



## ***Shock Absorber Rebuild Manual***

Models

***FLOAT  
FLOAT 2***



### ***FOX RACING SHOX***

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## Disclaimer

FOX Racing Shox is not responsible for any damages to you or others arising from riding, transporting, or other use of your FOX-equipped vehicle. In the event that your shock breaks or malfunctions, FOX Racing Shox shall have no liability or obligation beyond the repair or replacement of your shock, pursuant to the terms outlined in the Service and Warranty provisions of this manual.

## Consumer Safety

RIDING A MOTOR VEHICLE IS DANGEROUS AND CAN RESULT IN SERIOUS INJURY OR DEATH. RIDE RESPONSIBLY AT ALL TIMES.

- Maintain your vehicle and your suspension.
- Always wear a helmet, protective clothing and eye protection.
- Ride within your limits.
- Tread lightly.

## Removal & Installation

The method for removing and installing your FOX Racing Shox is different for every vehicle. Refer to your vehicle's service manual for complete instructions.

## Float 2 Upgrade

If you are doing a Float 2 upgrade, ensure that your Float has the right internals for being target of the upgrade.

If you are upgrading your Float to a Float 2, please advise the upgrade instructions FOX P/N 605-01-033

## Recommended Service Intervals

Your FOX Racing Shox will perform the best if serviced at regular intervals:

Every Ride	Wash and dry your vehicle and suspension.
Every 100 hours	Visually inspect shock seals.
Every 500 hours or 3-5000 Miles	Change shock oil and seals.



**Tools & Materials Required for Rebuild**

1. Safety Glasses
2. Latex Gloves
3. Lint Free Towels
4. Vice w/ Soft Jaws
5. Assembly grease: FOX P/N 025-01-013
6. FOX Float AirShox Seal Kit: Fox P/N 803-00-099-A
7. Recommended Shock Fluid – 1 Qt 5wt: Fox P/N 803-11-005
8. 12” Scale or Caliper (for IFP depth setting)
9. Fox Seal Installation Bullet, 1/2” Shaft: Fox P/N 398-00-026-B
10. Fox Nitrogen Safety Needle : Fox P/N 802-01-000-A
11. 5/64” Hex Key (“Allen Wrench”)
12. 5/32” Hex Key (“Allen Wrench”)
13. 3/16” Hex Key (“Allen Wrench”)
14. 3/16” Pin Spanner
15. Scribe or Dental Pick
16. #2 Phillips Screwdriver
17. 9/16” Open End Wrench
18. 9/16” Socket
19. Torque Wrench
20. Hammer
21. Nitrogen Tank w/ Regulator
22. Cleaning Solvent
23. 8” Long Pin Punch with 1/8” to 1/4” Point Size

## **REBUILD INSTRUCTIONS**

### **Important notes:**

- SAFETY FIRST - Always wear safety glasses and read directions completely BEFORE disassembling the shock.
- Cleanliness is critical, make sure your work area is clean and un-cluttered prior to starting work. Contamination of the shock will lead to premature wear and poor function of your shocks.
- **IMPORTANT:** When replacing a seal during a service, make sure that the new seal is the same size, shape, and material as the one you are replacing. In some cases, there may be two seals in the rebuild kit that look similar.

### **NITROGEN SAFETY NEEDLE:**

You need to install the black needle guide bushing (FOX part # 200-02-002) on the FOX Nitrogen Safety Needle in order to assure a correct nitrogen fill and to prevent needle damage when charging your FOX AirShox. To install the black guide bushing, unthread the red bushing from the safety needle body and thread the black bushing in finger tight.

### **DISASSEMBLY:**

1. Remove the shock from the vehicle.
2. Remove stainless steel reducers and clean with parts cleaner. If your shock has polyurethane bushings and steel sleeves instead of stainless steel reducers, remove them.
3. Clean the entire shock assembly with soapy water. Try to remove as much dirt and grime as possible by scrubbing with a soft bristle brush. **Cleanliness is critical!** Never pressure wash your shock, as this can force water and debris inside which will damage the seals. Dry the shock assembly with compressed air, if available, or use clean towels.

4. Release all air pressure from the air valve.



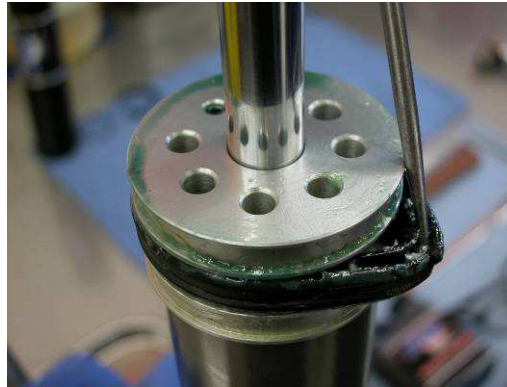
5. Clamp the air sleeve cap eyelet in a vise with soft jaws.
6. Slide the travel indicator o-ring off of the body and set it aside.
7. Loosen air sleeve, turning it counter clockwise by hand and slide it up and off of the body.



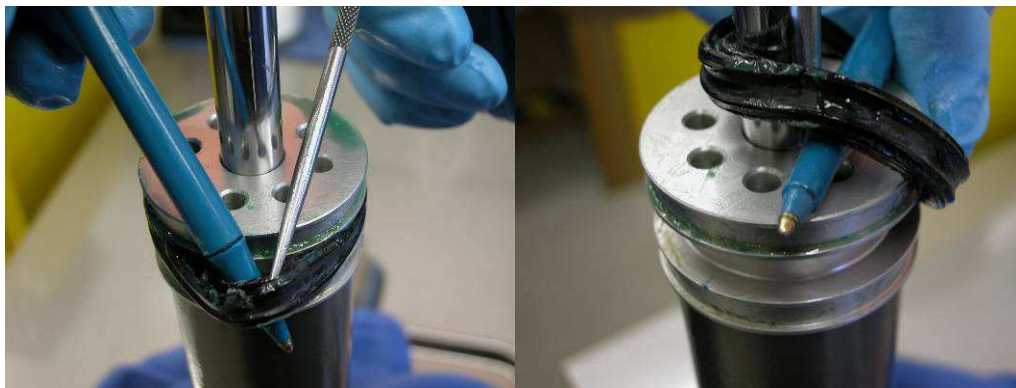
8. Remove the air piston slide rings from the air piston.
9. Clean inside of the air sleeve with parts cleaner and set it on a clean, lint free towel.
10. After cleaning any of the parts with parts cleaner, dry them with compressed air in a well ventilated area. If compressed air is not available, dry parts using clean, lint free paper towels and let sit in a well ventilated area to allow the remaining solvent to evaporate.
11. Remove the shock from the vice and clean it with parts cleaner.
12. Place the shock in the vice, holding it by the impact body eyelet.
13. Now is the best time to remove the air piston seal from the bearing assembly.
14. **Use extreme caution when using a scribe to remove seals. Always "spear" the seal with the point of the scribe. Do not wedge the point of the scribe in behind the**

**seal. This can scratch the surface of the seal groove which will compromise the performance and reliability of the shock absorber.**

15. Pointing the scribe downward, spear the air piston seal in the center groove and pry it outward away from the bearing assembly.



16. Insert the barrel of a pen (or similar plastic part that will not scratch the aluminum) behind the air piston seal and pry it all the way out of its groove (Picture 4) and off of the bearing assembly. (Picture 5) Let it stay around the shock shaft for now.



17. Using the point of the scribe, remove the nylon ball from the nitrogen filler valve on the shock body. (Picture 6)



18. Insert the FOX Nitrogen Safety Needle into the nitrogen filler valve on the shock body and, using a small blunt object such as an allen wrench to depress the Schrader valve, release all of the nitrogen pressure. (Picture 7)



19. Using the 3/16" pin spanner, loosen and unthread the bearing assembly from the shock body. (Picture 8)



20. Remove the shaft assembly from the shock body and set it on a clean, lint free towel.
21. Remove the shock body from the vice and pour shock oil from body tube into a proper disposal container. **DO NOT RE-USE OLD SHOCK OIL.**
22. Using the 3/16" Allen wrench, remove the air valve pellet retainer set screw from the nitrogen filler valve.



23. Using the scribe, remove the rubber nitrogen valve pellet from the nitrogen filler valve by spearing it and pulling it straight out. Dispose of the old nitrogen valve pellet.
24. Fold a cloth shop towel into at least 4 layers. Hold the body with the open end pointed down at the folded shop towel.
25. To remove the IFP, insert an air gun into the nitrogen filler valve opening and pressurize the shock body with compressed air. (Picture 9) This will safely blow the piston out into the folded shop towel. **WARNING: USE ONLY COMPRESSED AIR. NEVER USE HIGH PRESSURE NITROGEN.**



26. Clean the impact body and IFP with parts cleaner.
27. Clamp the air sleeve cap eyelet securely in vice with the shaft and piston up.
28. Using a 9/16" wrench, remove the piston lock nut from the end of the shaft.

29. Hold the tip of the Phillips Head Screwdriver against the end of shaft. Hold the piston assembly under the top-out plate and lift upwards. Slide the piston assembly onto the shaft of the screwdriver. (Picture 10) Pull the Screwdriver away from shock shaft while supporting the piston assembly. Set this on a clean, lint free towel. There are many pieces to the piston assembly, and the assembly order of these pieces is critical to the proper performance of your shock. This step ensures that the proper order is kept.



30. Slide bearing assembly and top out pad off of the shaft and set them on a clean, lint free towel. Use extreme caution not to scratch inside of the bearing assembly when passing it over the threads at end of shaft.
31. Remove the old air piston seal that is hanging around the shaft and dispose of it.
32. Using the 5/64" Allen wrench, loosen and remove the bleed screw and steel ball from the bearing and set them both on a clean, lint free towel.

## **REBUILDING**

1. Use a scribe or dental pick to remove the shaft seal and all o-ring seals from the bearing housing. Be careful not to scratch the seal grooves or the DU bushing that is pressed into the bearing. (Picture 11)



2. Thoroughly clean the bearing assembly with parts cleaner.
3. Use a scribe or dental pick to remove the o-ring seal from the IFP.
4. Use a scribe or dental pick to remove the o-ring seal from the air sleeve cap.
5. Use a scribe or dental pick to remove the two wipers from the air sleeve.
6. Use a scribe or dental pick to remove the o-ring from the damping piston if your shock has that type of piston.
7. Install the new, well lubricated, o-ring into the bearing housing. Correct placement of the shaft seal o-ring is in the groove next to the DU bushing. Check to make sure the seals are properly seated, and are not twisted. If a tool is required to aid in proper seating of o-ring, use the non-writing end of a pen, or a similar soft, blunt object, to push it in.
8. Install the new shaft seal into bearing. Check to make sure the seal is properly seated. If a tool is required to aid in proper seating of the shaft seal, use the non-writing end of a pen, or a similar soft, blunt object, to push it in.
9. Install the new, well lubricated, o-ring into the out side of the bearing housing by very carefully sliding it over the bearing threads.

10. Install the new, well lubricated, air piston seal into the out side of the bearing housing by very carefully sliding it over the non threaded end of the bearing. **The grooved side of the seal (concave) should point towards the non threaded end of the bearing. The orientation of this seal is critical. Be sure it is oriented correctly!**  
(Picture 12)



11. Install the new, well greased, o-ring onto the IFP.  
12. Install the new, well greased, o-ring into the air sleeve cap.  
13. Install the new, well greased, o-ring onto the damping piston if your shock has that type of piston.

## ASSEMBLY

1. Clamp air sleeve cap eyelet securely in vice, and place seal bullet tool on end of shaft.
2. Lubricate the bearing assembly seals with an ample amount of assembly lube. Slide the bearing assembly onto shaft with the threaded end pointed up. (Picture 13) This should be done in a single smooth motion to avoid damaging the seals.

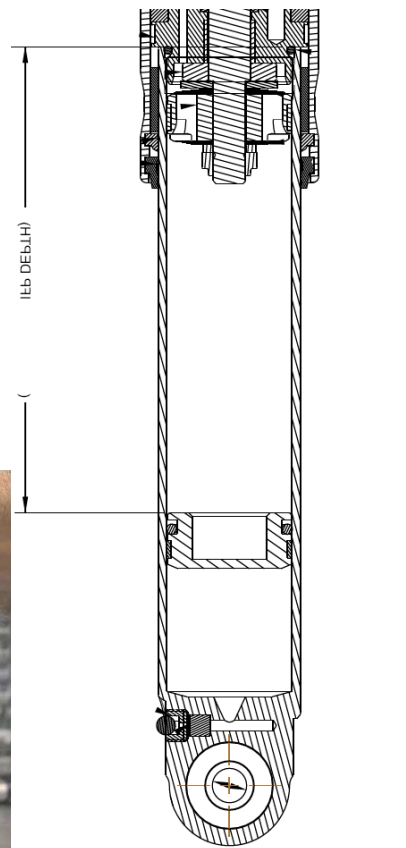
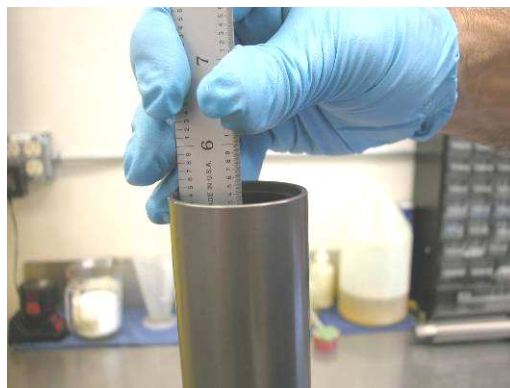


3. Slide the top out bumper onto the shaft.
4. Hold the piston assembly from underneath the top-out plate and place the end of the screwdriver onto the end of the shock shaft. Slide the piston assembly onto the shaft end. Check to make sure the piston assembly is properly seated, then install the piston lock nut. Torque the nut to 22 ft/lb, using the torque wrench and 9/16" socket. (Picture 14) Remove shaft assembly from vice and set it aside on a clean, lint free paper towel.



5. Clamp the impact body of the shock securely in the vice, with the open end of the body facing up.

6. **Generously lube** the IFP o-ring with assembly lube and wrap a new piston ring around it.
7. Insert the IFP into the shock body with the dished side facing up toward the open end of the shock body to just below the bearing threads. The IFP is a snug fit in the body. **Be sure it does not cock sideways and use plenty of grease to avoid damaging the o-ring on the bearing threads.**
8. The correct IFP depth is listed by shock part # on the back page of this instruction sheet. The shock part number is stamped into the air sleeve cap eyelet. The IFP depth is measured using either a 12" dial caliper or measuring scale with inches graduated in 10ths. The measurement is from the edge of the open end of the body to the outside edge of the IFP. (Picture 15) Using the 8" Pin Punch at the center of the IFP, slide the IFP into the body until it is at the proper depth specification (+/- 0.050) for your particular shock. You may either push the punch by hand or **lightly tap** with the hammer.



9. Install a new rubber nitrogen valve pellet into the nitrogen filler valve opening.
10. Thread the nitrogen valve pellet retainer into the nitrogen filler valve opening and tighten it using the 3/16" Allen wrench.
11. Fill the impact body with oil to the bottom of the bearing threads.
12. Wrap the new piston band around the piston, making sure the rounded edges face out. Insert the shaft assembly into the impact body. (Picture 16) Slowly push shaft into body until piston assembly is approximately ½ inch below the oil surface.



13. Slowly stroke the shaft assembly up and down over about a 1 inch range 2 or 3 times, being very careful not to pull the piston assembly out of the oil. There should be no air bubbles coming up from the piston assembly at this point.
14. Top off the shock body with oil and slowly pull the shaft up until the piston assembly is about in the middle of the bearing threads.
15. Holding the shaft in that position, slide the bearing assembly down the shaft and start threading it into the body by hand. Oil should flow out of the bearing bleed hole. (Picture 17)



16. As you thread the bearing assembly down, it will contact the damping piston assembly and pull it down into the shock body with it. As you thread the bearing in



from this point, be sure the damping piston assembly stays in contact with the bearing.

17. When the bearing is threaded all the way down, drop the steel ball into the bleed hole and thread the bleed screw into the bearing assembly and tighten it down using the 5/64" hex key. (Picture 18)



18. Using the # 398-00-249 bearing tool, tighten the bearing assembly into the body. (Approximately 50 ft/lb torque)
19. Push the shaft all the way down until the air sleeve cap lightly contacts the bearing assembly. It should go all the way down without any feeling of contact or interference. (Picture 19) **DO NOT attempt to pull the shaft back out of the body.**



20. If there is any interference while pushing the shaft into the body, the IFP is in the wrong location. **You must unthread the bearing assembly from the shock body and repeat steps 8 through 17 of assembly.** Failure to do so will result in improper performance, potential damage to the shock absorber or even rider injury. See the **Consumer Safety** section at the end of these instructions. If there is no interference, proceed to step 19 of assembly.
21. Remove the shock from the vice.



22. Securely clamp Fox Nitrogen Safety Needle in the vice. Be sure to point the air valve away from your face and body.
23. Insert the safety needle squarely into center of the nitrogen filler valve, and pressurize the shock to 200psi. The shock shaft should be fully extended from the pressure before you take the final pressure reading. (Picture 20) Continue charging with gas as you pull the shock away from the Fox Nitrogen Safety Needle using a smooth, straight motion. Keep the shock as straight as possible to prevent the safety needle from bending. As the safety needle is pulled free from the Fox air valve, a popping sound should be heard. **CHARGE THE SHOCK DAMPER IFP CHAMBER USING NITROGEN GAS ONLY. DO NOT FILL WITH ANY OTHER GASSES.** Doing so will compromise the performance of your shock and may be **EXTREMELY DANGEROUS!**



24. Hold the shock in the vice by the impact body eyelet in a horizontal orientation with the nitrogen filler valve facing up.
25. Insert the end of the 5/32" Allen wrench into each of the "pin" insertion holes on the top of the bearing assembly and force the oil out of them. (Picture 21) Wipe off the oil with a clean, lint free towel.



26. Using the hammer and pin punch, carefully tap a new nylon ball into the hex of the nitrogen valve pellet retainer. (Picture 22) **Be extremely careful not to strike the surface of the shock body and damage it with the hammer.**



27. Lightly lube the air sleeve cap o-ring and threads with FLOAT Fluid or Multi-purpose Lithium based grease (NLGI #2). Make sure the o-ring is seated all the way around in the groove in the cap.
28. Liberally lube the air piston seal with FLOAT Fluid.
29. Lightly grease the air sleeve wiper and back-up wiper.
30. Tightly wrap the new slide rings around the #2 Phillips screwdriver shaft to “pre-curve” them. (Picture 23) This will keep them on the bearing assembly during air sleeve installation.



31. Grease and install both slide rings in their grooves on the bearing assembly.
32. Slide the air sleeve over the body until the leading edge of the air sleeve is at the air piston. (Picture 24)



33. Carefully slide the air sleeve over the first installed slide ring and the air piston seal. You will feel a slight drag from the seal and slide ring, but no binding. If you feel solid binding, the slide ring may be out of its groove and you must pull back the air sleeve and repeat step 30.
34. Carefully slide the air sleeve over the second installed slide ring and half way to the air sleeve cap.
35. Again, you will feel a slight drag, but no binding. If you feel any solid binding, the second slide ring may be out of its groove and you must pull back the air sleeve and repeat step 32.
36. Remove the shock from the vice, turn it over, and put it back into the vice, holding it by the impact body eyelet.
37. Add one pillow pack of float fluid to each shock, each pack contains 5cc of fluid. The float fluid packs are part of the rebuild kit. (Picture 25)



38. Slide the air sleeve down to the air sleeve cap.
39. Thread the air sleeve into air sleeve cap and hand tighten until the air sleeve makes contact with the o-ring in the air sleeve cap.
40. Remove the shock from the vice, turn it over, and put it back into the vice, holding it by the air sleeve cap eyelet.
41. Tighten the air sleeve by hand until it bottoms in the air sleeve cap.
42. **Do not over tighten air sleeve or use tools other than your hands.**
43. Inflate shock using inflation instructions listed in the Pump Instructions.
44. Clean all oil residues from the shock and reservoir with solvent, and dry with compressed air in a well ventilated area. If compressed air is not available, dry the shock and reservoir using clean, lint free paper towels and let sit in a well ventilated area to allow the solvents to evaporate.
45. Slide the travel indicator o-ring on to the body.
46. Install reducers (or polyurethane bushings and steel sleeves) in eyelets.
47. Congratulations, you're done

**CONSUMER SAFETY:**

We highly recommend if for any reason your shock absorber ever loses damping, oil, air pressure, behaves shock erratically, or makes any unusual noises that you **STOP RIDING IMMEDIATELY** and have your absorber inspected by a FOX Racing Shox dealer or contact FOX Racing Shox directly at 1-800-FOX-SHOX.

**RIDING ON A SHOCK ABSORBER THAT IS BROKEN OR MALFUNCTIONING CAN RESULT IN LOSS OF CONTROL, CRASHING, AND POSSIBLE SERIOUS INJURIES OR DEATH.**

**FLOAT AIRSHOX IFP DEPTH:**

<b>IFP Depth:</b>	<b>FOX Part #:</b>
7.24	950-51-215
7.27	950-51-214
7.74	950-51-205
7.26	950-51-216
6.19	950-51-057
6.19	950-51-057
8.08	930-52-200
8.08	930-52-200
6.54	930-13-200
6.54	930-13-200
6.68	950-50-045
7.36	950-50-050
7.36	950-50-200
6.6	950-50-202
7.20	930-50-200
7.20	930-50-200
6.19	950-50-046
6.97	950-50-051
6.97	950-50-201
6.81	950-52-200
6.81	950-52-201
6.80	950-52-018
6.80	930-11-200
6.69	950-12-201
6.60	950-12-200
6.30	950-12-202
6.69	950-12-208
7.24	950-12-207
6.27	930-12-200
6.27	930-12-200
6.27	930-12-220
6.34	930-12-219
6.34	930-12-219
6.34	930-12-201
6.34	930-12-201

**Contact Information**

FOX Racing Shox 130 Hangar Way Watsonville, CA 95076	Phone: 800.369.7469 ext. 7647 North America: 800.369.7469 Fax: 831.768.7026
E-mail: <a href="mailto:info@foxracingshox.com">info@foxracingshox.com</a>	Website: <a href="http://www.foxracingshox.com">www.foxracingshox.com</a>
Business Hours: Monday-Friday 8:00AM-5:00PM, Pacific Time	

**Service / Warranty**

1. Contact FOX Racing Shox at 800.FOX-SHOX (800-369-7469) to obtain a Return Authorization Number (RA) and shipping instructions.
2. Satisfactory proof of purchase receipt is required for warranty consideration.
3. Mark the Return Authorization Number (RAN) and the Return Address on the outside of the box. Send the shock to FOX Racing Shox with the shipping pre-paid by sender.
4. Include a description of the problem, vehicle information (manufacture, year & model), type of FOX product, spring rate, type of riding, and a return address with daytime phone number.

**Warranty Policy:**

FOX Racing Shox products are covered by a 1-Year Limited Warranty against defects in materials and/or workmanship. Any modifications to the product will void all warranty. This Warranty will be extended to the original retail consumer of an OEM Customer's FOX Racing Shox equipped vehicle and is valid for one year from the original date of purchase from an OEM Customer's authorized dealer. Warranty is limited to the repair or replacement of the FOX Racing Shox product. FOX Racing Shox reserves the right of final decision with regards to all warranty related issues.

Warranty is void when damage to the shock has occurred from the following:

- Abuse.
- Seal damage due to power washing.
- Damage to the exterior finish caused by debris, rocks, or crashes.
- Any attempts to disassemble shock absorber.
- Modifications.
- Non-factory oil use or improper service
- Shipping damage or loss (purchase of full insurance is recommended).

**Methods of Payment**

VISA, MasterCard and/or Cashier's Check

**Methods of Shipping**

FOX Racing Shox uses UPS Ground Service within the USA. Customer may request UPS Air Service at an extra cost. All non-warranty shipping charges are the customer's responsibility.

