



OWNERS MANUAL

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IMPORTANT

CONSUMER SAFETY INFORMATION

WARNING: RIDING A BIKE IS DANGEROUS. NOT PROPERLY MAINTAINING OR INSPECTING YOUR BIKE AND IT'S COMPONENTS IS EVEN MORE DANGEROUS. IT IS ALSO DANGEROUS TO NOT READ AND FOLLOW THESE INSTRUCTIONS.

1. NEVER REMOVE STEERER TUBE FROM CROWN. THIS IS A PRESSED IN PART. REMOVING IT WILL RENDER BOTH THE CROWN AND STEERER TUBE INOPERABLE.* MAKE SURE THE FORK CAPS AND ALL FORK HARDWARE (brake bolts, pinch bolts, etc.) ARE TIGHT BEFORE EACH RIDE.
2. DO NOT PERFORM ANY MODIFICATIONS OR ADJUSTMENTS THAT ARE NOT OUTLINED IN THIS MANUAL. SEE THE TUNING SECTION FOR MORE DETAILS.
3. INSPECT YOUR FORK BEFORE EVERY RIDE. INSPECT THE CROWN, TUBES, AND AXLE SEAT AREAS FOR ANY SIGNS OF FATIGUE, BENDING, CRACKING OR OTHER DAMAGE. IF YOU NOTICE ANY TYPE OF DAMAGE, DO NOT RIDE IT. RETURN IT TO YOUR DEALER OR TO WHITE BROTHERS FOR A COMPLETE INSPECTION AND NECESSARY REPAIR.
4. PERFORM ALL RECOMMENDED MAINTENANCE ACCORDING TO THE MAINTENANCE SECTION OF THIS MANUAL. FAILURE TO PERFORM MAINTENANCE COULD DRASTICALLY REDUCE THE FORK'S LIFE, PERFORMANCE AND CAUSE YOUR FORK TO BE A SAFETY HAZARD.
5. WHITE BROTHERS RECOMMENDS THAT YOU WEAR PROPER SAFETY EQUIPMENT EVERY TIME YOU RIDE, INCLUDING APPROVED BICYCLE HELMET. NEVER RIDE AT NIGHT WITHOUT LIGHTS.
6. ALWAYS USE GENUINE WHITE BROTHERS PARTS. USE OF AFTERMARKET REPLACEMENT PARTS AND UPGRADES VOIDS THE WARRANTY AND COULD CAUSE STRUCTURAL FAILURE.
7. WHITE BROTHERS FORKS ARE DESIGNED FOR OFF ROAD USE ONLY. THEY ARE NOT EQUIPPED WITH REFLECTORS FOR ROAD USE. IF YOU ARE GOING TO USE YOUR FORK ON THE ROAD, HAVE A DEALER OR MECHANIC INSTALL REFLECTORS THAT MEET THE CONSUMER PRODUCT SAFETY COMMISSION'S REQUIREMENTS.

8. ALL WHITE BROTHERS 20MM FORKS ARE DESIGNED BASED ON THE IS DISK BRAKE STANDARD. IF YOUR WHITE BROTHERS FORK HAS A 20MM THROUGH AXLE, IT IS CRITICAL TO SAFETY AND FUNCTION THAT YOU ONLY USE A DISK BRAKE PROPERLY DESIGNED FOR THE 20MM IS DISK BRAKE STANDARD. SIMPLY SPACING A NON 20MM DISK BRAKE TO WORK ON THE 20MM FORK MAY RESULT IN INSUFFICIENT THREAD ENGAGEMENT WHEN ATTACHING THE BRAKE. THIS CAN RESULT IN SERIOUS BODILY INJURY OR DEATH. ONLY USE DISK BRAKES PROPERLY DESIGNED FOR THE 20MM IS DISK BRAKE STANDARD.

**IF SERVICE BECOMES NECESSARY OR REMOVAL OCCURS, PLEASE CALL WHITE BROTHERS CUSTOMER SERVICE FOR PRODUCT EVALUATION AND DIAGNOSIS.*

INTRODUCTION

Thank you for purchasing your new White Brothers fork. Our forks are designed to help you perform at your absolute peak. Your new White Brothers fork has oil damping and is air sprung for light weight performance. The air spring and damper is set stock to satisfy a wide range of rider weights and riding styles. Fine tuning can be easily accomplished by changing air pressure and external damper settings. See the tuning section for details. Steering accuracy is improved over conventional MTB forks by utilizing superior materials and design. These include oversized 32mm fork tubes, a torsion box design steering crown with pressed in tubes, a one piece billet brake arch and extra thick drop-outs. The WB bootless design allows a considerable amount more slider/stanchion overlap than competitor forks which increases fork steering accuracy. Every effort has been made to make White Brothers forks very light and perform at a level superior to other forks on the market. To ensure peak performance, proper installation and periodic maintenance is required. When riding on public land, please respect the rights of others and stay on established paths and trails. By riding responsibly, you are helping ensure the future of our sport.

FORK INSTALLATION

White Brothers forks feature a 1-1/8" threadless steer tube. If you have a threaded type fork on your bicycle, consult your dealer for the appropriate upgrade parts necessary to convert to a 1-1/8" threadless steerer tube.

1. Remove your old fork from the bicycle. Measure the diameter and length of your old forks steerer tube to ensure that the White Brothers steerer tube is the correct diameter and sufficient length for the installation.
2. Remove the crown race from your old fork.
3. Press the crown race onto your new White Brothers fork. **(see Figure #1)**
4. Preassemble the headset by sliding the fork steerer tube through the bearings. Then install the headset upper race, headset spacer (optional), and stem onto the fork steerer tube. Adjust with optional spacers to your preferred height. **(See Figure #2)** Refer to the headset owners manual if there is any questions about the pre-assembly.
5. Mark the steerer tube at the top of the stem. The steerer tube will now need to be cut to the correct length. Disassemble and cut 3mm (1/8") below the mark. Consult your dealer or mechanic if you don't have the proper tools to cut the steerer tube.
6. The star fangled nut must now be installed into the steerer tube. If you don't have

the set tool, we recommend dealer installation of this part. (See Figure #3)

7. Clean and grease all headset bearings and races to prepare them for assembly.
Note: Replace the bearings if there is any sign of wear or corrosion.
8. Now loosely assemble the headset, stem and handle bars as done in step four.
9. Install the headset top cap into the star fangled nut. Tighten until there is no play in the steering. The fork should rotate freely in the head tube. Straighten the stem in relation to the front tire and tighten the pinch bolts on the stem. If there are any questions consult your dealer or mechanic.
10. Install your front brake and adjust according to the manufacture instructions.
11. Install and tighten the wheel in the front fork. Tighten the 20 mm thru axle nut and the pinch bolts.
12. Check to see that the brakes are adjusted and properly working. Make sure that the brake cable does not interfere with any part of the bike when the fork is compressed and released.

Warning: When installing the wheel or a new tire, check for minimum clearance. Measure from the highest point on the tire to the under side of the crown. There must be 1/8" or 3mm more clearance than the fork travel to ensure adequate clearance in all riding conditions. Any less clearance can result in the tire hitting the crown resulting in serious injury or death.

TUNING

To get the most out of your White Brothers fork, it is important that you tune the fork to fit your weight, riding style and the terrain you ride.

INITIAL BREAK-IN PERIOD:

Your new fork is designed to break-in over a period of 10 hours or more of riding. As all the parts bed into each other, the stiction (friction) of the fork decreases and the

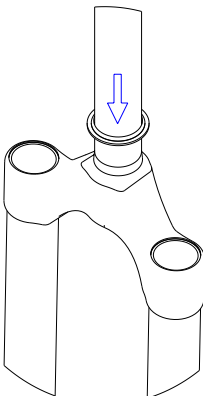


Figure #1

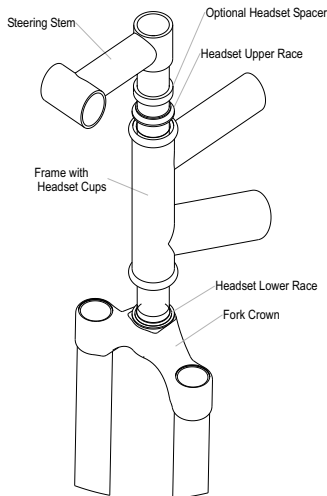


Figure #2

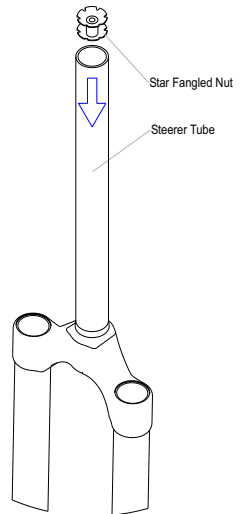


Figure #3

sensitivity increases. After the initial brake-in period, fine tuning the air pressure and damping adjustments may be beneficial to achieve the best possible performance.

TOOLS NEEDED:

- 24mm socket with ratchet.
- 4mm Allen wrench
- 6mm Allen wrench

AIR SPRING / OIL DAMPER

Your new White Brothers fork is designed with a air spring and oil damping. The following guidelines for adjusting and maintaining your fork will enable you to enjoy maximum performance and longevity from your fork.

1. First, test ride the fork over easy terrain. If after riding the fork over varied terrain you decide that more tuning is necessary, continue to the next step.
2. The compression or spring of the fork can be changed two ways: 1) by adjusting the spring air pressure, 2) by adjusting the rebound setting or adding air to the damper.
3. To adjust the air pressure remove the dust cap from the left leg to expose the air valve. Add or remove pressure using a high pressure shock pump to achieve your desired spring support. 50-150psi is the user range. The fork is delivered with 80 psi in the air spring. You should begin adjusting the air spring by setting the fork sag. Sag is the amount the fork compresses with the rider seated on the bike on level ground. Fork sag should be between 25% and 30% of the total travel of the

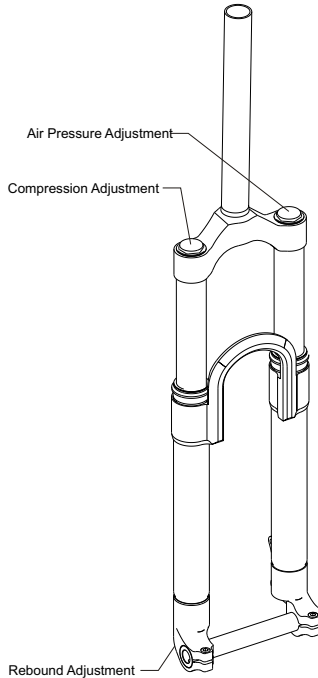


Figure #4

4. **Compression adjustment** is done by adding or removing air at the top of the right leg. Pressures can range from 0 to 45 psi. Higher air pressure will provide more compression damping while lower air pressure will provide less compression damping. Less compression damping will increase the fork dive but will feel smoother over small bumps. More compression damping will feel stiffer over small bumps but will be more resistant to bottoming.
5. **Rebound adjustment** is done by turning the knob on the bottom of the right leg. Turn the knob clockwise for slower rebound. To speed up rebound, turn the knob counter-clockwise. Start with a middle setting and fine tune the rebound from there. Proper rebound will allow the tire to track the ground over consecutive bumps. Too slow of rebound will pack-up (feel stiff over consecutive bumps) while rebound set too fast will cause the fork to top out harshly. Usable adjustment range is 1.5 to 6 turns out from bottom.

MAINTENANCE

Your White Brothers fork requires periodic maintenance to ensure peak performance and long life. Neglecting proper maintenance will reduce the fork's life. Internal build up of water and dirt or a lack of lubrication will cause excessive wear and void the warranty.

BEFORE EVERY RIDE: Visually inspect your fork for bent or broken parts, loss of oil, abnormal sounds or other indications of possible fork failure. Compress your fork to verify proper function. Check all other bicycle components to ensure proper working order.

AFTER EVERY RIDE: Clean and dry the exterior of your fork. When cleaning the fork, do not direct the water spray at the seals. Visually inspect your fork for damage.

***EVERY 30 HOURS OF RIDING:** Your fork should be disassembled, inspect, cleaned and re-grease. If the fork appears to be relatively clean, you can go 40 hours between servicing. If the fork appears excessively dirty you should service it every 20 hours. The three things that will effect the service interval and performance of your fork are water, mud and dust. How much you use your fork in those conditions will determine how much service it requires.

***EVERY 100 HOURS OF RIDING:** Complete service should include removing the lower fork legs cleaning and re-greasing all shafts, bushings and seals. Check top cap assembly's, damper cartridge, stanchion plug, brake bolts and shaft bolts for proper torque. At this time, the fork should be carefully inspected for wear and damage before reassembly. Contact White Brothers for replacement parts and service. We recommend that this service be performed by a certified White Brothers service center or by the factory.

*White Brothers recommends that you consult with a qualified technician before performing:

Basic Fork Disassembly and Inspection

1. Disconnect the front brake and remove the wheel as outlined in you bicycle owners manual.
2. **Remove the rebound** knob from the bottom of the right dropout. Loosen the allen bolts at the bottom of the fork legs(See **figure #5**). **Back out the compression screws 1/4" and using a dead blow hammer knock the bolts back into the lower legs.** Finish removing the compression screws.
3. Simply slide the fork legs off the end of the inner stanchion tubes.
4. Check the air pressure in the damper. It should be between 0 and 45 psi. Inspect the damper leg for visible leakage. Push in the damper rod to full compression. The damper rod should return on it's own. If the damper has visible leakage and/or the damping feels inconsistent as it is stroked, return the fork to White Brothers or a dealer familiar with rebuilding the damper for service. The damper is a sealed unit and should not be opened unless service is required. Damper service should be performed by White Brothers.
5. Remove the air pressure from the spring side air cap. Remove the top cap and check oil on the piston. It should have 10cc's of fork oil on the top of the piston. Install air cap and inflate to desired pressure.
6. Clean all parts with a clean, non-abrasive rag. A mild grease cutting cleaner or solvent might make this an easier task. Once clean, inspect the seals for tears or cracks. If in good condition, re-grease them with Slick Honey or other suitable non-lithium grease. If your seals show signs of wear have them replaced.
7. Check the DU bushings carefully for wear. This is done by looking at the color of the bushings. If the bushings are dark gray, they are in good condition. If they are bronze/gold in areas, they are worn and can cause fork stanchion damage. If there is noticeable movement back and forth when the legs are fully engaged on the fork stanchions, the DU bushings may need to be replaced. Please note that special tools are required to remove and replace these bushings. This service can be performed by White Brothers.
8. Next, inspect the fork stanchion tubes for wear, nicks or scrapes. These will cause premature wear on the seals and DU bushings. Check again for noticeable play between the stanchion tubes and the fork lower.
9. If everything is free of problems, coat all parts with a liberal coat of Slick Honey or other non-lithium based grease. Be sure to lube the DU bushings located inside the lower leg.

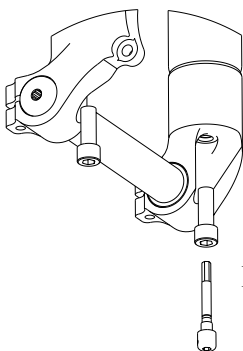


Figure #5

Basic Fork Reassembly

1. Make sure all the spacers and bottoming bumpers are installed on the control rods (see exploded views for proper installation). With all parts cleaned and reinstalled with new grease, fit the lower assembly over the stanchion tubes and gently rock and slide together until the control rods are touching the bottom of the lower assembly. Thread the compression screws into the control rods starting with the damper side and firmly tighten.. Downward pressure on the fork will help hold the control rods from rotating until the compression screws become tight. **Note: Ensure the compression screws are fully tight before riding.**
2. Check the spring air pressure 50-150 psi. Damper pressure should be between 0 and 45 psi.
3. Make sure the fork caps are fully tightened into the top of the stanchion tubes. Connect the front brake and wheel as outlined in you bicycle owners manual. Ensure that the 20mm axle nut and pinch clamps are tight before riding.
4. Compress the fork to make sure it works smoothly and the brake cable does not interfere with the operation of the fork.

TROUBLE SHOOTING

Fork Feels Sticky

This is usually caused by:

1. A lack of lubrication. Clean and lubricate the fork as outlined in the maintenance section.
2. Contamination inside the fork. Clean and lubricate the fork as outlined in the maintenance section.
3. Fork is not sufficiently broken in. Contact White Brothers for further technical information.

Fork Bottoms Too Easily

1. Incorrect spring air pressure. Add air pressure as outlined in #3 of the tuning section.
2. Insufficient compression damping. Add compression damping by adding air (0-45 psi range) to the top of the right leg.

Fork Doesn't Use Full Travel

1. Incorrect spring air pressure. Remove air pressure as outlined in #3 of the tuning section.
2. Excessive compression damping. Reduce the compression damping by removing air (0-45 psi range) from the top of the right leg.

Damping Adjustment is Not Working

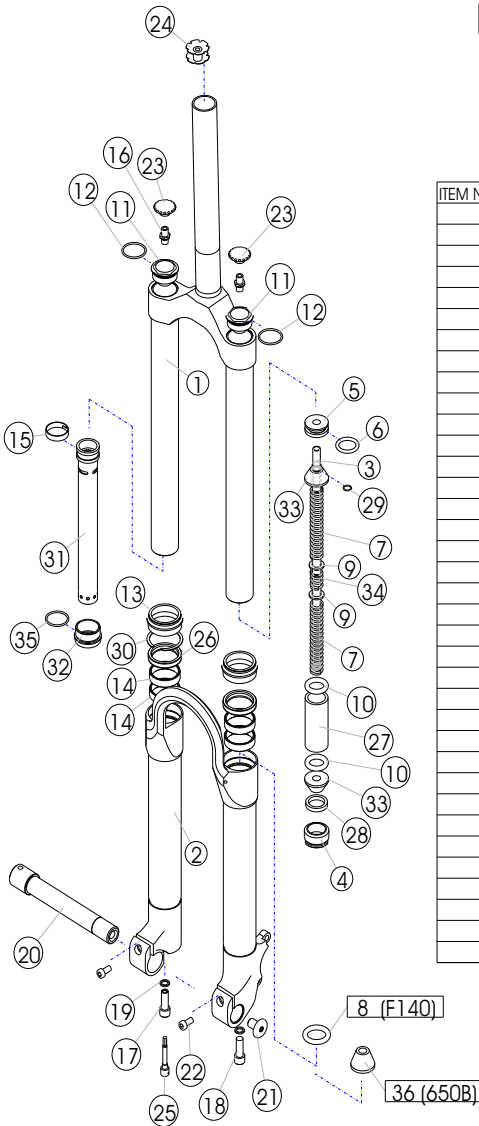
1. Damper may need servicing. Contact White Brothers for technical information.

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EXPLODED VIEW



ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	P1139-3	Upper Assembly
2	1	1.4 Lower	Lower Assembly
3	1	100660-1	Compression Rod
4	1	101468	Stanchion Plug
5	1	100572-2	Air Piston
6	1	100262	Air Piston O-Ring
7	2	100662	Negative Spring
8	1	100009	Bottom Out, F 140
9	2	P3310-1	Negative Spring Shim
10	2	F-2402	O-Ring, 313
11	2	100060	Air Cap
12	2	101271	Air Cap O-Ring
13	2	97-1351	Wiper Seal
14	4	97-986	DU Bushing
15	1	P3000	Piston Band
16	2	100054	Schrader Valve
17	1	100063	Compression Screw
18	1	100063S	Compression Screw, Solid
19	2	101245	Compression Washer
20	1	100285	20 mm Axle
21	1	100531	20 mm Axle Nut
22	2	P4001	M6 Clamp Screw
23	2	101276-1	Schrader Valve Cap
24	1	97-9301	Star Nut
25	1	100200	Rebound Knob
26	2	P3060	Oil Seal
27	1	100581	Top Out Spacer
28	1	P3311	Top Out Shim
29	1	101288	O-Ring, 8 mm X 1
30	1	P4301	Circlip
31	1	101391	Damper
32	1	101273-1	Seal Head
33	2	97-3342	Top Out Bumper
34	1	100016	Negative Spring, Short
35	1	P3028	Seal Head O-ring
36	1	P3290	Bottom Out, F130 650B

OWNERS NAME:

ADDRESS:

PHONE:

PURCHASE DATE:

MAINTENANCE LOG

Date

Service Performed

<u>Date</u>	<u>Service Performed</u>

WARRANTY CLAIMS

White Brothers forks are the highest quality and as such are warranted to be free from defects in materials and workmanship for a period of one year from the date of purchase for the original purchaser. On receipt of the fork, if it is found to be defective, White Brothers will determine replacement or repair of the fork. This warranty is the sole and exclusive remedy. White Brothers shall not be liable for any indirect, special or consequential damages. Warranty does not apply to any product that has been installed improperly or adjusted using methods not outlined in this manual. Warranty also does not cover forks that have been misused, or forks that have missing/altered serial numbers (located on the back of the right fork stanchion). The fork is not warrantied against damage in the appearance of the fork or for modifications not outlined in this manual. This warranty does not cover breakage, bending, or damage that may result from crashes, falls or abuse. Normal wear (i.e. seals, bushings, sliders finish, etc) and tear and damage caused by lack of proper maintenance is not included. ***The warranty registration card must be filled out and returned within 30 days of purchase to activate and validate this warranty.** A copy of the proof of purchase must be included with all warranties. Customers in the US please contact White Brothers or your dealer for a Return Authorization Number (RA#) before returning the forks. All forks returned for inspection must be sent freight paid to: White Brothers Cycling, 580 N. Westgate Dr., Grand Junction, CO 81505, USA.



A Division Of



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