

FOX START

SERVICE HOME

CONTACT FOX

USE PROPER TOOLS, SUPPLIES & KITS · READ ALL WARNINGS · KNOW OIL VOLUMES AND INSPECTION GUIDELINES · USE CORRECT FORK TORQUE SPECIFICATIONS AND REAR SHOCK TORQUE SPECIFICATIONS

RP23 Rebuild

[Select a PDF drawing fitting your FLOAT RP23 product specification.](#)

Disassembly

1. Prepare the work area. Lay out clean shop towel to store and organize the shock's parts on.
2. Put on your safety glasses and use rubber gloves if desired.
3. Remove mounting hardware before disassembly. Record the shock's eye-to-eye length and total travel. This information will assist you with determining the IFP setting, and for ordering replacement parts.
4. Remove the air valve cap and release all air pressure from the main air chamber Schrader valve.





Warning! FOX air shocks contain high air pressures. Before continuing service, ensure that the shock is not stuck-down. Always wear eye protection when servicing any FOX product.

5. Remove the travel indicator o-ring.



6. Placing the eyelet assembly into a soft-jaw vice, remove air sleeve from the damper by turning the air sleeve counterclockwise.



7. Clean the inside area of damper and also clean air sleeve at this time.

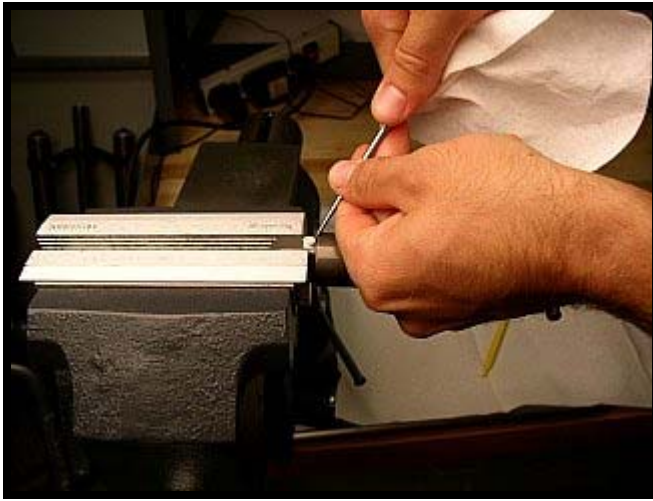


8. Remove bearing housing seal with plastic pick and also remove white bearings.

Note: Do not scratch the seal gland.



9. Remove IFP filler plastic ball with sharp metal pick on damper body.



10. Using a 5/32" (4mm) hex key, slowly remove the set screw. Remove the rubber pellet from the damper body.



11. Remove the bearing housing bleed screw slowly. The pressure may still be in the shock, even if you've already released it from the nitrogen filler port.

Warning! Be careful; wear safety glasses.



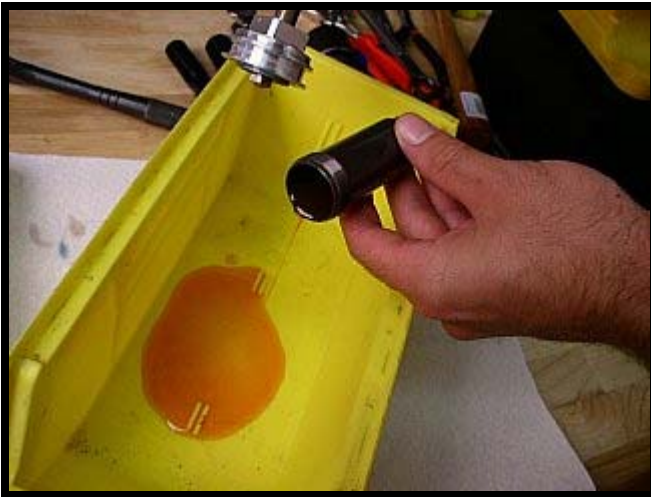
12. Unthread the bearing housing from the damper body with a 3/4" open-end wrench or crows-foot (counterclockwise). Make sure the torquing force is not applied onto

the bleed screw hole or thread damage may result.

Tech Tip: The shock's serial number is located on top of the bearing housing.



13. Remove the bearing housing from the damper body over an oil drain pan.



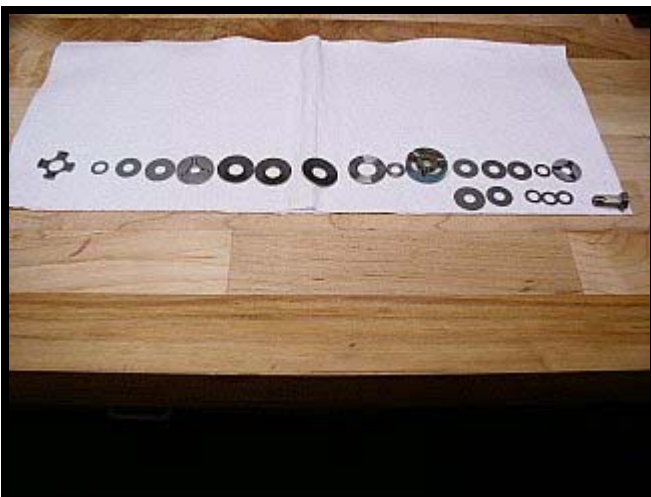
14. Clean and inspect the body and remove the IFP. Hold a [shop towel](#) over the open end of the shock body. Using an air nozzle, blow air into filler port at the eyelet end. This will blow the IFP out of the body and into your hand. Clean the IFP and install new seals as necessary. Lube the IFP and seal with grease and set aside.
15. Place the shaft end eyelet into a soft-jaw vise and unthread the 3/8" piston bolt.



16. Carefully remove the piston bolt and piston assembly. Grip them so that all the piston parts come off together and set the assembly aside on a clean shop towel.



17. If you suspect an issue with the shim stack or wish to change valving, lay all the parts out in assembly order on a clean shop towel.



18. Remove the ProPedal plunger assembly tip, spring, and very small spring preload washer.

Note: The number of preload washers (one or more) may vary, due to the tuning of the shock.

Lay out the parts on clean shop towel.



19. Remove bearing housing and bottom-out o-ring and washer.





20. Clean bearing housing, inspect, and replace seals in housing if necessary. Make sure to grease the o-ring inside diameter of bearing housing body threads, and the shaft seal.



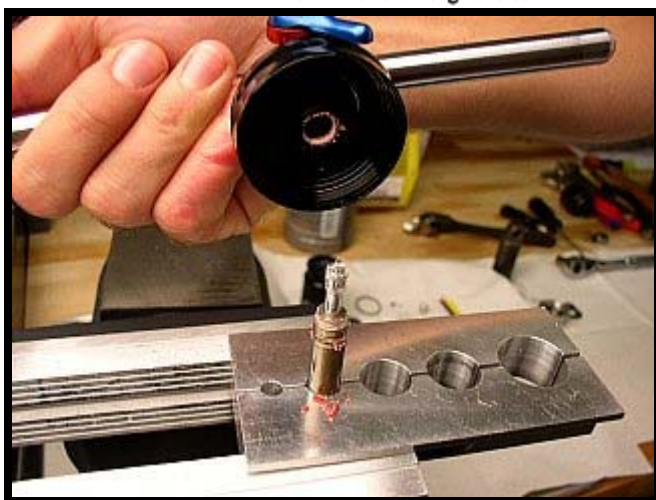
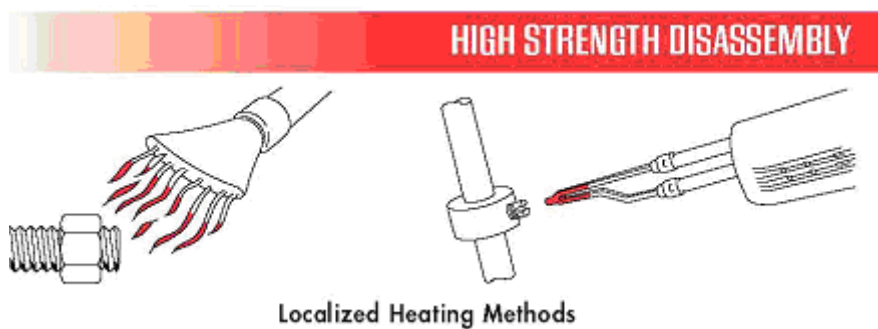
21. Place the damper shaft into shaft clamps up close to eyelet.
Tech Tip: The damper shaft is made of aluminum, so be careful when using the shaft clamps. Do not allow the shaft to spin as you unthread the eyelet. Do not use excessive force on the vise or you may damage the aluminum shaft.



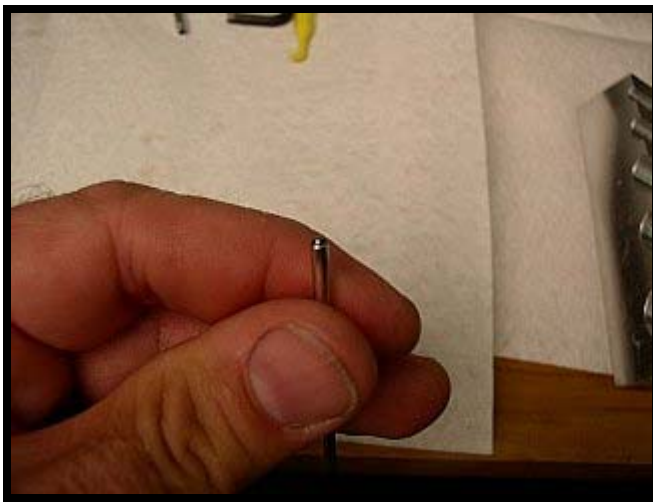
22. Remove the eyelet with a 1/2-inch bar for increased leverage, turning counterclockwise.



23. The damper shaft has been put together at the factory with the use of red Loctite. If excessive force is required to remove the damper shaft, use a heat source to soften the Loctite.



24. The inner adjuster rod has a very small steel ball on top of it. This little ball sits in a drilled pocket in the inner adjuster rod. Pull the ball out and place it in a safe spot.
Tech Tip: Pencil magnets work great for extracting little parts.



25. If you suspect the o-ring inside of the damper shaft has failed and wish to replace it with a new one, do not scratch the seal gland surfaces as you pull the original o-ring out. Grease the new o-ring and install it.



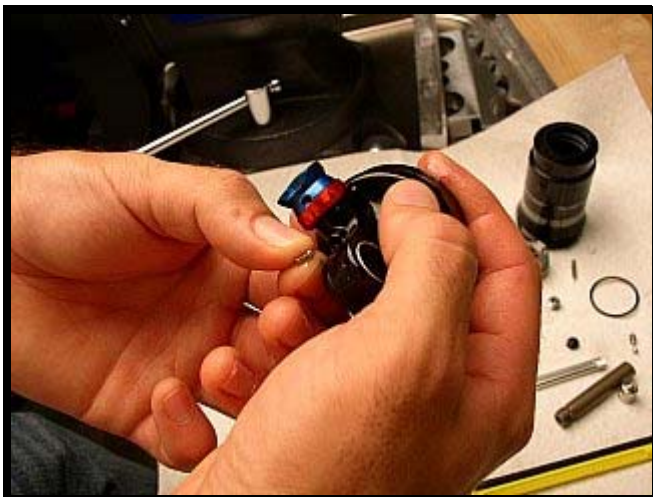
26. The photo below shows the top of the ProPedal adjuster rod (outer and inner). Note the small o-ring inside the outer adjuster rod. Be careful when removing this o-ring. Lube and install a new o-ring as required.



27. Remove the set screw on the side of the eyelet first and set aside.



28. Remove the set screw, detent spring and steel ball. The ball may sometimes get stuck in grease at the bottom of the threaded hole. Flip the eyelet over and knock it onto a soft shop towel a couple of times and the ball will drop out. Set the parts aside.



29. Remove the RP23 adjusters from the eyelet by gripping the red rebound knob. The adjusters will slide out as one unit. Unthread the set screw a couple of turns on the side of the blue ProPedal damping adjust knob, clean and set aside.



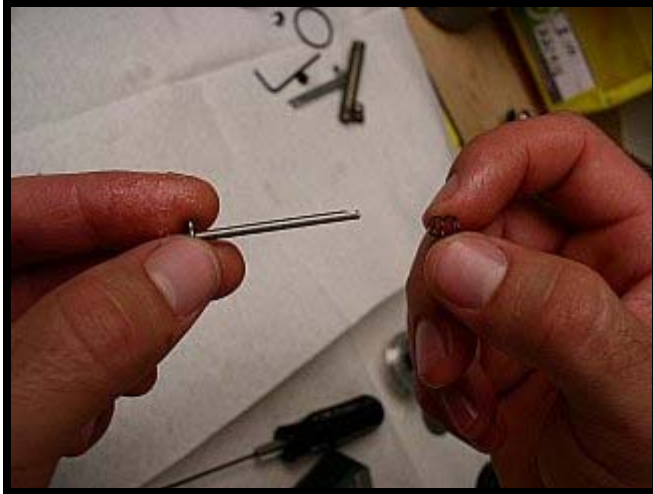
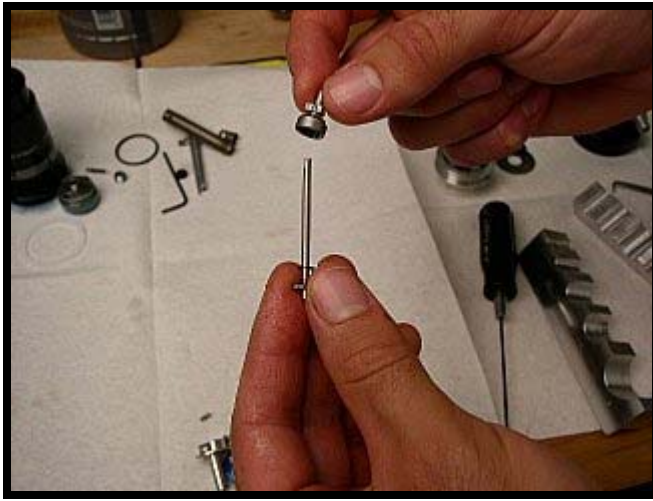
30. Unthread the set screw on the RP23 compression lever a couple of turns. Pull it from the compression adjuster lever boss.



31. Pull out the silver ProPedal adjuster lever boss from the rebound knob; clean it and set aside.



32. Pull off the rebound knob from the three-lobe cam shaft, cam, 3x2 position, and spring. The spring is conical. The large end seats inside the cam, 3x2 position. Clean, and lube both parts with grease.



Assembly

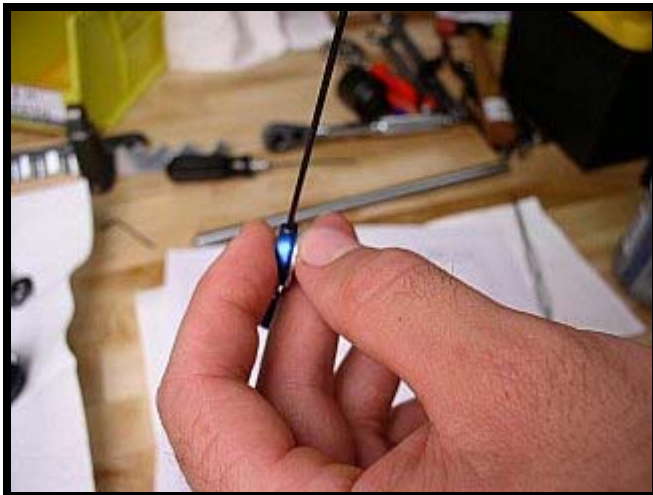
1. Place the cam 3x2 spring back onto the three-lobe cam shaft. Be sure to place a small amount of grease on the parts.



2. Insert the cam 3x2 with spring into the rebound adjuster knob and set it aside for a moment.



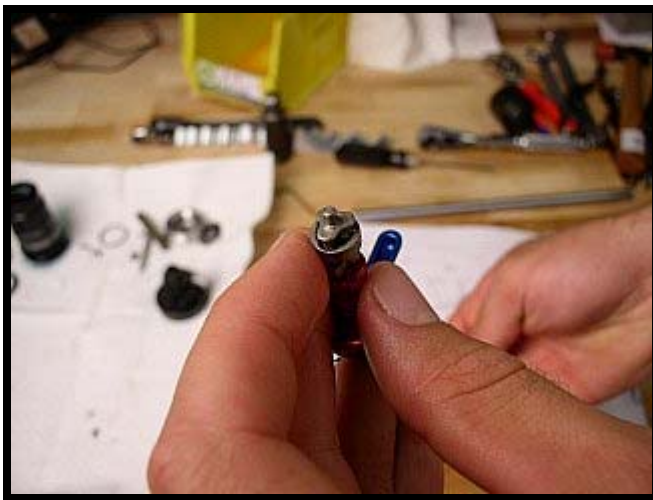
3. Place the RP23 compression lever onto the compression boss and place one drop of blue Loctite onto the set screw, then tighten the screw.



4. Insert the RP23 compression lever assembly into the hole in the rebound knob.



5. Align the cam 2x3 into cam pocket. The fit is mated.



6. Depress the cam 2x3 with index finger as the ProPedal Selection range knob is slipped on. Align the set screw in the knob to milled spot in adjuster rod, then tighten the screw.



7. Test lever and knob functionality; pull and turn knob, and move lever back and forth. The parts should move freely without binding.

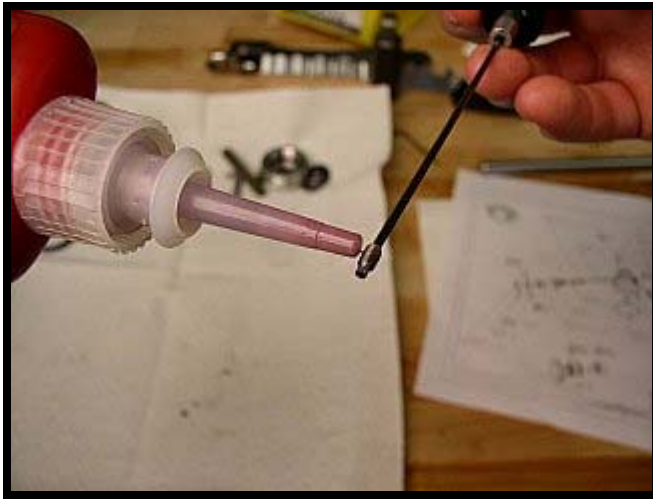


8. Before inserting the ProPedal adjuster assembly into the eyelet, line up the milled slots in the rebound adjuster and compression boss to the set screw hole.

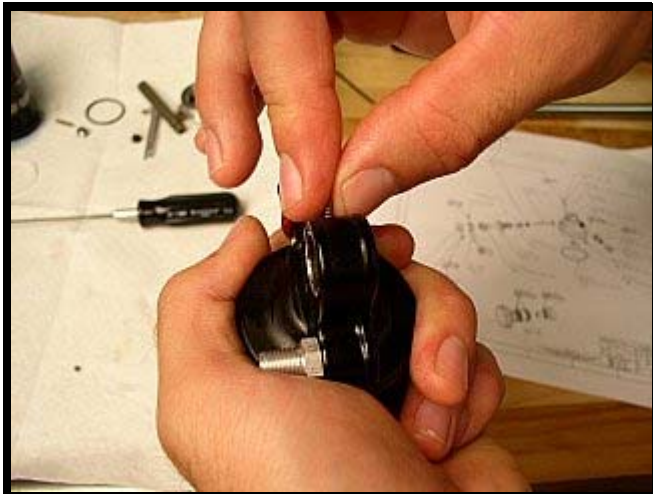


9. Place one drop of blue Loctite onto the long set screw that holds the assembly in place. Gently tighten up until resistance is felt, then back the screw off $\frac{1}{2}$ turn. If you do not back it out, the set screw will pinch the adjuster shaft and it will not turn.





10. Install the rebound ball spring and set screw. Place one drop of Loctite onto the set screw and thread in until the top of the screw is flush with the outside surface. This will provide the rebound knob with a proper feel. Turn the rebound knob, then test and adjust as needed.





11. Double check the lever and knob for movement. You can view the action by looking into the damper shaft threaded hole.



12. Prepare compression and rebound rods. Ensure they are clean, and that the o-rings have been inspected and replaced if necessary. Ensure that the small steel ball is lubricated and in position at top end of the inner rod.





13. Inspect and grease the o-ring in the damper shaft.



14. Grease the adjuster rod end without the ball. With a gentle push and wiggle motion, insert it into damper shaft gently. **NEVER** jam the adjuster rod into the shaft or damage will result.



15. Place two drops of red Loctite onto the outside diameter threads on the damper shaft. Keep the Loctite below the non-threaded portion.



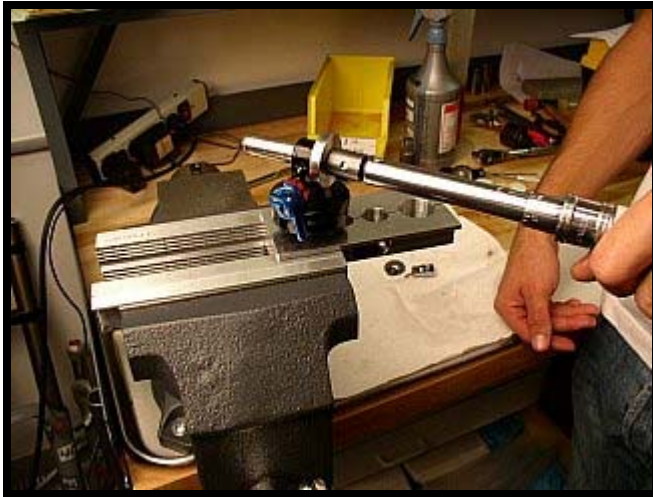
16. Pull the adjuster rod out of the damper shaft about 12mm. Engage the slot of the outer adjuster rod to the RP23 adjuster mechanism in the eyelet housing.



17. Thread the shaft in by hand as far as possible. Test the RP23 compression lever the lever is turned back and forth. Place your index finger on the adjuster rod at the end of the damper shaft. You should feel the adjuster move up and down. If it does not move up and down, you will need to go back to [step 16](#).



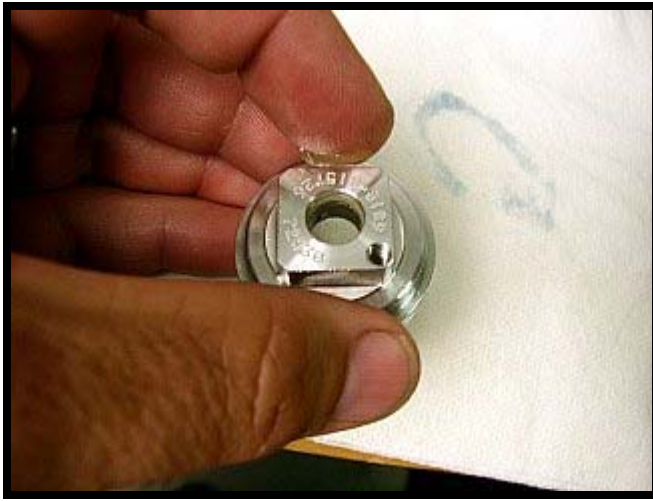
18. Place the damper shaft into shaft clamps and using the FOX Racing Shox ½-inch bar torque wrench tip tool (FOX P/N 398-00-031-A), torque the eyelet to 110 in-lbs. (7.58 N-m).



19. Install bottom-out washer and bottom-out o-ring onto damper shaft.



20. Inspect and replace, if necessary, the seals in the bearing housing—the body thread inside diameter o-ring and shaft seal. Lubricate it before sliding it onto the damper shaft.



21. Slide the bearing housing onto the damper shaft. Gently push and wiggle as you slide the damper shaft past the bearing housing seal.
22. Insert the ProPedal check valve, spring, and preload washer(s) onto the adjuster rod end.



23. Put the damper piston assembly onto the damper shaft. Thread the piston bolt in by hand and double-check action of the ProPedal compression lever. Depress the check valve at the center of the bolt about 1mm with a 2mm hex key wrench and turn the ProPedal compression lever back and forth. You should feel the check valve move up and down.



24. After finishing testing the check valve, torque the 3/8" piston bolt to 75 in-lbs. (5.17 N-m), then set aside.



25. Use the [2007 Rear Shock Cheat Sheet](#) to locate the shock's IFP setting. Adjust the calipers to this IFP setting.
26. Set the IFP according to the shock's IFP specification. (An [IFP setting tool](#), if available, can be handy in this step.)



27. Place the damper body into a soft-jaw vise and fill the body to the top with 10 wt. FOX Suspension Fluid.



28. Push the bearing housing all the way down to the topout plate on the back side of the damper piston.



29. Push the bearing housing downward into the oil and wiggle it back and forth as you thread the bearing housing onto the body threads. This will help oil pass around the damper piston as it lowers into the damper body. As you thread the bearing housing onto the body, you will see oil flow out of the bleed port on top of the bearing housing. This is normal. If oil does not come out, you should unthread the bearing housing, top off the body with oil, and try again.



30. Drop the steel ball into the bleed port and thread in the set screw. Tighten to 15 in-lbs. (1.03 N-m)



31. Install a new rubber pellet into the damper body. Using nitrogen, pressurize to 400 psi and torque the filler screw to 14 in-lbs. (0.97 N-m).





32. Press in a new plastic ball by using a soft-jaw vise.



33. Clean the reservoir with isopropyl alcohol, and replace decal if necessary.
34. Perform the [Air Sleeve Maintenance](#) procedure, if necessary. Otherwise, install the air sleeve and travel indicator o-ring.
35. Give shock back to the now-happy customer. Smile! :-]

**USE PROPER [TOOLS, SUPPLIES & KITS](#) · READ ALL [WARNINGS](#) · KNOW [OIL VOLUMES](#)
AND [INSPECTION GUIDELINES](#) · USE CORRECT [FORK TORQUE SPECIFICATIONS](#) AND
[REAR SHOCK TORQUE SPECIFICATIONS](#)**

Copyright © 2008
FOX Factory Inc., dba FOX Racing Shox