



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

- Clean work area
- 24mm, 15mm, and 10mm Socket Wrench
- Dental Pick
- 300psi Shock Pump (part# 120-004873-00)
- Lint Free Rag
- Judy Butter or Red Rum
- Isopropyl Alcohol (Spray Bottle)
- Safety Glasses
- Bicycle stand
- 5mm and 2.5mm Hex Wrench
- SID Threaded Base Plate Removal Tool (part# 140-001905-00)
- Plastic Mallet
- Oil Pan
- RockShox 5 and 15wt oils
- Torque Wrench

NOTE: RIGHT SIDE EQUALS RIDER'S RIGHT. LEFT SIDE EQUALS RIDER'S LEFT.

THIS SERVICE MAY ALSO BE PERFORMED WHILE THE FORK IS INSTALLED ON THE BICYCLE.

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

## REMOVE THE LOWER LEGS

1. Remove the air caps from both top caps and negative air valves (on the bottom left leg).
2. Starting with the negative air valve (bottom left lower leg) release the air pressure from all air chambers. Fork should be completely deflated before disassembly (fig. 2).

NOTE: A SMALL AMOUNT OF OIL MAY COME OUT WHEN RELEASING THE AIR.



3. Using a 10mm socket tool, loosen the negative air shaft nut (left side) from the airshaft. Loosen the nut enough so the nut extends past the threaded shaft end (fig. 3).
4. Remove the rebound adjuster knob by pulling it from the rebound shaft bolt. Using a 5mm hex wrench, loosen the rebound damper shaft bolt (right side) about 3 turns, or half way (fig. 3).



5. Place the 10mm socket on the negative air shaft nut (left side) and tap the socket using a plastic mallet, until the shafts are free from the lower leg. You will feel the shaft release from the lower leg press-fit (fig. 5).
6. With an oil pan below the fork, remove the negative air shaft nut and shaft bolt.



7. Turn fork right side up, and firmly pull lower legs down. Oil will drain into the oil pan (fig. 7). Using a clean rag and isopropyl alcohol, wipe the upper tubes clean of oil and contamination. Inspect the upper tubes for wear. If anodization is worn from upper tubes, the crown/steerer/upper tube assembly should be replaced.

NOTE: SET THE LOWER LEG ASSEMBLY RIGHT SIDE UP TO ALLOW THE EXCESS OIL BATH TO DRAIN.

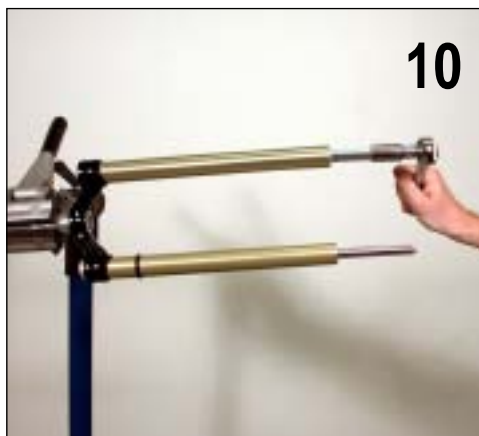


### REMOVING THE DUAL AIR ASSEMBLY

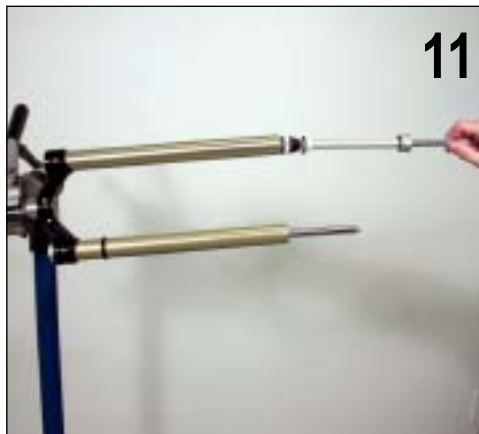
8. Using a 24mm socket, loosen and remove the air top cap (left side). Inspect the top cap o-ring for wear. Replace if worn or cut. Clean the underside of the top cap with isopropyl alcohol (fig. 8).
9. Turn fork on its side in the bicycle stand. Remove the black bottom out bumper from the Dual Air negative shaft (2002-2003 only).



10. Slide the SID threaded base plate removal tool (attached to 15 mm socket tool or adjustable wrench) over the Dual Air shaft until you get firm leverage on the inner hex fitting of the threaded base plate. Press firmly into the hex fitting! Turn the wrench clockwise (the threaded base plate is reverse threaded!) to loosen the base plate. Remove the base plate when unthreaded (fig. 10).



11. Pull the Dual Air shaft until the entire assembly is removed from the upper tube. You may need to release additional negative air by pressing the negative air valve (fig. 11).



## REMOVING THE COMPRESSION/NEUTRAL SHAFT AND REBOUND ASSEMBLIES

12. The SID Dual Air spring assembly consists of two assemblies:

- a. The positive air spring shaft and piston.
- b. The negative air shaft and piston.

Inspect the air seal o-rings on each assembly for wear or cuts (fig. 12a, 12b, and 12c). Replace o-rings with the SID Dual Air O-ring Service Kit (11.4306.176.000).

**IMPORTANT:** AFTER THE AIR SEAL O-RINGS ARE REPLACED, APPLY A LIGHT COATING OF OIL SOLUBLE GREASE, 15WT OR ROCKSHOX REDRUM TO ALL THREE O-RING AIR SEALS. PROPER LUBRICATION OF THE AIR SEALS DECREASES HEAT FRICTION AND WEAR (FIG. 14).

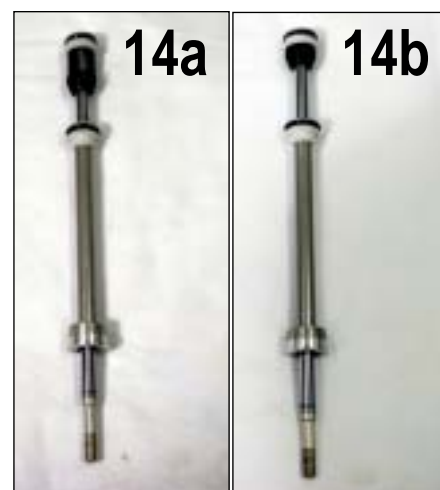
13. Inspect the inner part of the upper tube and clean with isopropyl alcohol and a clean rag. You may need to wrap the clean rag around a long dowel or screwdriver. Allow tube to dry.



## ALL TRAVEL CONFIGURATIONS AND INSTALLATION OF THE DUAL AIR ASSEMBLIES

14. With the 20mm All Travel spacer snapped in place on the positive air shaft (Fig. 14a) the fork is set up for 63 mm of compression travel. By removing the 20 mm All Travel spacer from the positive air shaft (Fig. 14b) the fork is set up for 80 mm of compression travel.

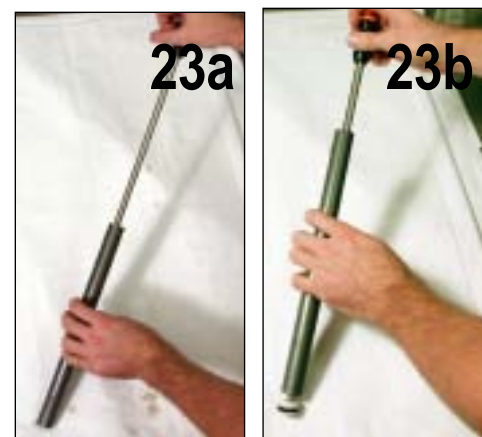
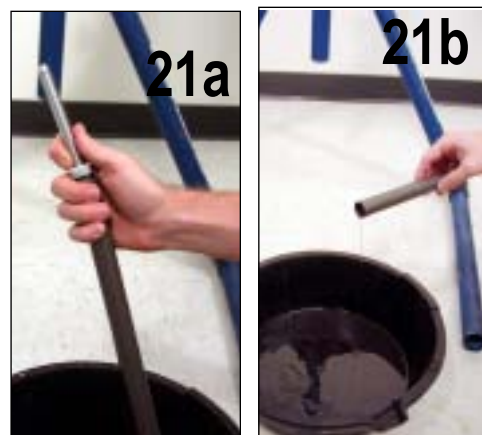
15. Carefully insert the Dual Air spring assembly into the bottom of the upper tube. Be sure to push the piston straight into the upper tube! The tube is threaded, ensure you don't cut or knick the o-rings (see fig. 11). Apply grease to the threads.
16. Using your SID Threaded Base Plate Removal Tool, thread the base plate into the upper tube, turning counterclockwise. Tighten firmly and remember reverse threads (fig. 10)! Torque to 30 in-lb.



17. Add 3 cc/ml of 15wt oil or RockShox RedRum to the positive air chamber (fig. 17). This lubricates the positive air seal o-ring and protects against heat friction and wear. Install the air top cap with a 24mm socket to 50 in-lbs.

### SERVICING THE PURE DELITE REBOUND DAMPER (2002-03 SID RACE ONLY)

18. Remove the black cone bottom out bumper from the rebound damper shaft (02-03).
19. Press the schrader valve on the Delite air top cap and release any air pressure.
20. Using a 24mm socket tool, loosen and remove the Pure Delite air top cap from the crown. Pull up and remove the entire Pure Delite damper assembly (see fig. 20) from the upper tube. Remove the Delite air top cap by pulling out of the Pure damper tube.
21. Invert the damper and gently but firmly pull the rebound damper seal head from the Pure tube (fig. 21a). You may want to hold a rag around the end of the Pure tube to catch any oil that spills. Turn the Pure tube over and drain the oil into the oil pan (see fig. 21b).
22. To remove the internal floating piston (IFP) hold the Pure tube over a clean rag with one end up. The IFP is located inside the Pure damper tube in the center of the tube. The IFP is the seal that separates the oil from the air in the Delite air chamber.
23. Using a long plastic rod, insert the rod into the Pure tube until the rod touches the underside of the IFP. Make sure the rod engages only the pocketed side of the IFP. This ensures that you do not damage the inside of the Pure tube with the rod. Press firmly on the rod only when it is engaged safely into the IFP. See fig 23a. Push firmly down to release the IFP from the Pure tube. See FIG 23b. Pull the rod out gently without scratching the inside of the Pure tube.



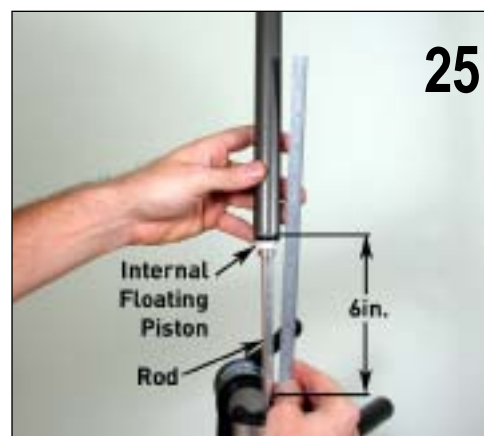


24. See fig. 24 for Pure Delite Damper assembly parts/components.



### ASSEMBLY OF THE PURE DELITE DAMPER (SID RACE ONLY)

25. To assemble the Pure Delite damper, the IFP must first be set to a 6 inch depth inside the Pure tube. Mount a thin rod or dowel into the bicycle stand clamp or bench vice with 6 inches of exposed rod (fig. 25). The width of the end of the rod should be a maximum of 8mm.



26. Place the IFP on the end of the rod/dowel, with the pocketed side down. This allows the IFP to be set to a depth of 6 inches inside of the Pure tube. Place one end of the Pure tube onto the IFP piston o-ring, and press firmly down until the IFP is seated inside the tube (fig. 26). Be careful, the Pure tube ends are sharp! Use a rag to protect your hands.



27. Press down until the Pure tube end is flat against the vice or bicycle stand clamp (fig 27a). Pull the Pure tube up and off of the rod/dowel. The IFP is now seated firmly inside the tube at a 6-inch depth (fig 27b).



28. Before installing the Pure rebound damper assembly, remove the white seal head assembly from the rebound damper shaft. The seal head includes an outer o-ring oil seal and an inner shaft o-ring oil seal. Inspect and replace if damaged or worn using the Pure Damper o-ring service kit (part# 11.4306.245.000). Reinstall the seal head by sliding it over the rebound damper shaft.

NOTE: LUBRICATE THE INNER REBOUND SHAFT O-RING WITH A SMALL AMOUNT OF OIL BEFORE INSTALLATION



29. Holding the Pure tube over an oil pan, with the pocketed side of the IFP facing down (rounded side facing up), fill the tube until completely full with 15wt RockShox fork oil (fig 29).

TIP: FOR QUICKER REABOUND, OR IN COLDER WEATHER, YOU MAY SUBSTITUTE 15WT OIL WITH 10 OR 5 WT.



30. Gently insert the rebound damper piston head into the oil-filled Pure tube. The oil will slowly fill the damper valves (some oil may spill). Allow enough oil to fill the cavities and top-off the oil volume until completely full. Gently press down on the white seal head until it snaps into the Pure tube securely. Your damper is now sealed (fig. 30).

NOTE: PISTON SEAL HEAD MUST BE TOPPED AGAINST REBOUND PISTON. REBOUND DAMPING SETTING MUST BE OPEN.

NOTE: DO NOT CYCLE THE DAMPER SHAFT UNTIL THE DELITE AIR TOP CAP HAS BEEN INSTALLED AND PRESSURIZED!

31. Slide the Pure Delite damper unit into the top of the crown (right side) and upper tube, just as you removed it.



32. Add 3cc/ml of 15wt RockShox fork oil to the top chamber of the Pure Delite damper. This will lubricate the IFP o-ring. Install the Delite air top cap with a 24mm socket tool to 50 in-lbs and pressurize the chamber 20 to 60 psi with your shock pump. The IFP is now pressure-set and your damper is sealed. See FIG 33.

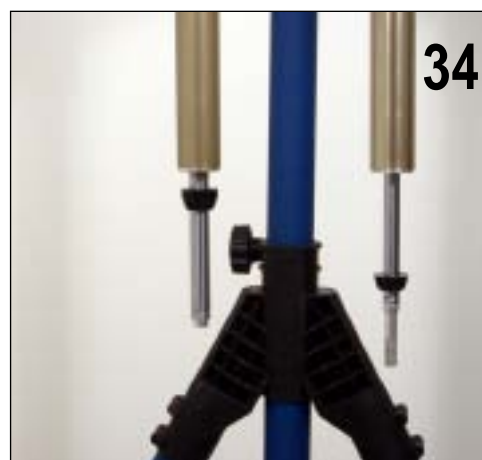
IMPORTANT: 60 PSI IS THE MAXIMUM AIR PRESSURE!



33. Insert the rebound damper external adjuster knob into the bottom of the rebound damper shaft, and turn clockwise until damper is in the full closed position. This step will protect the internal damper rod when installing the shaft bolt (fig. 33).



34. Slide the bottom out bumpers back onto to each shaft. The large bumper is on the rebound shaft and the small bumper is on the Dual Air shaft (fig. 34).



SERVICING THE PURE DAMPER WITH CLIMB-IT CONTROL  
(SID TEAM AND WORLD CUP, 02 SID SL AND RACE)

35. Remove the large bottom out bumper from the Pure rebound damper shaft.  
36. Using a 2.5mm hex wrench, remove the Pure Climb-It Control knob bolt (fig. 36).





37. Lift the Pure knob up gently, below the knob is a 5/32 ball bearing and detent spring. Remove the ball and spring with a magnet (fig. 37).



38. Using your fingers, loosen and remove the aluminum compression adjuster rod (fig. 38).



39. Use a 24mm socket tool to loosen the top cap. When the top cap is loosened, pull the Pure damper assembly from the upper tube (fig. 39). The assembly pulls out of the upper tube by lifting straight up.



40. Turn damper tube assembly upside down with compression damper top cap aimed inside of your oil pan. Push on the rebound damper shaft to cycle the oil from the PURE Tube assembly. Cycle until most of the oil is drained (fig. 40).



41. Pull the top cap/compression damper assembly slowly out of the Pure tube. You need to pull fairly hard and twist the assembly to work it free from the Pure tube (fig. 41).

NOTE: IT HELPS TO HOLD A RAG AROUND THE EXPOSED COMPRESSION DAMPER ASSEMBLY AS YOU PULL UP AND TWIST. THE RAG WILL ALSO COLLECT EXCESS OIL.

42. Invert the tube and remove the rebound damper assembly. Drain any remaining oil (fig. 21).

NOTE (ONLY ON THE PURE SYSTEM): IF THERE IS A WAVY WASHER LOCATED BETWEEN THE THREADED BASE PLATE RETAINER AND THE UPPER TUBE, REMOVE AND REPLACE WITH 18.0 ID x 2.5 O-RING (AVAILABLE IN THE FOLLOWING KITS: 11.4306245.000 AND DUAL AIR SERVICE KIT, 11.4306.176.000).

43. Inspect and replace all o-rings and glide rings on the Pure damper assemblies (fig. 43). Inspect and clean the inside of the PURE tube using isopropyl alcohol and a clean rag



44. Using the SID threaded base plate removal tool, remove the base plate from the bottom of the right upper tube. Inspect the base plate o-ring and replace if damaged (Part# 11.4306.245.000 or 11.4306.176.000). Reinstall the base plate.

### ASSEMBLING THE PURE DAMPER

45. Install the rebound damper assembly into one end of the Pure tube (fig. 31)
46. Insert the Pure tube and rebound damper into the upper tube through the crown (rebound damper shaft facing down). Using the rebound damper external adjuster knob, open the rebound damper valve by turning counterclockwise (fig. 34)
47. Apply a light coating of 5 wt. fork oil to the internal floating piston o-ring and fixed compression piston o-ring. Insert the compression assembly IFP into the top of the Pure tube through the crown. Press firmly, and twist side to side to work it into the Pure tube. Using a 24mm socket, tighten the compression assembly top cap 2/3 down (fig. 47).



48. Insert an oil mixing syringe into the top of the top cap adjuster rod hole. Slowly pour RockShox 5wt fork oil into the syringe. Pull up and down slowly on the rebound damper shaft to cycle the oil into and through the pure tube damper assemblies. Add oil until pure tube is completely full of oil (fig. 48) and oil mixing syringe is about half-full.

NOTE: ENSURE YOUR FORK IS VERTICAL WHILE BLEEDING, THIS HELPS DURING THE BLEED PROCEDURE THAT FOLLOWS.



49. Now bleed all of the air from the Pure tube damper. With the oil syringe still in the top cap, pull the rebound damper shaft slowly up and down until you no longer see air bubbles rise from the pure tube damper. This takes approximately 30 cycles of the shaft to release all of the air from the damper (fig. 49).

NOTE: SLIGHTLY ROTATING THE REBOUND SHAFT IN A TWISTING MOTION WHILE CYCLING THE REBOUND SHAFT ASSISTS IN ALLOWING TRAPPED AIR BUBBLES TO ESCAPE. IT IS CRITICAL THAT ALL AIR BUBBLES ARE BLED FROM OIL BEFORE FINAL ASSEMBLY.



50. Place your palm onto the top of the oil syringe to create a vacuum. Pull the syringe up and release all of the excess oil into your oil pan (fig. 50)



51. The Pure damper is now full of oil. Insert the aluminum compression rod into the compression damper top cap and release. The weight of the rod allows it to 'sink' into the compression damper (fig. 51). Oil will displace and the system now contains pure oil only. Hand-tighten the aluminum compression rod to the fully closed position. **DO NOT USE A WRENCH!**

52. Using a 24mm socket, tighten the compression damper top cap to 50in-lb.

53. Clean the compression damper assembly top by spraying isopropyl alcohol into the top cap detent holes and wipe clean with a rag.

HINT: IT HELPS TO INVERT THE FORK.



54. Test the lockout function: With the compression damper adjuster rod in the fully closed position (hand-tight), push up on the rebound damper shaft. If the shaft does not move, the lockout function is working. If the rebound shaft compresses into the upper tube, there is an air gap and the damper must be bled again. Begin from step 48.

#### PURE CLIMB-IT CONTROL KNOB INSTALLATION

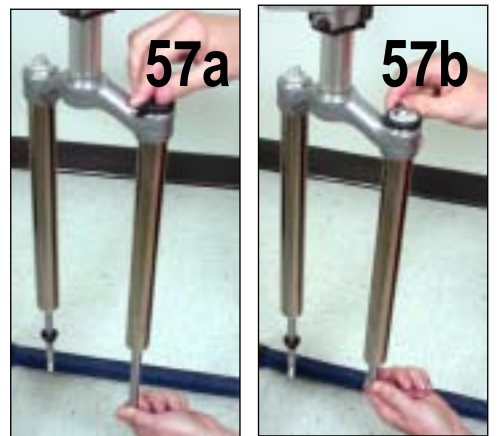
55. From the back of the crown perspective, insert the detent spring into the six o'clock (positioned) detent hole. Position the ball bearing on the top of the detent spring (fig 55).
56. Install the Pure knob over the compression damper rod, with the lockout dial in the six or seven o'clock position, which ever is closest to the back of the crown (fig 56). Tighten the knob to the assembly with the 2.5mm hex bolt.



57. Test the lockout function and the compression damper setting of the Pure knob by turning counterclockwise. Cycle the rebound damper shaft in each position from full open to full close to test the lockout and compression damping settings (fig 57a and 57b)
58. Lock the damper out using the Pure knob and insert the bottom out bumper over the rebound damper shaft. Insert the rebound external adjuster knob into the rebound damper shaft and turn clockwise until the damper is fully closed. Remove the rebound knob

NOTE: FOR REMOTE CONTROL ADJUSTER KNOB INSTALLATION, SEE THE REMOTE LOCKOUT LEVER INSTALLATION GUIDE.

59. Clean and inspect the dust seals and foam rings. Replace if necessary (Part# 11.4307.250.000). For bushing removal and installation, refer to the Bushing Service Guide available at [www.rockshox.com](http://www.rockshox.com)



#### INSTALLING THE LOWER LEGS

60. Saturate the foam rings with 5wt or 15wt fork oil (fig. 60). This will provide fork lubrication to the foam rings and upper tubes when the fork is in use.
61. Gently, slide the lower leg assembly back onto the upper tubes. Be sure the dust seals do not fold over! Pull the lower leg assembly up just until you feel the lower bushing touch the bottom of each upper tube. The shaft rods should not be visible through the shaft bolt holes of the lower leg (fig. 7).
62. Invert the fork in the bicycle stand to about a 45 degree angle.





63. Using an oil syringe, add 10cc of 5wt RockShox fork oil to the bottom of the fork, through each of the bolt holes (fig. 63).



64. Slide the lower leg up on the upper tubes until both the rebound and Dual Air shafts slide through the bolt holes. Wipe the lower leg and shafts with a clean rag to remove any excess oil or debris(fig. 64).

65. Clean each black nylon crush washer and replace if necessary. Insert and tighten the Rebound damper shaft bolt. Hand-thread the DualAir shaft nut, and tighten with a 10mm socket. Insert the rebound damper external adjuster knob. Torque to 50 in-lb.



66. Inflate the positive air chamber to the desired pressure. Inflate the negative air chamber to the desired pressure (fig. 66).

<b><u>Rider Weight</u></b>	<b><u>Positive Air Pressure (Left TopCap)</u></b>
>120lb (55 kg)	70-80 psi
120-140lb (55-65 kg)	80-100 psi
140-160lb (65-73 kg)	100-120 psi
160-180lb (73-82 kg)	120-140 psi
>180lb (82 kg)	140-160 psi

<b><u>Rider Weight</u></b>	<b><u>XC (Push Ride) Racing (Firm Ride)</u></b>
>120lb (55 kg)	70-80 psi 40-60 psi
120-140lb (55-65 kg)	80-100 psi 60-80 psi
140-160lb (65-73 kg)	100-120 psi 80-100 psi
160-180lb (73-82 kg)	120-140 psi 100-120 psi
>180lb (82 kg)	140-160 psi 120-140 psi



67. Spray a light coat of Isopropyl alcohol to the entire fork, and wipe down with a clean rag