FULLFILL Air Spring Service

Tools
1.5mm hex
3mm hex
10mm wrench
Small flat blade screwdriver
Snap ring plyers
Rebound Removal tool (optional)
Rubber mallet
Supplies
30cc of 5-10wt fork oil
Slick Honey Grease (or equivalent)

1) After removing the fork from the bicycle, turn the ramp knob to the lightest setting (counterclockwise), to ensure all air is released during deflation of the air spring.

2) Remove the dust covers from both the top and bottom Schrader valve. Release all air pressure from the air spring leg by depressing the Schrader core in both the top and the bottom Schrader valves.

3) With the air released take a 10mm wrench and unthread the Schrader valve located on the bottom of the disc leg, until it protrudes roughly 5mm. Thread the Schrader cap back on to the valve and use your rubber mallet to tap the Schrader cap and release the air spring rod from the lowers. Once released continue to unthread the Schrader valve from bottom of the fork.

4) Loosen the setscrew on the red rebound knob until the knob can slide off of the damper screw. Remove the damper screw using the rebound removal knob in combination with the open end 10 mm wrench. **Skip to step 4a if removal tool is not being used.** Holding the removal knob while turning the screw will maintain the position of the rebound needle in the damper rod.

4a) If the removal knob is not used, turn the rebound to the full slow position (clockwise) before removing the red knob. Remove the red rebound knob and set aside. Use a 10mm open end wrench and unthread the damper screw, the rebound needle will unthread to the end of the damper rod as the damper screw unthreads. Feel for the threads of the damper screw to release from the rod, and then pull the damper screw straight out of the rebound needle. The rebound needle will now be flush with the end of the damper rod. Use the 3mm hex key to turn the rebound needle back down into place. Tighten until firm resistance is encountered, then back off by half a turn.

5) Thread the Schrader valve (with the Schrader cap threaded on) part way into the damper rod and tap the screw firmly with the mallet to unseat the damper rod. Remove the Schrader valve. Slide the fork lower casting off of the stanchion assembly and set the casting aside. Lubricating oil may drip from the casting and stanchions.

6) For LOOP TR and RIBBON forks skip to step 7. With the STAGE fork you will need to remove the bottom out peg from the end of the stanchion. Using your thumb apply firm pressure to the side of the gray peg until it pops loose and can be removed. Inspect the peg for damage and set aside.

7) After checking again, that all pressure has been released from the air chamber use snap ring pliers (for LOOP TR/RIBBON) or small crew driver (STAGE) to remove the snap ring at the bottom of the air spring stanchion. Thread the Schrader valve into the end of the spring side rod. Gripping the screw, pull firmly on the rod to remove the spring assembly.

8) With the air spring assembly removed from the stanchion, remove the negative chamber seal head from the air spring rod. Using a small pick carefully remove the oring and the white wear band from the ID of the seal head. Clean and inspect the groove for any damage, then install the new oring and wear band. Now remove the oring from the OD of the seal head. Clean and inspect the groove and replace with the new oring. Lightly grease the ID seal and wear band then carefully install the negative air seal head on to the air spring rod.

9) Remove the oring from the main piston and inspect the groove for any damage. Remove the main piston wear band and replace with the new wear band. Lightly grease the new main piston oring and install at the top of the piston.

10) Inspect the ID of the air spring side stanchion for any wear or scratches, if there is any contact MRP about replacing. Take a marble size dollop of stanchion grease and smear it on the ID of the stanchion roughly 10mm down from the end of the stanchion. Lightly grease the main piston seal and wear band, then insert the air spring assembly into the stanchion. Push the air spring rod down about 10mm and release some of the natural air build up out of the Schrader valve at the top of the crown. Now press the negative air seal head into the end of the stanchion and install the snap ring into the snap ring groove.

11) For LOOP SL/TR forks jump to step 12. For STAGE forks you will now want to reinstall the bottom out peg. Slide the peg over the air spring rod so the bottom out bumper is facing away from the stanchion. Then with the peg lined up on the stanchion, press down firmly until you feel the bottom out peg snap into place.

12) Before installing the lower casting, clean and inspect the wiper seals and foam rings for dirt or damage. Replace if needed. If the fork has been ridden, it will be good to re-grease the wiper seals before installing the lower casting.

13) With the stanchion assembly still inverted, slide the lower casting onto the stanchions. As soon as the lower bushings in the casting engage the stanchions, stop and pour approximately 15cc of fork oil into the screw hole of each lower casting leg. Hold the fork at an angle while pouring to avoid getting oil in the ends of the damper and spring rods.

14) Resume sliding the casting onto the stanchions until the casting touches the damper rod. Use the corner of a shop rag or cotton swabs to remove excess oil that may have gotten into the end of the damper rod, then install the damper screw.

15) Use the rebound removal knob to hold the rebound adjustment stationary as the damper screw is tightened (if you do not have the rebound removal knob refer to 15b). If the screw encounters resistance before fully tightening, oil may still be trapped in the socket of the rebound needle. Remove the screw and use a cotton swab to wick away oil pooled in the hex socket, then install the screw and tighten to 75 inch-lbs (8.5 Nm).

15b) If the rebound removal knob is not used, before installing the screw use the 3 mm hex key to screw the rebound needle inside the damper rod until it is near the end of the damper rod. Use a cotton swab to wick away any oil trapped in the socket of the rebound needle. Insert the key of the damper screw into the socket of the rebound needle and thread the screw into the rod. Tighten the screw to 75 inch-lbs (8.5 Nm).

16) Wipe away any oil on the damper screw and install the red rebound knob then compress the fork until the casting touches the air spring rod. Install the Schrader valve and tighten to 75 inch-lbs (8.5 Nm).

17) Inflate the FULFILL air spring. With both chambers at zero psi, you will want to start with the positive chamber at the top of the crown and inflate it to your desired starting pressure. Next inflate the negative chamber to the same pressure as the positive chamber. If you are looking to refine your air spring further, please refer to MRP's inflation chart for different negative spring pressures.