



For exploded diagram and part number information, refer to the Spare Parts Catalog available on our website at [www.rockshox.com](http://www.rockshox.com).

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## TOOLS NEEDED

Torque Wrench  
 Plastic Faced Mallet  
 3/8" Ratchet  
 Snap Ring Pliers  
 Small Flat Blade Screwdriver  
 Large Flat Blade Screwdriver  
 24mm Socket, 32mm Socket  
 3 and 5mm Hex Wrench  
 Adjustable Open End Wrench  
 Dental Pick, or Sharp Pick  
 Safety Glasses  
 Oil Pan  
 Judy Butter  
 RockShox 5wt oil



**NOTE: THOROUGHLY READ THIS GUIDE BEFORE PERFORMING SERVICE ON YOUR PRODUCT. NOTE WHAT KIND OF KITS/PARTS YOU MAY NEED TO REPLACE.**

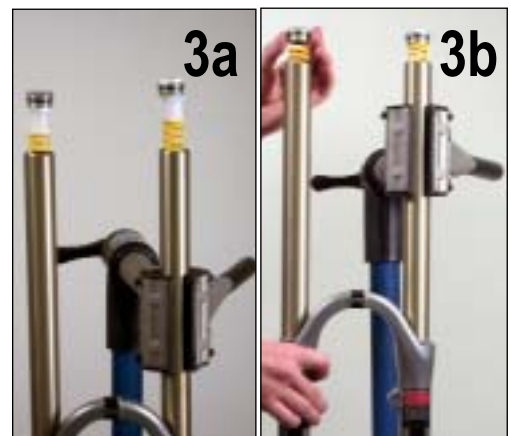
## REMOVING TOP CAPS AND COIL SPRINGS

1. Loosen the crown bolts and slide the upper and lower crown up to remove from the upper tubes.
2. Remove top caps using a 24mm socket wrench.



3. Compress the fork upper tubes into the lower legs and remove white spring spacers/All Travel spacers from top of each spring (Boxxer Race 7" travel configuration). See fig 3a.

**BOXXER RACE: FOR 6" TRAVEL CONFIGURATION, THE SPRINGS ARE DIRECTLY UNDER THE TOP CAPS (FIG 3B)**



4. Remove springs from upper tubes.



## REMOVING OIL FROM THE FORK

5. Invert the fork into a large oil pan. Cycle (compress) the upper tubes until oil has drained from fork.

**NOTE: JUST UNDER THE SPRING IS A WHITE SPRING PERCH SPACER (FOR BOXXER RACE THE SPRING PERCH IS ON BOTH SIDES, FOR BOXXER TEAM/WORLD CUP THE SPRING PERCH IS ON THE REBOUND SIDE ONLY). THIS MAY SLIDE OUT OF THE FORK WHEN THE FORK IS INVERTED.**



6. Using a 5mm hex wrench, unscrew both shaft bolts three turns. Leave bolts in the shafts.



7. With a mallet, tap the shaft bolts to release the internal shafts from the lower legs. After both shafts have been tapped free of the lower legs, completely unthread and remove the shaft bolts.

Inspect the nylon crush washers and crush washer retainers. Replace if necessary.

**NOTE: EARLY BOXXER RACE FORKS WERE ASSEMBLED WITH TWO WHITE CRUSH WASHERS ON THE REBOUND DAMPER SHAFT BOLT SIDE. THE 03 BOXXER RACE EXTERNAL HARDWARE KIT INCLUDES CRUSH WASHER, CRUSH WASHER RETAINERS AND SHAFT BOLTS FOR BOTH PRODUCTION VERSIONS OF THE 03 BOXXER RACE.**



8. Pull apart the lower leg from each upper tube over the oil pan.

**NOTE: THERE MAY BE SOME OIL STILL INSIDE THE LOWER LEG.**

**IMPORTANT: THE INITIAL VERSION OF THE 03 BOXXER RACE FORK INCLUDED BRAKE BOSS HOLES IN THE LOWER LEG ASSEMBLY. IF YOUR FORK HAS BRAKE BOSSES, THE FOLLOWING KITS MUST BE USED TO SERVICE THE INTERNALS (THESE KITS ARE SPECIFIC TO BOSSED LOWER LEGS):**

- 11.4307.311.002 03 Boxxer Race HC2 Rebound Damper Assy (Boss Lower Leg)
- 11.4307.663.000 03 Boxxer Race Compression Rod Kit (Boss Lower Leg)
- 11.4307.664.000 03 Boxxer Race Shaft Bolt Kit (Boss Lower Leg)



REMOVING THE COMPRESSION/NEUTRAL SHAFT AND REBOUND ASSEMBLIES

9. With snap ring pliers, remove the rebound damper assembly and the neutral shaft assembly(Race)/compression damper (Team and World Cup).



10. Inspect the damper piston o-ring or glide ring, and replace if worn, cut or torn. 03-04 Boxxer Damper Service Kit (11.4308.333.000).

**NOTE: BASE VALVE APPEARANCE AND CONFIGURATION MAY VARY.**

11. Inspect the rebound damper adjuster window for proper function with the rebound adjuster or 3mm hex key. The window should open and close smoothly. If the window does not open and close smoothly, replace HC2 rebound damper assembly.



## SERVICING THE SEALS

12. Use a large sharp flat blade screwdriver to gently pry the dust wiper seals from the lower leg.

**NOTE: 03-04 BOXXER FORKS DO NOT USE THE SNAP RING AND FLAT WASHER IN THE SEALING SYSTEM.**



13. With the large sharp flat blade screwdriver, remove the main oil seals from the lower leg. Clean the area of the lower leg with a rag.



14. Lubricate the new main oil seals with a light coating of Judy Butter. Then place a 1 1/4" (32mm) socket tool on top of the seal. Firmly press on the socket with the palm of your hand to install the oil seal. Ensure the seal is completely seated inside the lower leg.



15. Lubricate the inside of the new dust wiper seals and press them firmly into the lower leg by hand. Ensure they fit flush with the top of the lower leg.



## TEAM AND WORLD CUP FORKS ONLY: SERVICING THE COMPRESSION DAMPER

16. Clamp the compression damper rod into a soft-jaw alum vice clamp. Remove the compression damper end plug from the compression rod assembly using a flat adjustable wrench.
17. Remove the compression valve assembly from the compression damper rod. Using a small flat-blade screwdriver, remove the large o-ring from the end plug and replace it with a new o-ring (11.4304.700.000). Re-install the compression valve assembly into the compression damper rod.

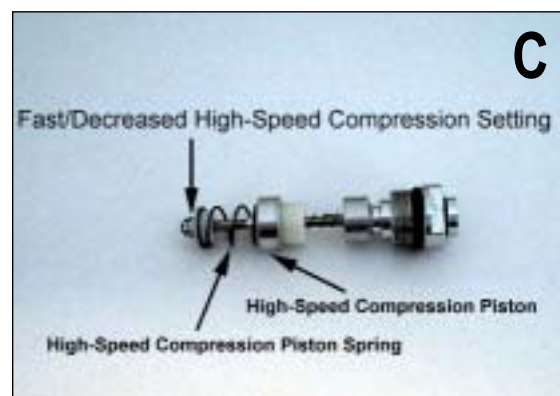
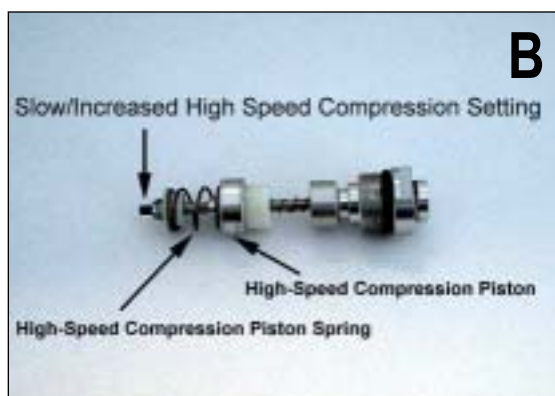


### TUNING TIP: HIGH-SPEED COMPRESSION DAMPING ADJUSTMENT

High-speed compression adjustment can alter the rate at which your Boxxer compresses at high shaft speeds. High-speed compression results from large hits and drops, as well as high-speed consecutive obstacles. Depending on your preference, the terrain, and your riding style, adjustments may be made to control the rate of compression stroke.

With the internal compression valve assembly removed from the compression damper shaft you may make adjustments as follows:

- To **increase** the amount of high-speed compression (slower compression at high shaft speeds), use an open-end adjustable wrench on the high-speed preload nut, and insert a 2.5 mm hex wrench (3mm hex for 1998-2002) into the threaded shaft end. Turn the high-speed preload nut clockwise. Two full turns will make a noticeable difference in high-speed compression (fig. A and B).
- To **decrease** the amount of high-speed compression (faster compression at high shaft speeds) turn the high-speed preload nut counterclockwise. Two full turns will make a noticeable difference in high-speed compression (fig. A and C).



## REBOUND AND COMPRESSION DAMPER/NEUTRAL SHAFT INSTALLATION

18. Add a light coating of 5wt oil to the rebound damper piston o-ring or glide ring. Insert the HC2 rebound damper assembly into the bottom of the right (rider's right) upper tube.
- BOXXER RACE: BEFORE INSTALLING THE REBOUND DAMPER ASSEMBLY, SEE PAGES 1 AND 8 FOR ALL TRAVEL CONFIGURATIONS.**
19. Slide the rebound base valve assembly over the rebound damper shaft and into upper tube. Secure with a snap ring.



20 **Race:** Insert neutral shaft, upper tube adapter sleeve, and base plate assembly into left upper tube and fix with snap ring (fig 20a, 6-inch shown). For Boxxer race All Travel configuration, see figs. 43a and 43b.

**Team/World Cup:** Insert compression damper and base plate assembly into left upper tube and fix with snap ring (fig. 20b).

### INSTALLING THE LOWER LEGS

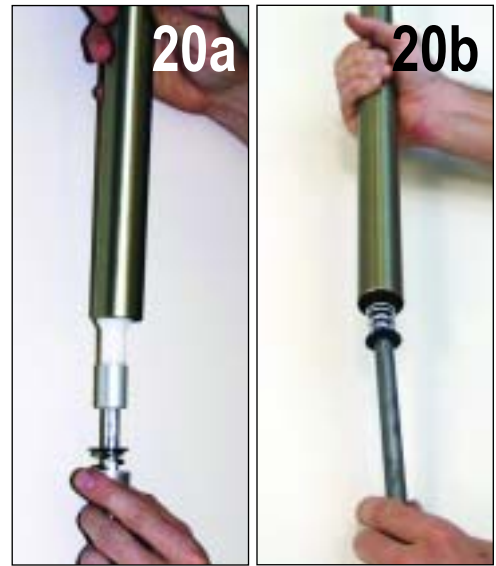
21. Using Judy Butter, lubricate the inside of the dust wiper seals and main oil seals.
22. Slide the lower leg assembly over the damper shafts, and onto the upper tubes. Make sure the dust wiper seals do not roll over when engaging the upper tubes.
23. Install new crush washers if damaged into the crush washer retainers (Boxxer Race may use two crush washers on the rebound damper shaft bolt! Be sure to note the number of crush washers before disassembling and make sure you install it with the same number that they came off with.).
24. Slide crush washer retainer (with crush washers) onto the shaft bolts. Install the shaft bolts into the bottom of the lower legs using a 5mm hex wrench. Torque shaft bolts to 60 in-lbs.

### BOXXER RACE INSTALLING THE SPRINGS AND OIL

25. Clamp the right upper tube into a fork stand.
26. Pour 190cc/ml of 5wt oil into the top of the right (rebound damper) upper tube. Pour 190cc/ml of 5wt oil into the top of the left (neutral shaft) upper tube. Cycle the upper tubes slowly five or six times to circulate the oil through the damper circuits.
27. Pull lower leg assembly down to full-extended position.
28. Insert the spring perch spacers into each upper tube so they rest into the neutral shaft and rebound damper assemblies. To insert, drop each spring perch, narrow end down, into the top of the upper tube (figure 30a and b).
29. Insert each coil spring, adding preload spacers as needed.
30. **7-inch Travel Only:** Insert the All-Travel/spring spacer (white) on the top of the coil spring, one on each side. In the 6 inch travel setting, the All Travel spacer will be located on the rebound and neutral shaft assemblies. See fig. 30b for correct spacer orientation.
31. Install each top cap with a 24mm socket wrench and torque to 60 in-lbs.
32. Install the lower crown/steerer tube assembly, and upper crown. Torque crown bolts to 65 in-lbs.
33. Wipe the fork clean.

### BOXXER TEAM AND WORLD CUP INSTALLING THE SPRINGS AND OIL

34. Clamp the right upper tube into a fork stand.
35. Pour 190cc/ml of 5wt oil into the top of the right (rebound damper) upper tube. Pour 190cc/ml of 10wt oil into the top of the left upper tube (Compression Damper). Cycle the upper tubes slowly five or six times to circulate the oil through the damper circuits.
36. Pull lower leg assembly down to fully extended position.
37. Insert the spring perch spacer into the right upper tube so it rests onto the rebound damper assembly. To insert, just drop perch into top of upper tube,



6-inch Boxxer Race



7-inch Boxxer Race

narrow end down.

38. Insert each coil spring. Insert the small white spring spacer on top of the right side spring. Insert the longer spring spacer on top of the left side spring. See fig. 38 for correct parts orientation.
38. Install each top cap with a 24mm socket tool, and torque to 60 in-lbs.
39. Torque crown bolts to 65 in-lbs.
40. Wipe the fork clean.

### Boxxer Race All Travel Configuration (7 inch)

41. An All Travel spring spacer should be located on top of each spring, and just under each top cap (fig. 30b). See fig. 43a for damper base plate assembly parts configuration.

### Boxxer Race: Six Inch Travel Configuration

42. The spring is located just under each top cap (fig. 30a).
43. **Rebound Damper (Right) Side (fig 43a):**
  - a. Remove base valve assembly from rebound damper shaft.
  - b. Remove the small black spring cap from the bottom of the top out spring. Pull/un-snap to remove the spring cap.
  - c. Snap the white All Travel/spring spacer onto the bottom of the top out spring.
  - d. Slide the base valve assembly onto the rebound damper shaft, and rest just under the All Travel spacer.
  - e. Install damper and base valve assembly into upper tube.

#### Neutral Shaft (Left) Side (43b):

- a. Remove the neutral base plate assembly from the neutral shaft.
- b. Remove the small black spring cap from the top of the top out spring. Set this aside in your tool box. It is not used in the fork in 6 inch travel setting.
- c. Snap the white spring spacer onto the gold top out spring on the neutral base plate assembly.
- d. Slide the neutral base plate assembly, white all-travel spacer first, onto neutral shaft. White all-travel spacer should be just under the neutral shaft head.
- e. Install neutral shaft and base plate assembly into bottom of upper tube and secure with snap ring.

