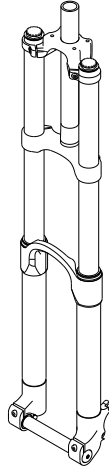




OWNERS MANUAL

***groove***  
**race**



A Division Of



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# TABLE OF CONTENTS

INTRODUCTION.....	PAGE 3
FORK INSTALLATION.....	PAGE 3
TUNING.....	PAGE 5
MAINTENANCE.....	PAGE 6
EXPLODED VIEW.....	PAGE 8
WARRANTY.....	PAGE 10

## 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 APRESSED IN PART. REMOVING IT WILL RENDER BOTH THE CROWN AND STEERER TUBE INOPERABLE.\* MAKE SURE THE FORK CAPS AND ALL FORK HARDWARE (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 are set stock to satisfy a wide range of rider weights and riding styles. Fine tuning can be easily accomplished by changing air pressure or damper settings. See the tuning section for details. 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

Check with your frame manufacturer to ensure your bike is designed for a triple clamp fork. If not, you may void your frame warranty.

The Groove Race fork is available either with a drop-style upper crown or with a flat upper crown (shown below). The flat upper crown is required for frames with a large diameter head tube to accept a 1.5 inch steerer.

1. Remove your old fork from the bicycle. Measure the diameter and length of your old fork's 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 head set upper race, upper triple clamp, headset spacer (if applicable), and stem onto the fork steerer tube. Adjust with optional spacers to your preferred height. **(See Figure #2).** **WARNING:** Refer to the head set owners manual if there are any questions about the installation of the headset.
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. (See **Figure #2**).
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. Tighten the pinch bolts on the upper clamp and double check that the lower clamp bolts are tight. These can easily be over tightened. We recommend tightening to 5 foot pounds. If there are any questions consult your dealer or mechanic.
10. Install your front brake and adjust according to the manufacture's instructions.
11. Install and tighten the wheel in the front fork. Tighten the pinch bolts and axle nut securely. Install the front wheel per manufactures specifications.
12. Check to see that the brakes are adjusted and properly working. Make sure the brake cable doesn't 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 at bottom out (maximum compression of the fork). The fork can be bottomed easily by releasing pressure from the air spring leg (the left leg as you are sitting on the bike--do NOT release all pressure from the damper leg). There must be 1/8" or 3mm minimum clearance between the tire and underside of the crown--any less clearance may allow the tire to hit the crown resulting in serious injury or death.

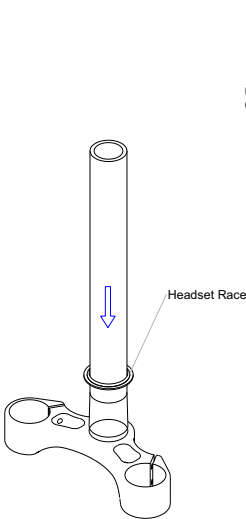


Figure #1

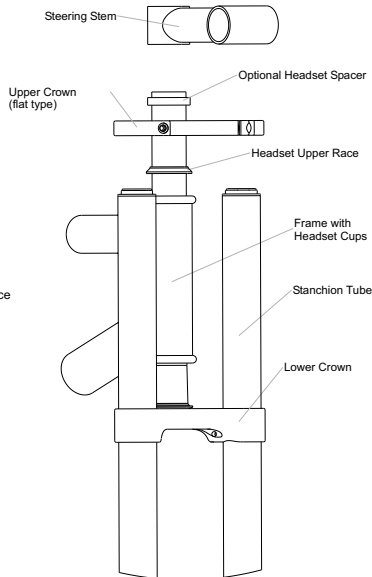


Figure #2

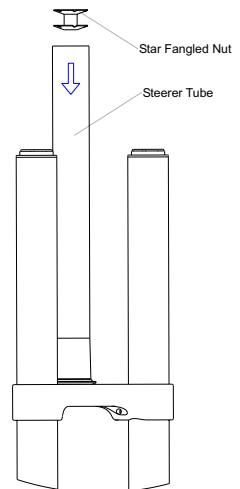


Figure #3

# TUNING

To get the most from your White Brothers fork, it is important that you tune the forks to fit your style of riding and the conditions you ride in.

## 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 will diminish and the fork will absorb the bumps better. After this initial break-in, fine tuning may be beneficial to achieve the best possible fork performance for your weight and riding style.

## TUNING YOUR AIR SPRING & OIL DAMPER

1. To adjust the air spring pressure remove the dust cap from the spring leg (left leg as you are sitting on the bike) to expose the air valve. Add or remove pressure using a high pressure air pump to achieve your desired spring support. The pressure range for the majority of riders is 80 - 160 psi. The fork is delivered with 110 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 fork. You can then fine tune the air spring by adding or removing air in 5 psi increments.

2. Rebound damping is adjusted by turning the knob on the bottom of the damper leg (right leg as you are sitting on the bike). Turn the knob clockwise for slower rebound. To speed up rebound, turn the knob counter-clockwise. The rebound knob has 1-1/2 turns of adjustment. 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 responsively without harsh topping out.

3. Compression damping/bottom out control can be changed by adding or removing air pressure from the damper leg (right leg). Adding air will increase resistance to bottom out; decreasing pressure will allow the fork to move through the full range of travel more quickly. Pressure should be between 0 - 50 psi, with 50 as absolute maximum.

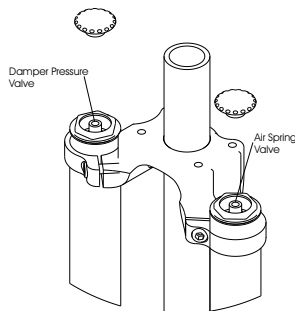


Figure #4

## MAINTENANCE

### TOOLS NEEDED:

High pressure air pump  
6-Millimeter Hex Key

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 20 - 40 HOURS OF RIDING:** The damper leg is lubricated by damping oil and does not need relubrication until a general service is performed (see next section). Relubrication of the air spring leg should be done at least every 20 hours of riding if the forks is being used in very muddy or dusty conditions. If the fork appears to be relatively clean the period can be extended to as long as 40 hours. To relubricate the air spring leg of the fork, put the bike in a workstand and remove the front wheel (if a workstand is not available, prop the bike securely). Place a tray or other receptacle under the fork to catch oil drips. Loosen the compression screw on the bottom of the air spring leg with a 6 mm hex key until the screw protrudes 5 - 10 mm. Reduce the air pressure in the spring leg to approximately 40 psi. While holding the lower leg, use a mallet to firmly tap the screw upward to unseat the compression rod inside the leg. Remove the screw. Depress the core of the schrader valve to release the remaining air from the leg. Allow the fork to sit for several minutes so that old oil can drip out of the leg. Rotate the fork in the workstand until it is upside-down, or prop the bike in an upside-down position. Pour approximately 15cc of fork oil (any SAE rating from 4 to 20 wt.) into the compression screw hole. With the fork still upside-down, repressurize the air spring leg with a shock pump. Reinstall the screw in the leg and hand tighten with moderate force. (Note: The lightweight aluminum screw can break if it is overtightened.) If old oil in the fork is heavily contaminated with dirt or sand, 60 - 90 cc of oil can be poured into the fork and then allowed to drain overnight to clean the inside of the leg before relubrication. Always dispose of old or dirty oil responsibly.

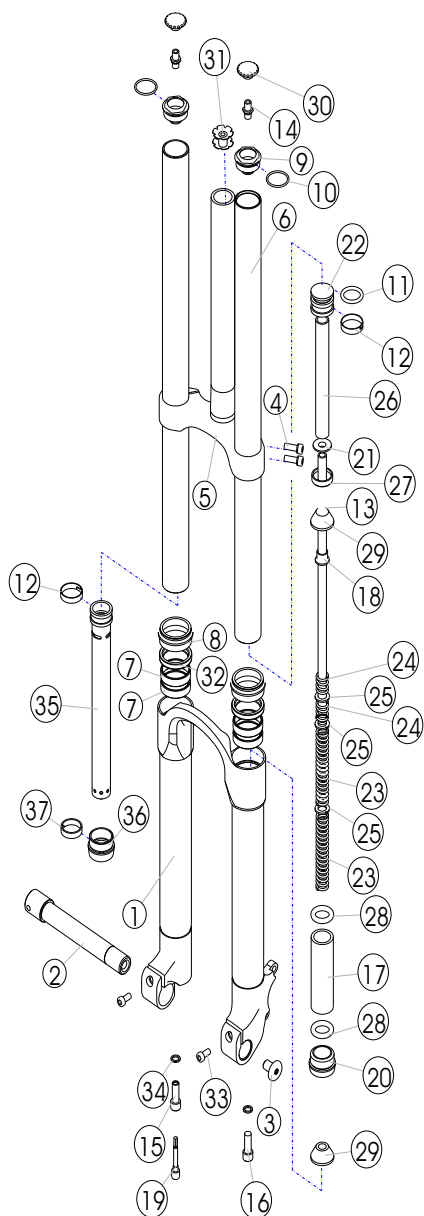
**\*EVERY 100 HOURS OF RIDING:** Complete service should include removing the lower fork legs cleaning and re-greasing all shafts, bushings and seals. Check top cap assembly's, damper cartridge, stanchion plug, brake post bolts and shaft bolts for proper torque. At this time, the fork should be carefully 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

**\*White Brothers recommends that you consult with a qualified technician before performing major service.**

## FORK DISASSEMBLY AND GENERAL SERVICE

General fork service, including inspection and possible replacement of seals and bushings, is best performed by an experienced bicycle mechanic with a full assortment of tools for the purpose. Excessive looseness, severe stiction or leakage of oil or air are indications that the fork may need general servicing. Seasonal service is advisable if the fork is being subjected to very heavy use, such as that associated with cross country racing. Factory service is available for all models of forks; call the number listed on the back of this owner's manual for details.

# GROOVE RACE EXPLODED VIEW



ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	100621	Lower Assembly
2	1	100285	20 mm Axle
3	1	100531	20 mm Axle Nut
4	4	97-850	M5 Clamp Screw
5	1	100258	Crown/Steerer Assembly
6	2	P1146	Inner Leg
7	4	97-986	DU Bushing
8	2	97-1351	Wiper Seal
9	2	100627	Air Cap for Triple Clamp
10	2	P3028	Air Cap O-Ring
11	1	100262	Air Piston O-Ring
12	2	P3000	Piston Band
13	1	100651	Compression Rod
14	2	100054	Schrader Valve
15	1	100063	Compression Screw
16	1	100063S	Compression Screw, Solid
17	1	100657	Top Out Spacer
18	1	100576	Top Out Buffer Guide
19	1	100200	Rebound Knob
20	1	100235	Stanchion Plug
21	1	P4600	Conical Nut
22	1	100572	Air Piston
23	2	100662	Negative Spring
24	2	100016	Negative Spring, Short
25	3	P3310-1	Negative Spring Shim
26	1	GR peg	Piston Peg
27	1	100292	Top Out Stop
28	2	F-2402	O-Ring 313
29	2	97-3342	Urethane Bumper
30	2	101276-1	Schrader Valve Cap
31	1	97-9300	Star Nut
32	2	P3060	Oil Seal
33	2	P4001	M6 Clamp Screw
34	2	101245	Compression Washer
35	1	101393	Damper
36	1	101273	Seal Head
37	1	101405	Seal Band

**OWNERS NAME:**

**ADDRESS:**

**PHONE:**

**PURCHASE DATE:**

## MAINTENANCE LOG

<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 warranted 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 your 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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