2005 PILOT XC/SL SERVICE GUIDE

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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PN 95.4309.885.000, Rev. A

- Perform service every 100 hours of riding (less depending on riding conditions and riding style).
- Regular maintenance will keep ensure your Pilot performs as it should
- For bushing removal and installation, please reference the Bushing Service Guide
- Right side equals rider's right; left side equals rider's left.

GETTING STARTED

1. Remove fork from bicycle.
2. Spray entire fork with isopropyl alcohol and wipe all dirt and mud from fork. Clean around dust seals and upper tubes.
3. Lay tools out on work bench, and provide a clean work area for internals service.
4. Place oil pan under fork on floor.

TOOLS

- Safety Glasses
- Clean Rags
- Oil Pan or Bucket
- Bicycle Stand and Clean Work Area
- 24mm 6-point Socket
- Plastic-Faced Mallet
- Snap Ring Pliers (internal and external)
- Shock Pump
- 5mm Hex Wrench
- Long and Short Plastic or Wood Dowel, 3/4" diameter (non-metallic)
- Torque Wrench
- Sharp Pick/Dental Pick
- Oil Mixing Syringe and Measuring cup
- Isopropyl Alcohol/Spray Bottle
- 5wt and 15wt Suspension Oil
- Isopropyl Alcohol (in Spray Bottle)

LOWER LEG / INTERNALS REMOVAL

1. Remove air valve cover cap; left side. Depress the schrader valve and remove all air from AirAssist chamber.

2. Gently pull external rebound adjuster knob and remove from right shaft bolt. **(11.4308.846.000, 05 External Rebound Adjuster Knob, Short)**

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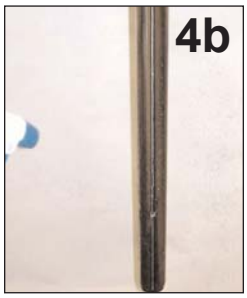
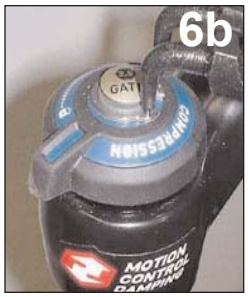
3. Using a 5mm hex wrench, loosen both shaft bolts three to four turns (fig 3a). With hex wrench still in shaft bolt, tap each bolt free with plastic mallet (fig 3b). Using your fingers, remove both shaft bolts completely.

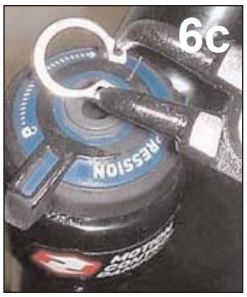
4. Firmly pull the lower leg assembly down by holding each leg or the brake arch. Spray isopropyl alcohol onto each upper tube. Wipe upper tubes with a clean rag.



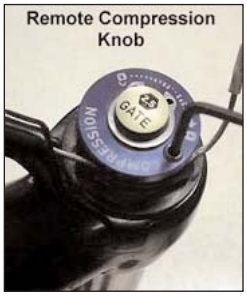
5. Using a 24mm socket wrench remove Air Assist top cap (left side). **Pilot XC:** Remove non-adjust top cap as well (right side).

6. **Pilot SL:** Using external snap ring pliers, remove external compression adjuster knob (plastic or aluminum remote) retaining ring.





Remote: Using a 2mm hex wrench, remove remote cable from adjuster cap before removing retaining ring.



7. **Pilot SL:** Remove compression adj knob (fig 7a) and top cap seal (fig 7b) (Standard and Remote).

8. Using a 24mm socket, loosen compression damper top cap from upper tube (fig 8a). By hand, slowly pull and remove compression damper from upper tube (fig 8b). Lift and remove cable stop clamp (not shown).

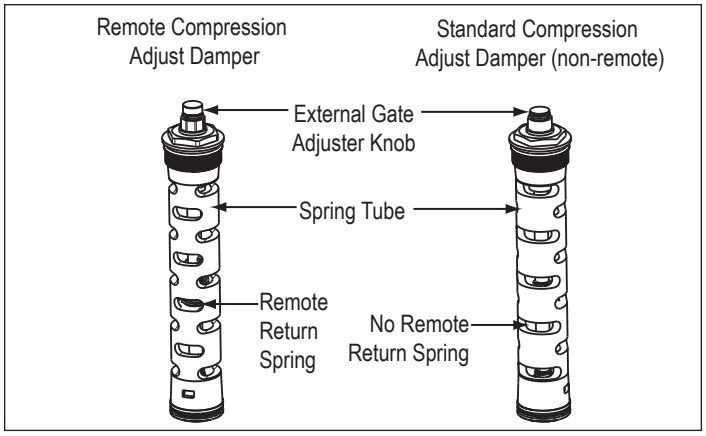
IMPORTANT! USE CARE WHEN REMOVING COMPRESSION DAMPER FROM UPPER TUBE. USE A SLOW TWISTING MOTION. THIS HELPS EASE THE O-RING PAST THE UPPER TUBE THREADS.

9. Inspect compression damper o-rings (located at top and bottom of damper) and replace if necessary. Apply grease to new o-rings.

10. Remove fork from bicycle stand and pour damper oil into oil pan.

UPGRADE: NON-REMOTE TO REMOTE ADJUST

Upgrading a *non-remote compression* adjust fork (crown-mounted adjuster knob) to *Remote compression adjust* (PopLoc adjuster), requires replacing the *non-remote compression damper* with a *Remote compression damper*. The remote return spring is designed into the compression damper, and is required for use with the PopLoc remote lever assembly.



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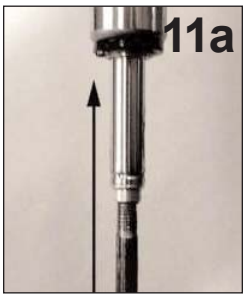
REMOVAL: REBOUND DAMPER AND SEAL HEAD

11. Using a long, thin dowel or rod, push the rebound damper shaft up and through upper tube (fig 11a). Pull damper up, and out of upper tube, through the crown (fig 11b)



12. Using external snap ring pliers, remove external seal head retaining ring and spacer.

NOTE: IT HELPS TO INVERT THE FORK (UPSIDE-DOWN) FOR BETTER ACCESS TO THE RETAINING RING AND SPACER.

13. Using a long dowel, push rebound damper seal head up through the upper tube.

14. Using a sharp pick or dental pick, remove rebound damper o-ring, inner and outer seal-head o-rings (figs 14a & 14b). Remove o-ring located on outer boss of seal-head (fig 14c).

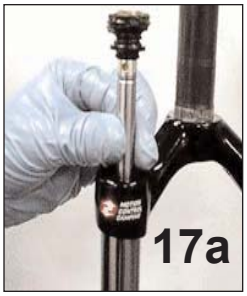
15. Replace rebound damper piston o-ring (fig 15a). Apply grease to rebound damper o-ring and all new seal head o-rings (fig 15b). Replace outer seal-head boss o-ring (fig 15b, lower o-ring pictured). **(11.4309.084.000 PILOT MOTION CONTROL DAMPER SERVICE KIT)**

REBOUND DAMPER INSTALLATION (PILOT XC & SL)

16. Insert rebound damper seal head assembly into upper tube through crown (fig 16a). Using a long dowel, push to seat the seal head into the upper tube end, with narrow end out (fig 16b). Invert the fork in bicycle stand (upside-down). Place seal-head spacer over seal-head boss that protrudes from upper tube (fig 16c). Using snap ring pliers, secure with external retaining ring (fig 16d).

TIP: TO ASSIST IN SECURING SEAL-HEAD RETAINING RING, INSERT LONG DOWEL INTO UPPER TUBE, THROUGH CROWN, AND APPLY PRESSURE TO SEAL-HEAD WHILE SECURING OUTER SEAL-HEAD RETAINING RING WITH SNAP RING PLIERS.

17. Insert rebound damper into upper tube, through crown, shaft end first (fig 17a). Using a long dowel, push the damper down to bottom of upper tube (fig 17b). Pull shaft end through the seal head until seated at full extension, while pushing down on dowel (fig 17c).



18. With rebound damper shaft in the fully extended position, measure and pour 95cc (+/-5cc) of RockShox 5wt suspension oil into upper tube, through crown (fig 18a).

TIP: YOU MAY ALSO POUR OIL INTO UPPER TUBE THROUGH CROWN, AND MEASURE 5" (+/- 0.25") (127MM) OIL-HEIGHT LEVEL, MEASURED FROM THE TOP OF CROWN, DOWN TO TOP OF OIL LEVEL (FIG 18B).

IMPORTANT! OIL HEIGHT IS CRITICAL. TOO LITTLE OIL DECREASES DAMPING PERFORMANCE. TOO MUCH OIL REDUCES AVAILABLE FORK COMPRESSION/TRAVEL AND POSSIBLE DAMAGE TO FORK FROM COMPRESSION BOTTOM-OUT.

19. Pilot XC: Hand-thread the non-adjust top cap into upper tube. Using a 24mm socket wrench, tighten to 60 in-lb.

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COMPRESSION DAMPER INSTALLATION (PILOT SL)

20. Insert compression damper into upper tube, through crown. Pressing firm, push damper into upper tube slowly. Use a slow twisting motion while firmly pressing compression damper into upper tube. Push down and hand-thread compression damper top cap into upper tube (fig 20a).

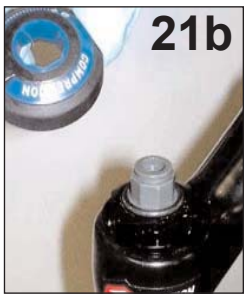
Using a 24mm socket wrench, tighten to 60 in-lb. (fig 20b).

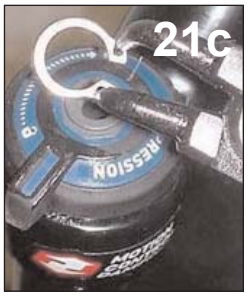
Motion Control Remote:

Position cable stop base onto crown before inserting compression damper into upper tube. Center cable stop base over upper tube hole, with alignment tab against back of crown.

21. Insert compression damper top cap seal (o-ring) over top cap (fig 21a). Place compression knob onto top cap, with dial at 3 o'clock position. The Remote knob should also be positioned with cable set-screw at 3 o'clock (fig 22b). Using snap ring pliers, secure compression knob with external retaining ring (fig 21c). Insert gate adjuster cover cap (fig 21d).

NOTE: USE THE SAME PROCEDURE FOR REMOTE KNOB.





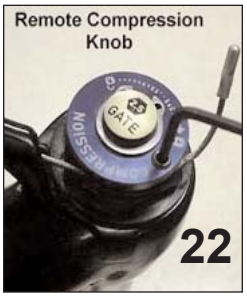
22. Motion Control Remote Forks: Cable Installation

a) Thread remote cable through cable-stop base.

b) Thread cable around compression knob, under cable set-screw, and tighten with 2mm hex wrench. Knob should be positioned in 3 o'clock position in full-open position.

c) Test remote lever function for proper lockout/compression adjust.

d) Adjust cable tension as needed.



SPRING ASSEMBLY REMOVAL

23. Using your hand, push spring shaft up and remove coil spring assembly from upper tube.

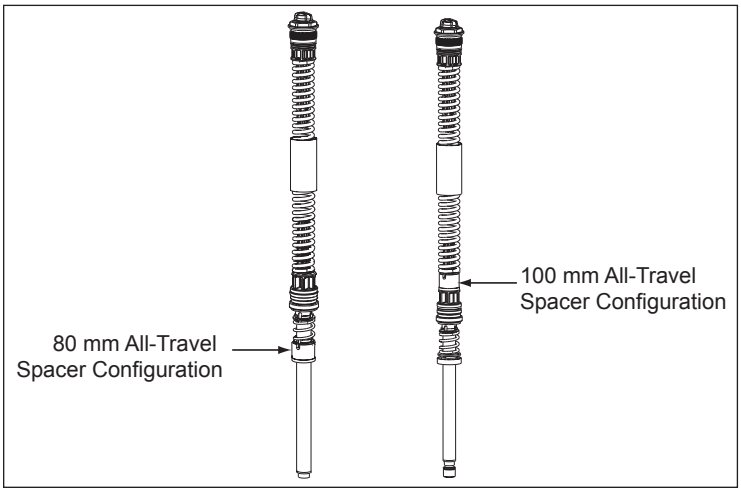
24. Using a long dowel, push spring shaft up and through upper tube (fig 24a). Remove from upper tube, through crown, by hand. Pull firmly to remove (fig 24b).

25. Using sharp pick or dental pick, remove Air Assist o-ring air seal from spring shaft perch (fig 25a). Replace o-ring and apply grease (fig 25b).

ALL-TRAVEL SPACER CONFIGURATIONS

80mm Travel: Snap All-Travel spacer onto topout spring, located just under the spring plunger shaft glide ring base.

100mm Travel: Remove All-Travel spacer from spring plunger topout spring. Snap All-Travel spacer onto bottom of main coil spring.



SPRING ASSEMBLY INSTALLATION

26. Insert the spring plunger assembly back into upper tube/crown, shaft end first. Press firmly to install and push assembly down into upper tube. Push plunger assembly down using a dowel to seat the shaft through the shaft guide at the bottom of the upper tube. Pull shaft end through shaft guide until it stops. You may need to guide the shaft end through shaft guide with a screwdriver, as you push down on the plunger.

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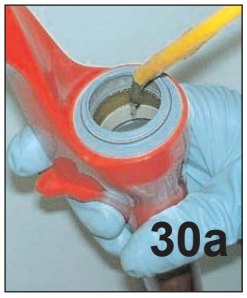
27. Measure and pour **6cc** of RockShox 15wt suspension oil into spring chamber (fig 27a). Insert coil spring into upper tube through crown. Insert coil spring spacer on top of spring (fig 27b).

28. Apply grease to Air Assist top cap o-ring, and hand-thread top cap into upper tube (fig 28a). Tighten with socket wrench; torque to 60 in-lb (fig 28b).

SPRING ASSEMBLY INSTALLATION

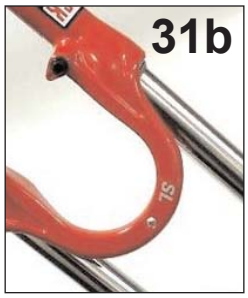
29. Invert fork in bicycle stand to a 45 degree angle, upper tubes facing up. Spray upper tubes with isopropyl alcohol and wipe with a clean rag.

30. Apply a light coating of Judy Butter, or oil-soluble grease to inside of dust seal (fig 30a). Pour a small amount of 5, 10 or 15wt RockShox suspension oil to new or clean foam rings; enough to saturate foam rings (fig 30b).



31. Slide lower leg assembly down upper tubes until you feel the lower bushings touch the end of the upper tubes and **stop.**

Measure and pour (or inject...an oil syringe works best) 10cc of 5wt, 10wt or 15wt (stock) RockShox suspension oil into both lower legs, through the shaft bolt holes. Wipe all excess oil from lower leg.



IMPORTANT! THREADED SHAFT ENDS SHOULD NOT BLOCK SHAFT BOLT HOLES.

32. Slide the lower leg assembly onto upper tubes until both shaft ends appear in the lower leg shaft holes. You may need to guide threaded shaft ends, using a hex tool, into each lower leg shaft hole.

33. Inspect and clean each shaft bolt and black nylon crush washer. Replace crush washers and crush washer retaininers if damaged (fig 33a). Damaged crush washers can cause oil to leak. Insert both shaft bolts into threaded shaft ends (hollow bolt - damper side; solid bolt - spring side) and tighten with a 5mm hex wrench to 60 in-lb (fig 33b). Wipe away excess oil.

34. Insert external rebound adjuster knob through damper shaft bolt, and press firm to seat. Turn to adjust to desired rebound setting.

35. Spray a light coating of isopropyl alcohol onto entire fork, and wipe with a clean rag. Inflate fork with shock pump, to desire air pressure. See chart, or decal on back of fork, for reference.

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AIR

Rider Weight (lbs/kg)	Air Pressure
<140lb (63kg)	0 psi
140-160lb (63-72kg)	0-5 psi
160-180lb (72-81kg)	5-10 psi
180-200lb (81-90kg)	10-15 psi
>220lb (>99kg)	15-20 psi

OIL

RIGHT LEG			
Right Leg Top (Volume)	**Oil Weight**	**Right Leg Bottom (Volume)**	**Oil Weight**
95cc/ml	5wt	10cc/ml	5, 10 or 15wt (stock)
LEFT LEG			
Left Leg Top (Volume)	**Oil Weight**	**Left Leg Bottom (volume)**	**Oil Weight**
6cc/ml	15wt	10cc/ml	5, 10 or 15wt (stock)

TUNING COIL SPRINGS

Rider Weight (approximate)	PART #
<140lb (63kg)	11.4308.942.000 (Soft)
140-160lb (63-72kg)	11.4306.208.000 (Standard)
160-180lb (72-81kg)	11.4308.812.000 (Firm)
>180 lbs (80 kg)	11.4308.813.000 X-Firm)

TROUBLESHOOTING

Air Loss

- Inspect air piston o-ring and replace if necessary.
- To avoid air loss, remove air top cap every month and pour 3 to 5cc RockShox 15wt suspension oil into air spring chamber. This keeps the air seal lubricated.
- Maximum air pressure may have been exceeded. Do not exceed 20 psi in AirAssist spring chamber!

Loss of/or Variance in Damping

- Inspect all damper o-rings. Replace and grease.
- Inspect damper oil volume. Remove damper top cap/compression damper assembly. Using a thin ruler, measure the oil height. Correct height is 5 inches from the top of the upper tube (when fork is set at 115mm travel). Add or remove oil as needed.
- **Remote:** Inspect remote cable tension. Cable may stretch or become loose. Loosen cable screw, tension cable and then tighten. Test and adjust as needed.

Compression Stroke not Smooth

- Remove both shaft bolts. Pull lowers down about an inch. Allow oil to drain. Inject or pour 10cc of fresh suspension oil into lower leg through shaft bolt holes.
- Lubricate upper tubes near dust seals. Press down on fork a few times. Wipe away excess lubricant.
- Inspect and replace worn bushings. Bushings are a wear and tear item, and need to be replaced approximately once a year.

TROUBLESHOOTING (CONTINUED)

Bushing Play

- Inspect and replace worn bushings. Bushings are a wear and tear item, and need to be replaced after approximately 100-200 riding hours, depending your riding style, riding conditions, and body weight. If you ride a lot, check the bushings!

  SEE THE 'BUSHING INSTALLATION' GUIDE AT WWW.ROCKSHOX.COM FOR PROCEDURES.

Oil Loss

- Inspect the air piston o-ring for air bypass. Air pressure can force oil out of the left dust seal.
- Inspect your shaft bolt crush washers. Replace if worn or damaged.
- Inspect your top cap o-rings. Replace if torn or knicked.

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