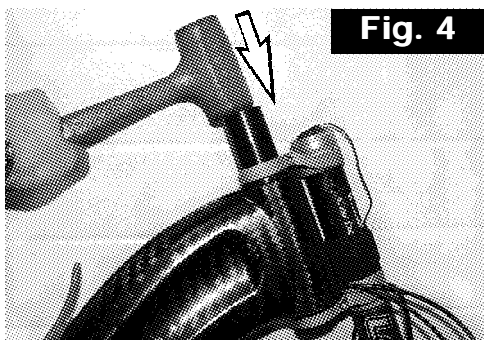
1. Carefully cut the zip tie that mounts the ELO switch to the handlebar using diagonal cutters. Then remove the switch from the handlebar. This will assure that the switch, wire, and ECU are not damaged by the removal of the stem from the bike. **See Fig. 1.**



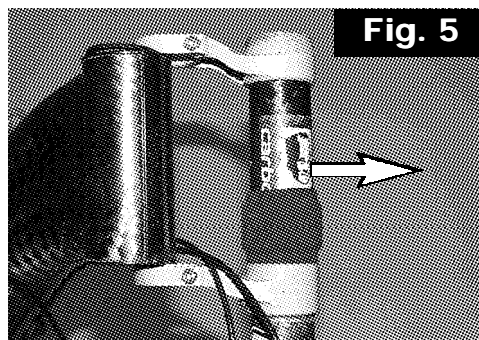
2. Remove the front wheel from the Lefty by first loosening (but not removing) the brake caliper mounting bolts and pivoting the brake caliper off of the fork mount. **See Fig. 2.** Then use a 5mm hex wrench to unscrew the front hub from the Lefty's axle spindle. For more details see the "FRONT WHEEL REMOVAL" section of the HeadShok Lefty Owner's Manual.



3. Using a 5mm hex wrench, loosen the two stem bolts and remove the stem from the top of the steerer tube. Then loosen both clamp bolts that attach the clamps to the steerer tube (which runs through the head tube of the bike). **See Fig. 3.**

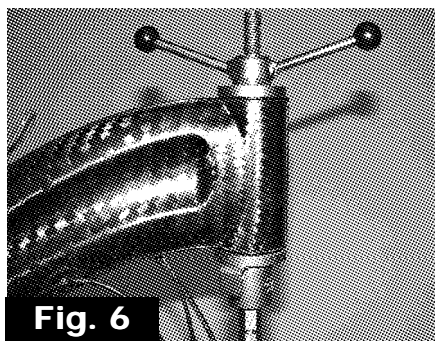


4. Using a plastic mallet, tap the steerer tube down through the head tube. If necessary, use the Park crown race setting tool CRS-1 to hammer it all the way out the bottom of the head tube. **See Fig. 4.**

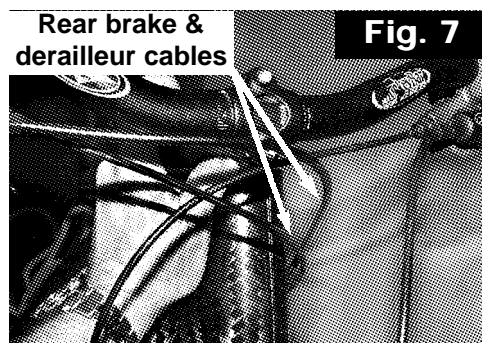


5. Pull the Carbon Lefty sideways off of the bike's head tube. **See Fig. 5.**

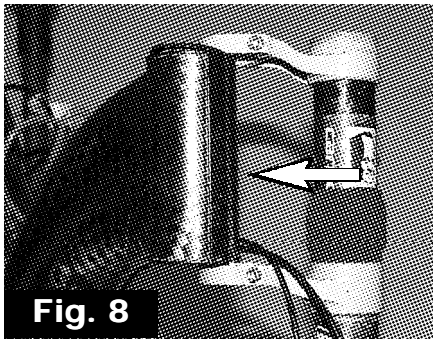
## CARBON LEFTY INSTALLATION



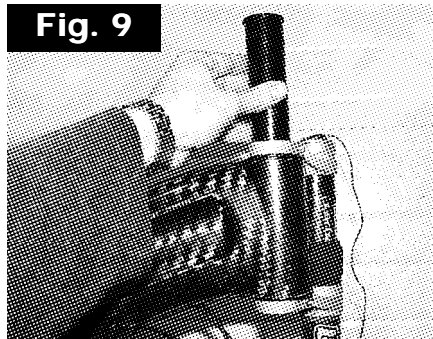
1. If they are not already installed, press both HeadShok headset bearings into the bike's head tube using a Park headset press HHP-1 or similar. **See Fig. 6.**



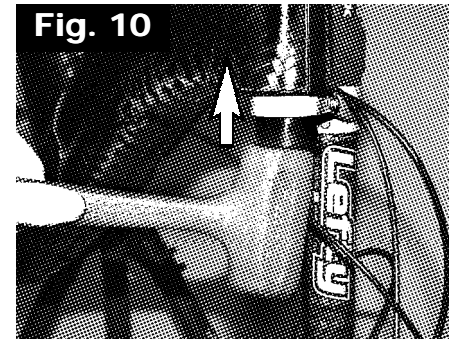
2. Before sliding the Carbon Lefty sideways onto the head tube, you need to make sure that the rear brake and derailleur cables are properly located along the left side of the head tube. **See Fig. 7.**



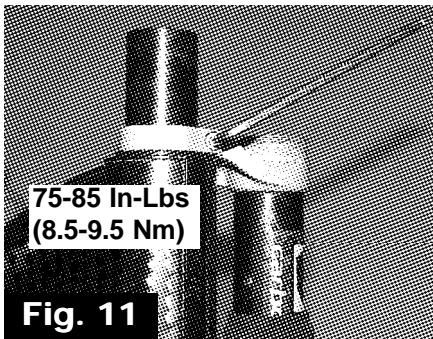
3. Position the headset bearing seal over the top bearing, and then slide the Carbon Lefty onto the head tube from the left side of the bike. See Fig. 8. Look through the head tube from the top of the bike to make sure that the clamps are aligned with the headset bearings and the headset bearing seal.



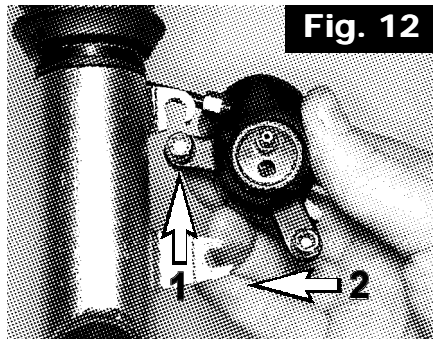
4. Use the top of the steerer tube to get everything correctly aligned if necessary. See Fig. 9. Also make sure that the clamp bolts are loose enough to easily allow the steerer tube to pass through the clamps.



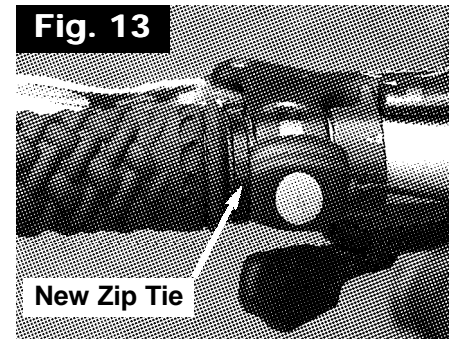
5. Install the steerer tube through the lower clamp and frame from the bottom of the head tube. Use the plastic mallet to tap it up until the flange on the bottom of the steerer tube rests flush against the bottom of the lower clamp. See Fig. 10. If it does not install easily, make sure that the clamp bolts are loose and that the clamps, headset bearings, and headset bearing seal are properly aligned.



6. Using the 5mm hex wrench, tighten the clamp bolts around the steerer tube to **75-85 In-Lbs (8.5-9.5 Nm)**. See Fig. 11. Then install the stem and tighten the two stem bolts to **77-94 In-Lbs (8.7-10.5 Nm)**. If the steerer tube has been properly installed, the top of the steerer tube will be flush with the top of the stem.



7. Install the front wheel to the Lefty by first using the 5mm hex wrench to screw the hub bolt into the axle spindle. Tighten to **133 In-Lbs (15 Nm)**. Then pivot the disc brake caliper onto the fork mount and tighten the caliper bolts to the brake manufacturer's recommended torque specification. See Fig. 12. For more details see the "FRONT WHEEL INSTALLATION" section of the HeadShok Lefty Owner's Manual supplement.



8. Install the ELO switch to the handlebar using a new zip tie (kit HD302/). See the "ELECTRONIC LOCK OUT SWITCH INSTALLATION" section of the HeadShok Lefty Owner's Manual supplement and Fig. 13. If the fork is being installed for the first time, it will first be necessary to install the battery and Electronic Control Unit (ECU) according to the "FORK SETUP" section of the HeadShok Lefty Owner's Manual supplement.

## HEAD TUBE ANGLE ADJUSTMENT

Unlike the aluminum Lefty, the clamps of the Carbon Lefty are permanently bonded in place. This means that no head tube angle adjustments are possible on the Carbon Lefty.

## FRONT TIRE CHOICE

If you elect to change the front tire to a non-stock model, it is very important that you make sure that there is at least 110mm of clearance between the bottom of the lower clamp and the tire before riding the bike. See Fig. 14. If there is not at least 110mm of clearance, a lower profile tire must be used.

**WARNING:** If the front tire used on a Lefty fork has less than 110mm of clearance between the tire and the bottom of the lower clamp, there is a risk of contact between the tire and the lower clamp when the fork is completely compressed. If such tire / clamp contact occurs while riding, the front wheel could stop suddenly and throw the rider over the handlebars, with risk of serious injury or death.

**WARNING:** It is important to note that the Carbon Lefty ELO fork requires a specific ELO cartridge and air cylinder. The ELO damping cartridge and air cylinder for a standard Lefty ELO fork will fit but must not be used. Only the screw-together Carbon Lefty-specific cartridge and air cylinder can be used. If the non-Carbon Lefty version of the ELO cartridge is used in a Carbon Lefty, the fork structure may be damaged and fork failure may occur, with attendant risk of serious injury or death.

*Please refer to the HeadShok Lefty Owner's Manual Supplement for more information regarding fork setup, ELO battery changes, lock out switch installation, proper cable routing, air spring preload adjustment, front wheel removal and installation, washing instructions, and HeadShok scheduled maintenance intervals.*

## GETTING IN TOUCH WITH CANNONDALE

For warranty related questions or for more information on this or any Cannondale product, please feel free to contact us.

USA and Canada: (800) BIKE-USA  
Europe (EC): (31) 541-573580  
Japan: (81) 722-99-9399  
Australia: (61) 2-9979-5851

<http://www.cannondale.com>  
[custserv@cannondale.com](mailto:custserv@cannondale.com)

**APPENDIX:** List of HeadShok Carbon Lefty specific replacement parts kits:

HD003/	Upper Collar
HD004/	Lower Collar
HD005/	Air Cylinder Saddle, fits into axle spindle
HD006/ *	Replacement Carbon Lefty damper, lightest damping
HD007/ *	Replacement Carbon Lefty damper, medium damping
HD008/ *	Replacement Carbon Lefty damper, heaviest damping
HD009/ *	Replacement Carbon Lefty air cylinder
HD010/	Carbon Lefty travel reduction kit (for 75 or 65 mm)
HD300/	Replacement ELO 9-volt lithium battery
HD301/	Replacement Electronic Control Unit (ECU)

\* As the warning above explains, the Carbon Lefty ELO fork requires a specific ELO cartridge and air cylinder.

**Fig. 14**

