

APPROVED



For exploded diagram and part number information, refer to the Spare Parts Catalog available on our website at www.rockshox.com.

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TOOLS NEEDED

- 5 mm Hex Wrench
- 10 mm Socket
- Torque Wrench
- Plastic Face Mallet
- 24 mm 6-point Socket
- Small Blade Screwdriver
- Straight and Curved Snap Ring Pliers
- 12" long cylindrical rod
- RockShox 5 wt. Oil
- RockShox RedRum
- Safety Glasses
- Oil Pan

After every 50 hours of riding, or less depending on riding conditions and riding style, the following service should be performed. This service should be performed by a qualified mechanic, using proper tools.

NOTE: SERVICE ON YOUR FORK MAY BE PERFORMED WITH IT STILL INSTALLED ON YOUR BICYCLE. USE THE EXPLODED VIEWS AT THE END OF THIS GUIDE TO IDENTIFY AND REFERENCE PARTS.

REMOVE AIR PRESSURE

1. Remove air valve covers from the negative (Race) and positive air chambers (fig. 1a). Depress schrader valve on the negative air chamber (Race) to remove air pressure and then repeat it on the positive air chamber (fig 1b).



REMOVE LOWER TUBE ASSEMBLY

2. Using a 24 mm socket, remove the top caps (fig. 2). (Part numbers 11.4306.446.000, silver or 11.4306.446.001, black; and 11.4307.271.000).



3. Gently pull downward to remove adjuster knob (11.4304.960.000) from the right shaft bolt (XC, SL and Race). See figure 3.



4. Loosen shaft bolt(s) and nut (Race) (11.4305.651.000) halfway (fig. 4) and tap firmly with a plastic faced mallet to separate the shafts from the lower tubes.
5. Keep a bucket below the fork to catch the 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 bolt(s) and nut completely.



7. Carefully slide lower tube assembly off of the upper tubes (fig. 7). Use the bucket to catch the excess oil.

NOTE: CYCLE THE DAMPER SHAFT IN THE UPPER TUBE TO ENSURE ALL OIL IS REMOVED.



CLEAN LOWER TUBE ASSEMBLY

8. Apply biodegradable solvent (Simple Green, Pedros, or isopropyl alcohol) to a clean rag and use a long cylindrical rod or screwdriver to clean the lower tube internals. Dry thoroughly.



REMOVING THE HYDRA AIR/DUAL AIR ASSEMBLY (LEFT SIDE)

HINT: RIGHT AND LEFT SIDE IS DETERMINED FROM THE RIDER'S PERSPECTIVE.

9. Push the air shaft through the plastic shaft guide (exposing only the shaft threads). Slide a 10 mm socket over Hydra Air/Dual Air shaft and flat against white shaft guide. Press socket firmly against base plate and past snap ring fitting. This will provide enough clearance to remove lower snap ring. Using angled (curved) snap ring pliers, carefully remove the lower snap ring and shaft guide from the upper tubes (fig. 9).

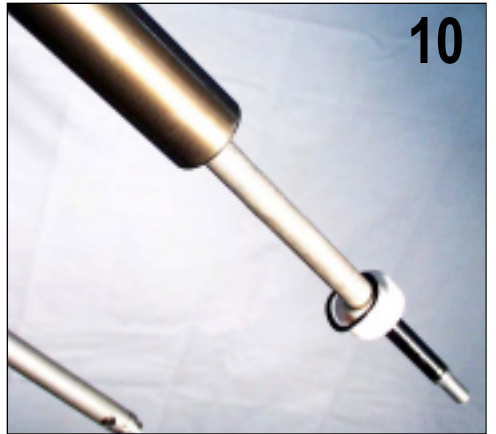
NOTE: IF YOU HAVE A 100 MM DUKE C, XC OR SL, YOU MAY SKIP TO STEP 13.

10. Remove wave washer from the Hydra Air/Dual Air side by tipping the fork down to a 45-degree angle. The wave washer will slide down to expose the inner snap ring.

11. Using straight snap ring pliers, remove the inner upper tube snap ring from the Hydra Air/Dual Air side and remove the air spring assembly (80 mm travel Duke only).

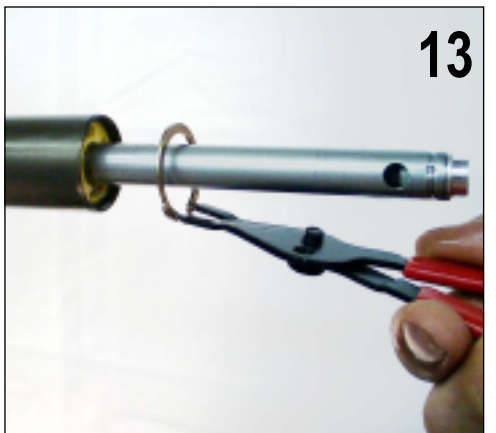
12. Inspect air piston o-rings for wear and replace with the Duke Spring and Damper O-ring Service Kit (11.4306.297.000). See the exploded diagrams at the end of this service guide for further information.

NOTE: DUKE RACE USES TWO PISTON O-RINGS AND DUKE C, XC AND SL USE ONE PISTON O-RING.



DAMPER ASSEMBLY REMOVAL (RIGHT SIDE)

13. Using snap ring pliers, carefully remove the lower snap ring from the right upper tube (fig. 13).



14. Remove the yellow base plate from upper tube by pulling gently on the damper shaft.

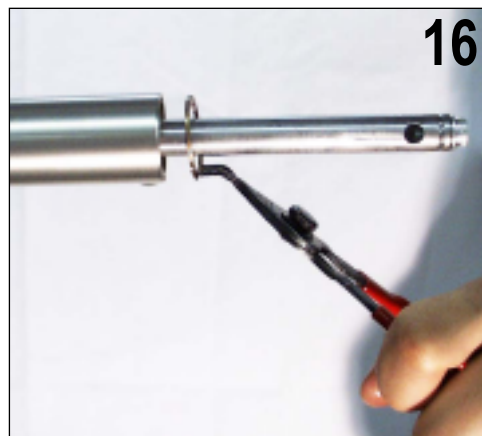


15. Using a pick, remove washer (fig. 15).

NOTE: IF YOU HAVE A 100 MM DUKE C, XC OR SL, YOU MAY SKIP TO STEP 17.



16. Duke C, XC, SL (80 mm) and Race Only: Using curved snap ring pliers, remove inner snap ring from the damper side (right side). See figure 16.
 17. Gently pull the damper assembly from the upper tube (11.4307.354.080 or 11.7307.298.100).
 18. Clean and inspect damper o-ring and replace if necessary.



O-RING SERVICE KITS:

Duke Air Spring/Damper 80/100 O-ring Service Kit - 11.4306.297.000

NOTE: IF 2003/2004 DUKE CROWN STEERER UPPER IS INSTALLED, YOU MUST ALSO INSTALL THE 2003-2004 DUKE HC2 REBOUND DAMPER AND HC2 BASE VALVE ASSEMBLIES. SEE THE ROCKSHOX SPARE PARTS CATALOG.

19. Apply biodegradable solvent (Simple Green, Pedros, or isopropyl alcohol) to a clean rag and use a long cylindrical rod or screw driver to clean the upper tube internals. Dry thoroughly.

NOTE: USE CARE NOT TO SCRATCH THE INNER SURFACE OF THE TUBE.



20. Using RockShox RedRum, thoroughly lubricate the air piston o-ring. This will ensure long o-ring life, smooth stroke and less friction.

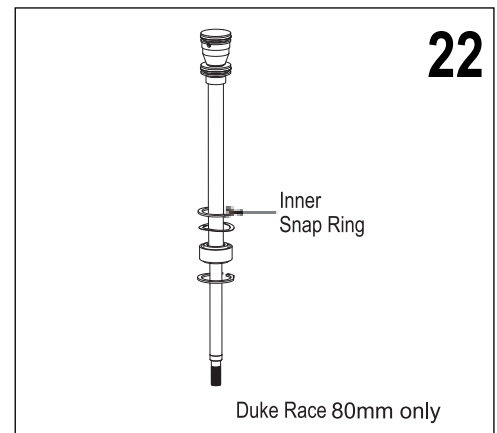


INSTALL DAMPER AND HYDRA/DUAL AIR SPRING

TIP: TO PROPERLY ORIENT AND INSTALL THE ASSEMBLIES, REFERENCE THE EXPLODED DIAGRAMS AT THE END OF THIS GUIDE.

21. Slide the Hydra Coil damper shaft assembly (right leg) and Hydra Air/Dual Air assembly (left leg) through the bottom of the upper tubes.
- IMPORTANT: USE CARE NOT TO DAMAGE THE PISTON O-RING.**
22. Install the inner snap ring (80 mm forks only). For Duke Race, ensure the inner snap ring is attached to the dual air shaft according to figure 22.
23. Install base valve/shaft guide and washer into the upper tube.
24. Re-install the lower snap ring with the sharpest side towards the end of the upper tube.
25. Install the lower onto the upper assembly. Stop when the lower bushing contacts the upper tubes.
26. Invert the fork and add 10 to 15 cc of RockShox 5 wt. oil into the Hydra Air side or Dual Air side (Race).
27. Inspect the nylon crush washers for wear or damage and replace if necessary.
28. **BEFORE** installing the hollow shaft bolt, insert the rebound adjuster knob into the damper and turn the rebound valve to the full clockwise position. Then remove the knob. **This prevents damage to the plastic rebound insert in the shaft.**
29. Install the hollow shaft bolt on the damper side and torque to 60 in-lb. Install the solid shaft bolt or nut on the Hydra Air/Dual Air side of the fork (left side). Torque to 60 in-lb.
30. Turn the fork right-side up. From the top of the upper tube, insert 125 cc of RockShox 5 wt. oil on the damper side for 80 mm forks and 140 cc for RockShox 5 wt. oil for 100 mm forks. Cycle the fork to circulate the oil through the damper.
- TUNING TIP #1: ADD UP TO 140 CC OF OIL TO INCREASE DAMPING PERFORMANCE AND INCREASE SPRING RATE AT THE END OF TRAVEL.**
- TUNING TIP #2: YOU MAY NEED TO USE A LIGHTER OR HEAVIER WEIGHT OIL TO ADJUST THE AMOUNT OF DAMPING.**
31. Install the non-adjust top cap on the damper side and torque to 40 in-lb.
32. Add 3 cc of RedRum on top of the air piston. This will lubricate the air piston o-ring. Install the air top cap and torque to 40 in-lb.

TUNING TIP: YOU MAY INCREASE THE PROGRESSION OF YOUR SPRING RATE



ADDING POSITIVE AND NEGATIVE AIR

BY ADDING UP TO 10 CC OF REDRUM ON TOP OF THE AIR PISTON.

33. Install the rebound adjuster knob into the hollow shaft bolt for Duke XC, SL and Race.
34. Add the desired positive air to the fork (all models). Then add desired negative air to the Duke Race.

POSITIVE AIR PRESSURE GUIDELINES

Rider Weight (lb)	Air Pressure
<140 (63 kg)	80-115 psi
140-160 (63-72 kg)	115-130 psi
160-180 (72-81 kg)	130-145 psi
180-200 (81-90 kg)	145-160 psi
>220 (99 kg)	180 psi

35. **Duke Race Only** : Add desired negative air.

NEGATIVE AIR PRESSURE GUIDELINES

Rider Weight (lb)	Air Pressure
<140 (63 kg)	60-115 psi
140-160 (63-72 kg)	95-130 psi
160-180 (72-81 kg)	110-145 psi
180-200 (81-90 kg)	125-160 psi
>220 (99 kg)	160-180 psi

TIP: FOR A LESS ACTIVE FORK (MINIMAL 'BOB' WHILE OUT OF THE SADDLE) INFLATE THE NEGATIVE CHAMBER WITH LOWER AIR PRESSURE. FOR A PLUSHER, MORE ACTIVE FORK, INCREASE THE NEGATIVE AIR PRESSURE BY 5-15PSI.

