

2003

# ***PILOT*** ***RACE***

OWNER'S MANUAL





Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 9



Fig. 10



Fig. 7



Fig. 8

**Congratulations!** You have the best in suspension components on your bicycle! This manual contains important information about the safe operation and maintenance of your fork. To ensure that your RockShox fork performs properly, we recommend that you have your fork installed by a qualified bicycle mechanic. We also urge you to follow our recommendations to help make your riding experience more enjoyable and trouble-free.



NOTE: YOUR FORK'S APPEARANCE MAY VARY FROM THE ILLUSTRATIONS/PHOTOS IN THIS MANUAL.  
FOR THE LATEST INFORMATION ABOUT YOUR FORK VISIT OUR WEBSITE AT [WWW.ROCKSHOX.COM](http://WWW.ROCKSHOX.COM).

## I M P O R T A N T

### Consumer Safety Information

1. The fork on your bicycle is designed for use by a single rider, on mountain trails, and similar off-road conditions.
2. Before riding the bicycle, be sure the brakes are properly installed and adjusted. If the brakes do not work properly, the rider could suffer serious and/or fatal injuries.
3. Your fork may fail in certain circumstances, including, but not limited to, any condition that causes a loss of oil; collision or other activity bending or breaking the fork's components or parts; and extended periods of non-use. Fork failure may not be visible. Do not ride the bicycle if you notice bent or broken fork parts, loss of oil, sounds of excessive topping out, or other indications of a possible fork failure, such as loss of shock absorbing properties. Instead, take your bike to a qualified dealer for inspection and repair. In the event of a fork failure, damage to the bicycle or personal injury may result.
4. Always use genuine RockShox parts. Use of aftermarket replacement parts voids the warranty and could cause structural failure to the shock. Structural failure could result in loss of control of the bicycle with possible serious and/or fatal injuries.
5. Use extreme caution not to tilt the bicycle to either side when mounting the bicycle to a carrier by the fork drop-outs (front wheel removed). The fork legs may suffer structural damage if the bicycle is tilted while the drop-outs are in the carrier. Make sure the fork is securely fastened down with a quick release. Make sure the rear wheel is fastened down when using ANY bike carrier that secures the fork's drop-outs. Not securing the rear can allow the bike's mass to side-load the drop-outs, causing them to break or crack. If the bicycle tilts or falls out of its carrier, do not ride the bicycle until the fork is properly examined for possible damage. Return the fork to your dealer for inspection or call RockShox if there is any question of possible damage (See the International Distributor List). A fork leg or drop-out failure could result in loss of control of the bicycle with possible serious and/or fatal injuries.
6. Only mount cantilever-type brakes to the existing brake posts. Forks with hangerless style braces are only designed for 'V'- style or hydraulic cantilever brakes. Do not use any cantilever brake other than those intended by the brake manufacturer to work with a hangerless brace. Do not route the front brake cable and/or cable housing through the stem or any other mounts or cable stops. Do not use a front brake cable leverage device mounted to the brace.
7. Observe all owner's manual instructions for care and service of this product.

**ROCKSHOX FORKS ARE DESIGNED FOR COMPETITIVE OFF-ROAD RIDING AND DO NOT COME WITH THE PROPER REFLECTORS FOR ON-ROAD USE. YOUR DEALER SHOULD INSTALL PROPER REFLECTORS TO MEET THE CONSUMER PRODUCT SAFETY COMMISSION'S (CPSC) REQUIREMENTS FOR BICYCLE STANDARDS IF THE FORK IS GOING TO BE USED ON PUBLIC ROADS AT ANY TIME.**

## INSTALLATION

It is extremely important that your RockShox fork is installed correctly by a qualified bicycle mechanic. Improperly installed forks are extremely *dangerous* and can result in *severe and/or fatal injuries*.

1. Remove the existing fork from the bicycle and the crown race from the fork. Measure the length of the fork steerer tube against the length of the RockShox steerer tube. The RockShox steerer tube may need cutting to the proper length. Make sure there is sufficient length to clamp the stem (refer to the stem manufacturer's instructions).

### WARNING

DO NOT ADD THREADS TO ROCKSHOX THREADLESS STEERERS. THE STEERER TUBE CROWN ASSEMBLY IS A ONE-TIME PRESS FIT. REPLACEMENT OF THE ASSEMBLY MUST BE DONE TO CHANGE THE LENGTH, DIAMETER OR HEADSET TYPE (THREADED OR THREADLESS).

DO NOT REMOVE OR REPLACE THE STEERER TUBE. THIS COULD RESULT IN THE LOSS OF CONTROL OF THE BICYCLE WITH POSSIBLE SERIOUS AND/OR FATAL INJURIES.

2. Install the headset crown race (29.9mm for 1 1/8" steerers) firmly against the top of the fork crown. Install the fork assembly on the bike. Adjust the headset until you feel no play or drag.
3. Install the brakes according to the manufacturer's instructions and adjust brake pads properly. Use the fork only with V-type or hydraulic cantilever brakes mounted to the existing brake posts or disc style brakes mounted through the provided mounting holes. Do not use any cantilever brake other than those intended by the brake manufacturer to work with a hangerless brace.
4. Adjust the front wheel quick release to clear the dropout's counter bore. The quick release nut must be tightened after the wheel is properly seated into the dropout's counter bore. Make sure four or more threads are engaged in the quick release nut when it is closed. Orient the quick release lever in front of and parallel to the lower tube in the locked position.
5. Keep in mind tire clearance as you choose tires. Maximum size is 2.2" wide or 335 mm radius installed. Be sure to check this radius whenever you change tires. To do this, remove the top caps and spring stack assemblies and compress the fork completely to make sure at least 5 mm of clearance exists between the top of the tire and the bottom of the crown. Exceeding maximum tire size will cause the tire to jam against the crown when the fork is fully compressed.

## PERFORMANCE TUNING

RockShox forks can be tuned for your particular weight, riding style, and terrain.

### Setting Sag

Pilot Race forks are designed to sag when you are sitting on your bike. Sag is the compression of the fork caused by the rider's weight. Proper sag allows the front wheel to follow the contour of the terrain as you ride. Sag is adjusted by increasing or decreasing the positive air pressure of your fork. Increasing the pressure in your positive chambers will decrease sag. Decreasing the pressure in your positive air chambers will increase sag.

Fork Travel	Sag
80mm	13-20mm

To measure sag, install a zip tie on the upper tube of the fork flush against the XXX seal. Sit on the bike with normal riding position and apparel. Step off the bike, and measure the distance between the XXX seal and the zip tie. This is your sag.

### AIR PRESSURE GUIDELINES

Rider Weight	Air Pressure
>120lb (55 kg)	30-40 psi
120-140lb (55-65 kg)	40-50 psi
140-160lb (65-73 kg)	50-60 psi
160-180lb (73-82 kg)	55-65 psi
>180lb (82 kg)	65-75 psi

## External Rebound Adjustment

To change the rebound damping on your Pilot, locate the adjuster knob on the lower right leg. A clockwise adjustment will increase the rebound damping; a counterclockwise adjustment will decrease the rebound damping. The knob offers 90 degrees of adjustment. Do not turn the rebound adjuster past its stop limits. Small changes in knob position will make large changes on the trail. Start in the middle position, and increase or decrease as necessary.

## Oil Tuning

Changing the HydraCoil oil in your Pilot fork will alter its rebound characteristics. Rebound is the extension or return of your fork. To slow the rebound of your fork, replace the stock 15 weight oil in your fork with a heavier weight oil. To speed the rebound of your fork, replace the stock oil with a lighter weight oil.

## MAINTENANCE

To maintain the high performance, safety, and long life of your fork, periodic maintenance is required. If you ride in extreme conditions, maintenance should be performed more frequently.

### Before Every Ride

Check the other components on your bicycle in accordance with the manuals supplied by the manufacturer to make sure they are in working order.

### After Every Ride

Clean and dry the exterior of your fork. Avoid directing water pressure at the upper tube/XXX seal junction.

### Every 8 hours of Riding

Wipe exterior surfaces, XXX seal area, and upper tubes. Apply 2-3 drops Teflon based oil to the upper tube/lower tube junction.

Check top cap assemblies, brake post bolts, and shaft bolts for proper torque.

#### Torque Tightening Values

Top Caps	60 in-lb
Brake Posts	80 in-lb
Shaft Bolts	60 in-lb
Reflector Bracket Nut	60 in-lb

### Every 50 Hours of Riding

**NOTE: SERVICE ON YOUR PILOT RACE CAN BE PERFORMED WITH IT STILL INSTALLED ON YOUR BICYCLE. YOU WILL NEED TO DISCONNECT THE FRONT BRAKE CABLE AND REMOVE THE WHEEL.**

#### Tools required

5mm Hex Wrench	Torque Wrench
Plastic Face Mallet	24mm 6-point Socket
Small Blade Screwdriver	RockShox Oil
Safety Glasses	RockShox RedRum

#### REMOVE AIR PRESSURE (FIG. 1-2)

1. Remove air valve cover. Depress schrader valve to remove positive air pressure.
2. Using a 24mm socket, remove the top caps.

#### REMOVE LOWER TUBE ASSEMBLY (FIG. 3-4)

3. Gently pull downward to remove adjuster knob.
4. Loosen shaft bolts 5 turns and tap firmly with a plastic faced mallet to separate the shafts from the lower tubes.
5. Keep a bucket nearby to catch oil. Inspect the condition of removed oil. If the oil is opaque and/or milky (water contamination), the lower tube assembly should be cleaned.
6. Remove shaft bolts.
7. Carefully slide lower tube assembly off of upper tubes.

### CLEAN LOWER TUBE ASSEMBLY

- Use a biodegradable solvent (Simple Green, Pedros, or equivalent) and a 12" long, 1 1/4" diameter soft bristle bottle brush to clean the lower tube internals. Dry thoroughly.

### REMOVE DAMPER AND NEGATIVE SPRING (FIG. 5-6)

- Using a small, flat blade screwdriver, carefully remove the retaining ring and Homer valve from the upper tube.
- Slide the damper or negative spring assembly out of the upper tube.

### INSTALL DAMPER AND NEGATIVE SPRING (FIG. 7)

- Using RockShox Redrum, thoroughly lubricate the air piston o-ring and glide ring.
- Slide the damper shaft assembly (right leg) and plunger shaft assembly (left leg) through the bottom of the upper tube.

**IMPORTANT: USE CARE NOT TO DAMAGE THE PISTON GLIDE RING.**

- Install flat washer, wavy washers, and Homer valve into the upper tube.
- Re-install the retaining ring into the upper tube.

### INSTALL LOWER TUBE ASSEMBLY (FIG. 8)

- Pour 2 ml Redrum on top of the air pistons.
- Install top cap assemblies and torque to 60 in-lbs.
- Carefully engage lower tubes onto the upper tubes. Use care not to damage the oil seals.
- Slide lower tube assembly onto the upper tubes until just before the lower bushing engages with the upper tube.

### REFILL FLUIDS (FIG. 9-10)

- Pour 100cc of RockShox 15 weight oil into the right leg.
- Pour 10cc of RockShox Redrum into the left leg.
- Slide the lower legs onto the upper tube until they engage with the damper and neutral shafts.
- Install the shaft bolts (hollow bolt on the damper side). Torque to 60 in-lbs.
- Install damper adjuster knob.
- Re-inflate fork to desired psi.

## WARRANTY

RockShox, Inc. warrants its products for a period of two years from original date of purchase to be free from defects in materials or workmanship. RockShox USA, or an authorized RockShox Agent must inspect all RockShox products. If a product is found by RockShox or its authorized agent to be defective in materials or workmanship, replacement or repair is at the option of RockShox. This warranty is the sole and exclusive remedy. RockShox shall not be held liable for any indirect, special, or consequential damages.

### Exclusions of Warranty

This warranty does not apply to products which have not been properly installed and adjusted according to RockShox installation instructions. The warranty does not cover any product that has been subject to misuse or whose serial number has been altered, defaced or removed. This warranty does not apply to damage to the product caused by a crash, impact, abuse of the product, non-compliance with manufacturer's specifications, or any other circumstances in which the product has been subjected to forces or loads beyond its design. This warranty does not cover paint damage or modifications to the product.

Original proof of purchase is required. Warranty repair/replacement is only valid upon presentation of proof of purchase, directly submitted to RockShox at the time of warranty evaluation. Warranty repair or replacement is at the discretion of RockShox or its authorized agent, upon physical product evaluation and proof of purchase.

This warranty does not include or cover common 'wear and tear' parts which are subject to damage as a result of normal use, failure to service product according to RockShox recommendations, wet conditions, racing, use of disc brakes, rider weight, riding or installation in conditions or applications other than recommended.

**'Wear and Tear' parts are identified as:** External dust seals, bushings, foam rings, rubber moving parts (such as air sealing o-rings and glide rings), stripped threaded shafts or bolts, upper tubes (stanchions), rear shock mounting hardware and springs, and fork drop outs.

### Pioneer Support Program

In the event parts are unavailable at the time of your repair, at the option of RockShox or its authorized agent, a replacement fork may be provided at a determined discount price.

### Warranty Expenses Incurred

The RockShox warranty policy excludes expenses incurred as a result of transportation of product from a RockShox dealer to RockShox USA, or its authorized distributor, labor performed by a RockShox dealer for removal of RockShox product, or warranty repair work performed by a RockShox dealer. Warranty work performed by a RockShox dealer is voluntary.

### Warranty Repair

If for any reason it should be necessary to have warranty work done, return the product to a RockShox dealer. In the USA, dealers are required to call for a Return Authorization number (RA#) prior to returning product. Outside the USA, dealers are required to call an authorized RockShox Distributor.

For more technical information, visit our website at [www.rockshox.com](http://www.rockshox.com). For toll-free technical support in the USA, call 1.800.677.7177. Dealers outside the USA must contact their local dealer or distributor. For a complete list of Authorized Distributors outside the USA, visit [www.rockshox.com](http://www.rockshox.com).



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## **IMBA Rules of the Trail**

Ride on open trails only  
Leave no trace  
Control your bicycle  
Always yield trail  
Never spook animals  
Plan ahead