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

DHX Air Rebuild

View OEM DHX Air Rebuild Procedures.

Note: The DHX OEM version does not have a Schrader Valve on the reservoir.

Select a PDF drawing fitting your DHX Air product specification.

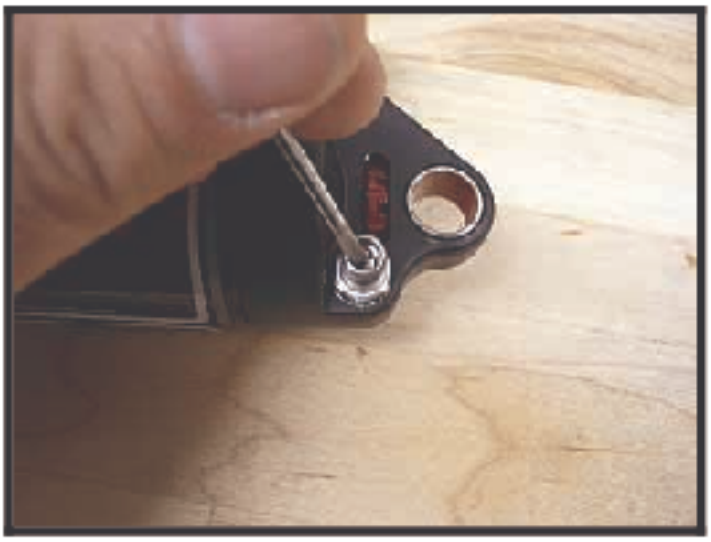
Disassembly

1. Prepare the work area. Lay out a clean shop towel on which you can store and organize the shock parts.

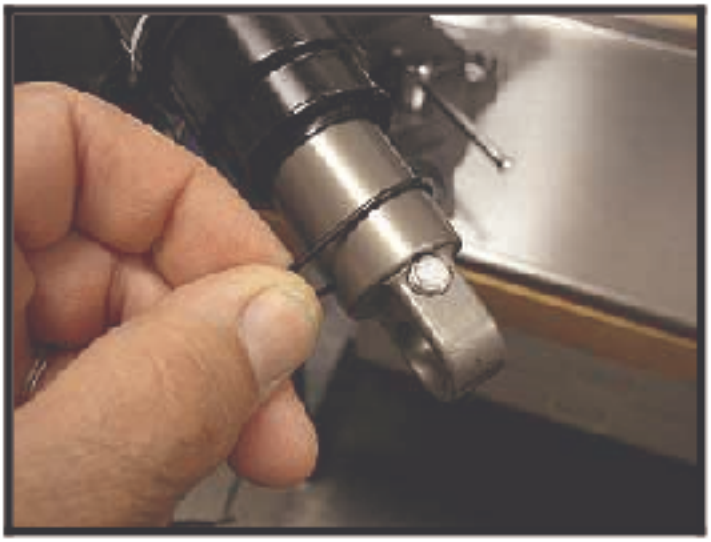
2. Put on your safety glasses and use rubber gloves if desired.

3. Remove the mounting hardware before disassembly. Record the shock's eye-to-eye length and total travel. This information will assist you in determining the IFP setting, and for ordering replacement parts.

4. Unthread the air sleeve air cap and release the air from the air sleeve.



5. Remove the travel indicator o-ring.



6. Remove the air sleeve from the damper by turning the air sleeve counterclockwise.

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.

7. Clean the inside area of the damper and air sleeve.

8. Clean and inspect the bottom-out o-ring on damper shaft.

9. Remove the bearing housing seal with a plastic o-ring pick and remove the white bearings. Be careful not to scratch the seal gland.

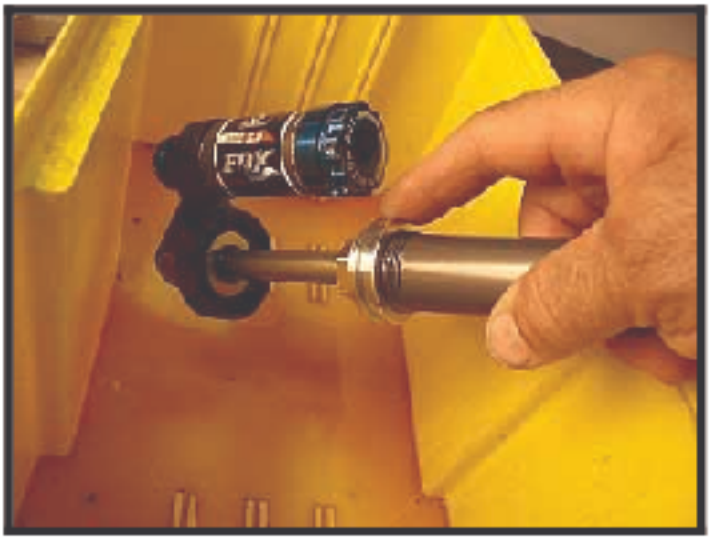
10. Remove air valve cap. Release the air from the Schrader valve using a 2mm hex key wrench or another tool.
Remove the Schrader valve using a 3/8" open-end wrench.

Warning! **FOX air shocks contain high air pressures. Before servicing a FOX air shock, certain precautions and countermeasures need to be taken. Always wear eye protection when servicing any FOX product.**

11. Remove the bearing housing and damper shaft with a 22mm open-end wrench (counterclockwise).

12. Note the serial numbers on the bearing housing.

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



14. Clean the body and air sleeve, then set them aside.

15. Unthread the bottom-out knob set screws with a 2mm hex key. The set screws do not need to be removed. Remove the bottom-out knob.

16. With the reservoir eyelet secured in a soft-jaw vise, remove the reservoir end cap with a 24mm socket wrench. If the reservoir body starts to unthread from the reservoir eyelet, secure the reservoir body with shaft clamps.

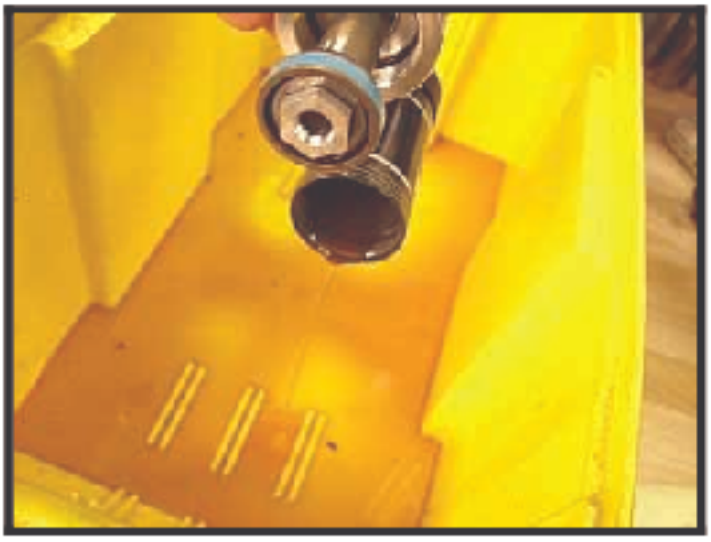
17. Remove the position-sensitive volume adjuster.

18. Remove the IFP by gripping the flats with needlenose pliers.

19. Remove the IFP bleed screw with a 2mm hex key. Hold onto the wrench flat with a 9mm open-end wrench.

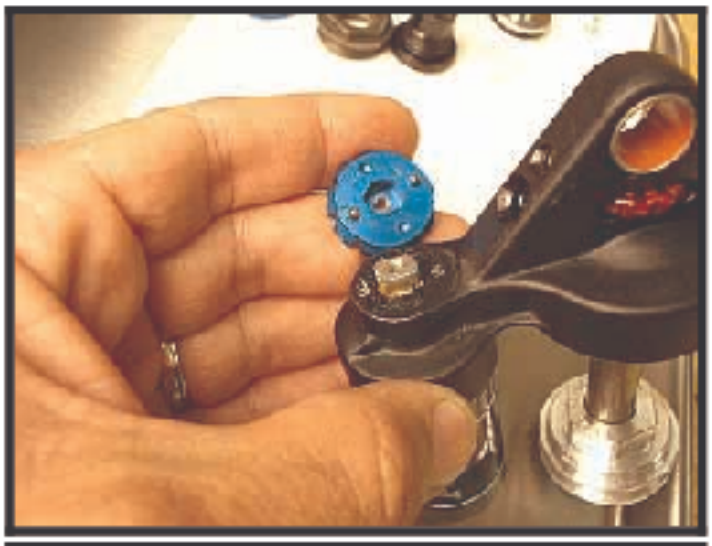
20. Clean the IFP. Replace the IFP o-ring, if necessary.

21. Pour remaining oil from inside the reservoir body into a drain pan.



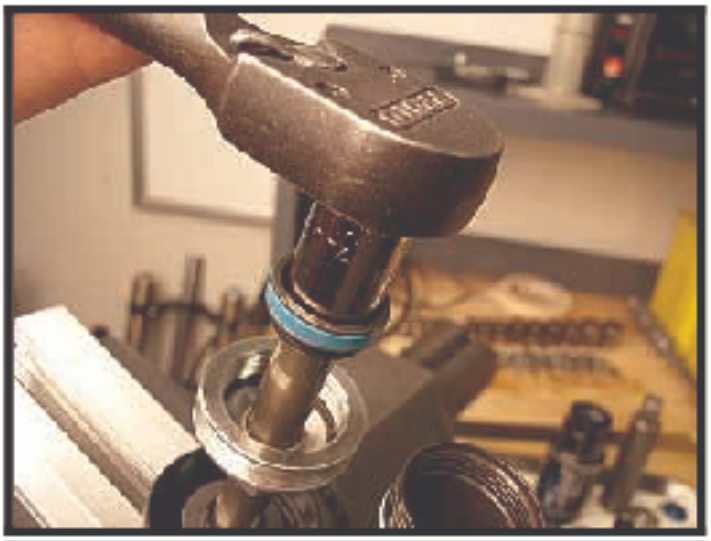
22. Remove the screw from the ProPedal adjuster knob using a 2mm hex key.

23. Remove the ProPedal knob. Be careful not to lose the two steel detent balls and springs inside the detent holes under the knob. Remove the balls and springs, clean, and set aside.



24. Remove the bleed screw with a 2mm hex key.

25. Set the eyelet into a soft-jaw vice and remove the piston assembly with a 1/2" (13mm) socket wrench.



26. Keep the piston assembly organized by laying it out in order on a clean shop towel. This is also a good time to inspect, clean and, if necessary, replace these parts.

27. Remove the bearing housing by sliding it off the damper shaft. Clean, inspect, and replace, if necessary, the bearing housing seals.

28. Remove the bottom-out o-ring and washer. Clean, inspect, and replace, if necessary.

29. Thread the reservoir end cap into the reservoir body.

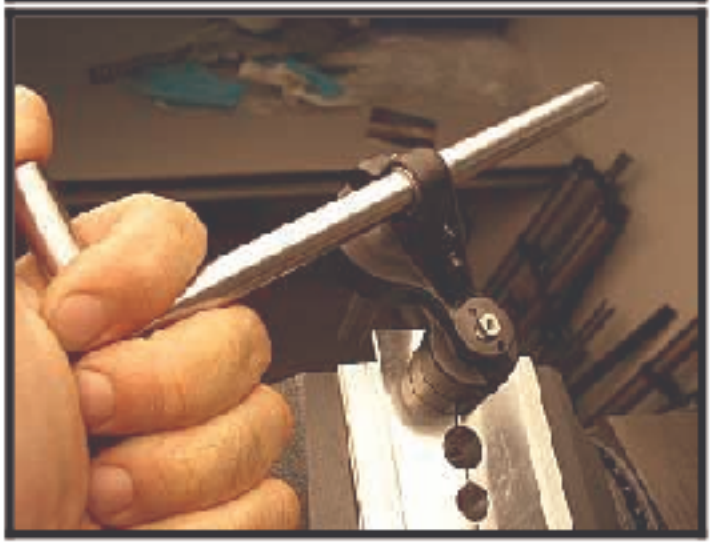
30. Attempt to remove the reservoir from the reservoir eyelet without removing the decal. However, the decal will most likely be damaged. (Find replacement decal P/N's) In order to remove the decal, warm it up slightly to soften the adhesive; warm to the touch works best. Peel the decal away from the reservoir and clean off any leftover glue with cleaner (e.g., Simple Green, isopropyl alcohol, parts washer solvent).

31. Place the reservoir body into shaft clamps. Clamp the assembly into a soft-jaw vise.
Tech Tip: Clean the shaft clamps with isopropyl alcohol and leave them wet. This will help the shaft clamps grip the reservoir body. (Quick primer on Surface Tension and Energy of Cohesion)

32. Heat up the reservoir at the bottom where the reservoir threads into the eyelet. The heat will soften the factory-installed Loctite on the threads. Heat the reservoir until it is just hot to the touch.

Localized Heating Methods

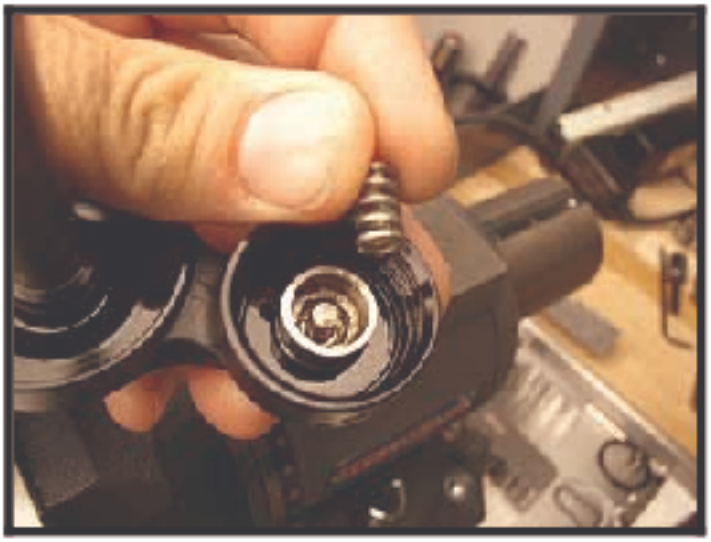
33. Use ½-inch bar stock and insert it into the DU bushing bore. Turn the eyelet counterclockwise to unthread the reservoir body from the eyelet.



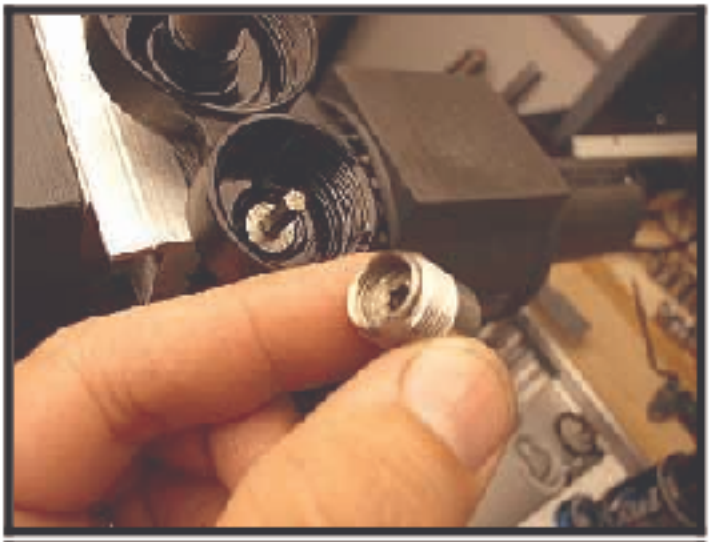
34. Clean the Loctite from the shaft and eyelet threads.

35. Remove the large rebound check valve spring.

36. Remove the smaller ProPedal spring.



37. Using the FOX Racing Shox DHX Hex Socket Wrench (FOX P/N 398-00-250), unthread the ProPedal adjuster. Remove the ProPedal adjuster spring preload assembly and hex shaft.



38. ProPedal adjuster parts:

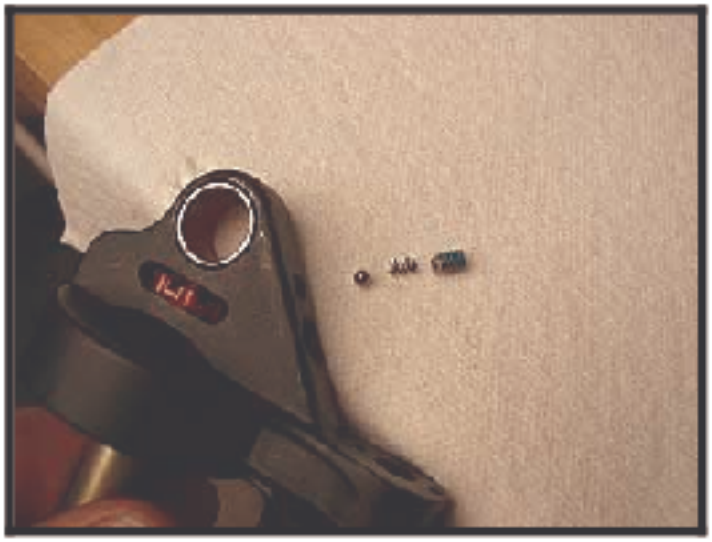
39. Remove the o-rings (two) from the reservoir eyelet assembly and ProPedal adjuster bore, and clean or replace these as necessary.

40. Retrieve the reservoir body and remove the rebound check valve.

41. Remove the bottom-out Boost Valve o-ring, and clean or replace as necessary.

42. Here is a view of the top of the bottom-out Boost Valve with retaining ring. Disassembly and service of the Boost Valve is rare.

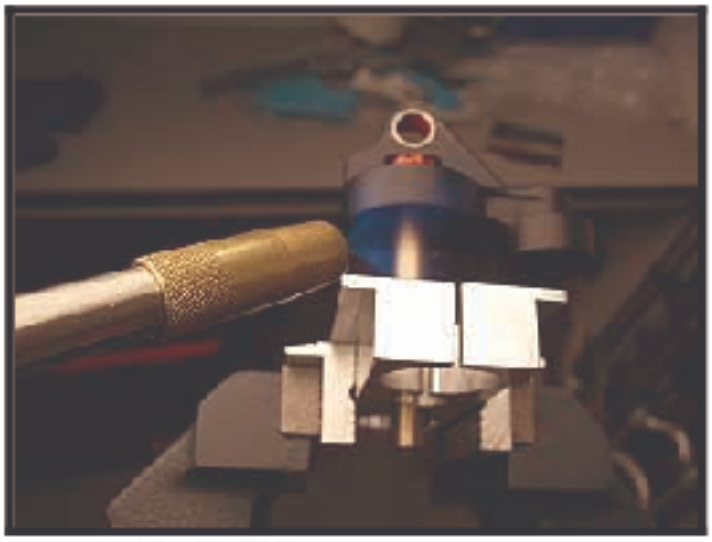
43. With a 2mm hex key, remove the rebound detent set screw, spring, and ball.



44. Clean the damper shaft with isopropyl alcohol. Clean the shaft clamps as well and leave them wet. Using the shaft clamps, clamp the damper shaft into a soft-jaw vise.

Note: **Do not overtighten the vise when securing the damper shaft or damage may result.**

45. Heat up the top of the damper shaft to soften the red Loctite; warm to the touch works best. Do not overheat.



Localized Heating Methods

46. Unthread the eyelet from the damper shaft. Do not allow the damper shaft to spin in the shaft clamps, or damage to the shaft finish may result.

47. Clean Loctite from the threads on the shaft, eyelet threads, and eyelet shaft threads.

48. Slide the rebound adjuster knob out from the eyelet.

49. Remove the rebound adjuster rod while holding onto the rebound knob (the knob may fall out as you slide out the rod). Inspect the rebound adjuster rod o-ring, and clean or replace as necessary.
Remove the rebound knob. Take note of the knob's orientation; the slots on the knob will point to the DU bushing.

50. Remove and inspect the o-ring located inside the threaded bore of the eyelet. Replace as necessary. Set assembly aside for now.

51. All major components have been disassembled. Clean and inspect all the parts that are neatly laid out in assembly sequence on your shop towel. Replace seal/o-rings, etc., before beginning assembly.

Assembly

1. Place the rebound check valve back into the bottom of the reservoir body.

2. Replace the bottom-out Boost Valve o-ring. Lubricate the o-ring and set the assembly aside.

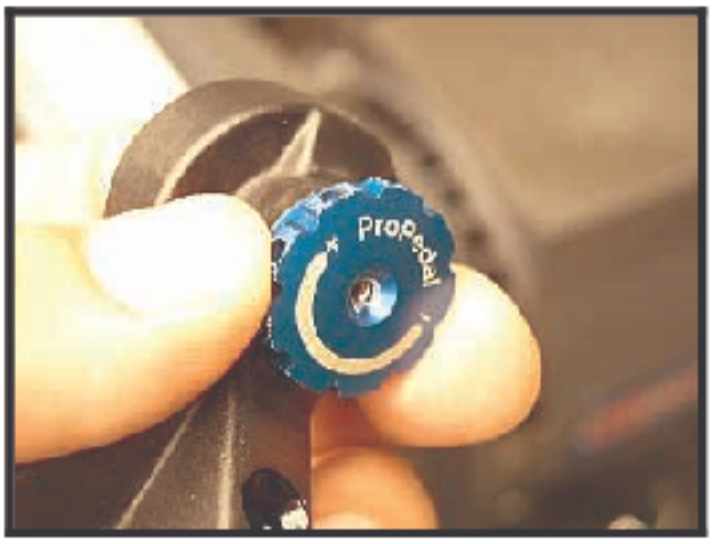
3. Place a small amount of grease on the ProPedal adjuster parts. Insert the spring adjust rod into the set screw.

4. Thread the set screw/spring adjust rod into the ProPedal spring adjust insert.

Tech Tip: The threads on these parts are reverse (i.e., left-handed).

5. Using the DHX Hex Socket Wrench, thread the ProPedal adjuster back into the reservoir eyelet by hand.

6. Test the ProPedal adjuster by using the ProPedal knob. You should be able to turn the adjuster knob approximately 3.5 full turns. Set the ProPedal knob aside for now.

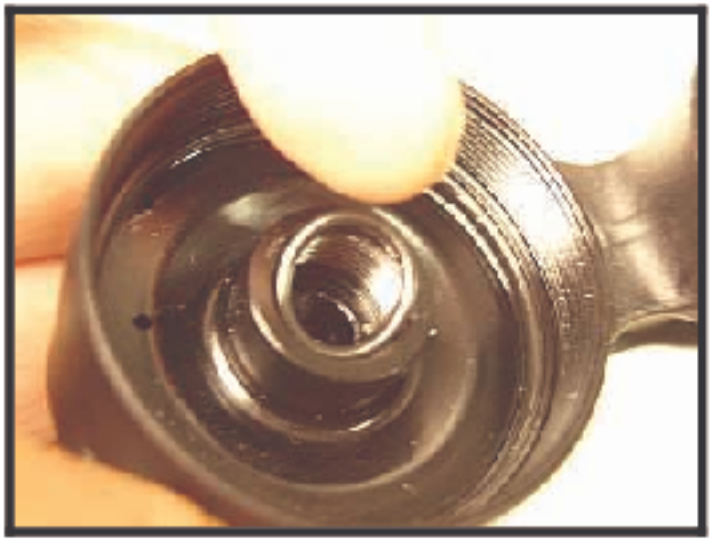


7. Using the DHX Hex Socket Wrench, torque the ProPedal housing to 110 in-lbs. (12.43 N-m). Set the assembly aside.

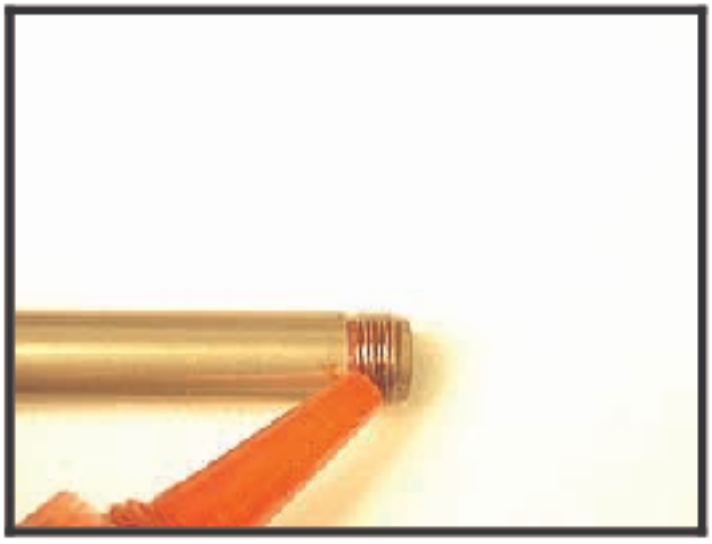
8. Insert the rod adjuster into the damper shaft. Ensure that the o-ring end of the rod adjuster is at the end with the threads on the outside diameter of the damper shaft.

9. Turn the rod adjuster so that the set screw is above the rebound port drilled into the side of the shaft.

10. Before threading the damper shaft back into the eyelet, ensure that the o-ring at the bottom is properly installed.

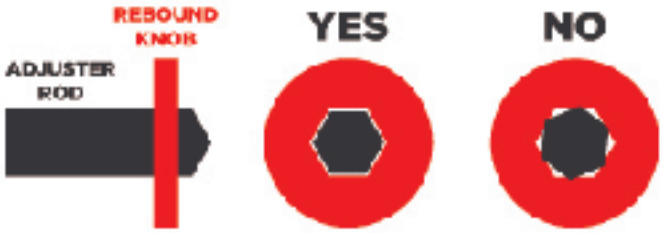


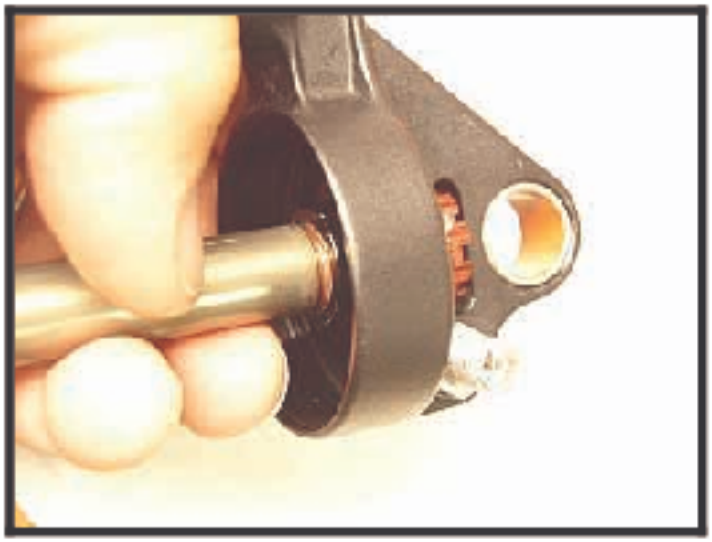
11. Place two drops of red Loctite #26231 onto the threads of the damper shaft.



12. Slide the rebound knob into the eyelet assembly (like a coin into a slot machine). Take note of the knob's orientation; point the slots on the knob towards the DU bushing.

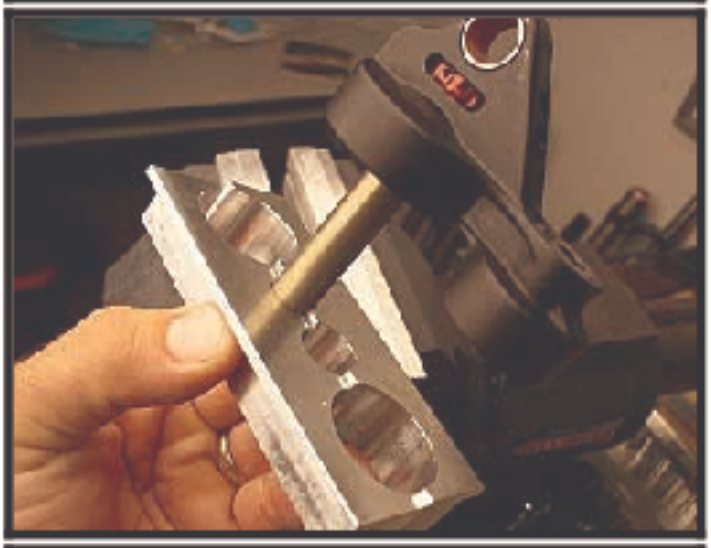
13. Thread the shaft into the eyelet. Ensure that the top of the rod adjuster is correctly inserted into the hex feature in the center of the rebound knob.
Tech Tip: Turn the knob and view through the rebound port on the side of the shaft. You should see the set screw move up and down.





14. Using the Eyelet Torque Wrench tool (P/N 398-00-031-A; shown below), torque the eyelet assembly to 110 in-lbs. (12.43 N-m). Using the shaft clamps, clamp the damper shaft in a soft-jaw vise.

Note: **Do not overtighten the vise when securing the damper shaft or damage may result.**



15. Place the bottom-out washer and bottom out o-ring onto the shaft and slide up to the eyelet.

16. Double-check the bearing housing and replace seals as necessary. Lube the seal and DU bushing in the bearing housing with grease. Gently slide the bearing housing onto the shaft all the way up to the bottom-out o-ring.

17. Place the damper piston with piston bolt onto the shaft. Thread it in all the way with gentle force.
Tech Tip: Ensure the rebound adjuster knob moves freely without bind.

18. Place the shaft eyelet assembly into a soft-jaw vise and torque the ½-inch piston bolt to 75 in-lbs (8.47 N-m).

19. Test the rebound knob/adjuster again to make sure it moves freely without bind. Set the assembly aside.

20. Working on the reservoir endcap assembly, install the ProPedal adjuster spring (small) and rebound check Spring (large).

21. Before threading the reservoir body back into the eyelet, ensure that the rebound check valve is in place and that the o-ring is on the end of the bottom-out Booster Valve.

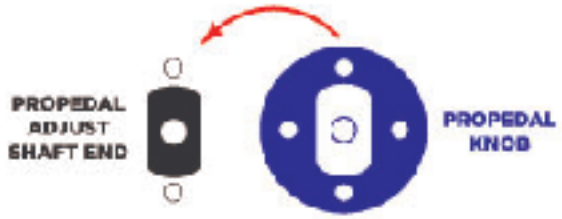
22. Place two drops of blue Loctite #24241 onto the reservoir threads. Apply the

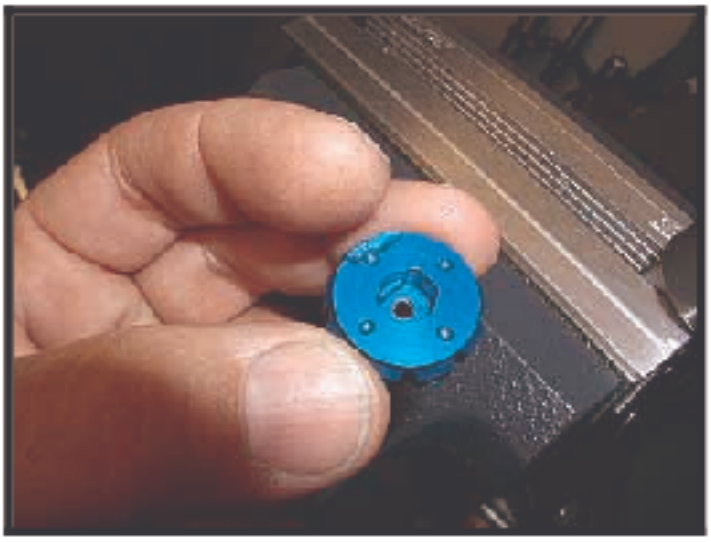
Loctite to the middle three threads only, keeping it off the o-ring gland. Thread the reservoir body onto the eyelet. Make sure the rebound check spring, ProPedal spring and rebound check valve are staying in place as you thread to final position (hand tight is good for now).

23. Place the two small springs and small steel balls back into the ProPedal detent holes on the eyelet. A small amount of grease will help the balls stay in place and provides *Smooth Action*™ when turned.

24. Place a dab of grease on the underside of the ProPedal knob. Put on the ProPedal knob (line up slot in knob to adjuster rod). Align the oval features on the shaft

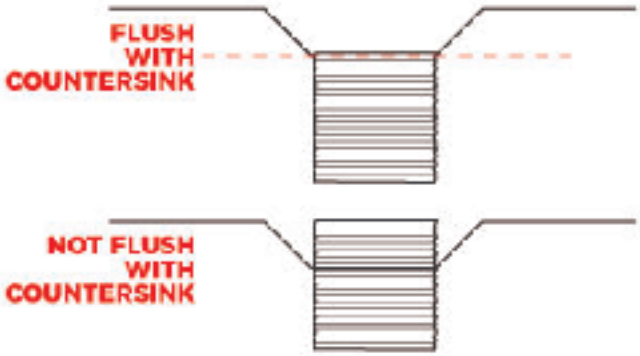
end and ProPedal knob.

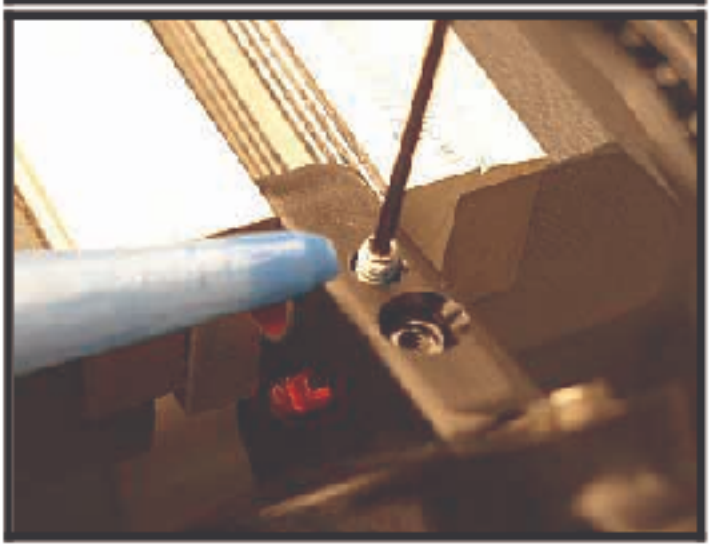




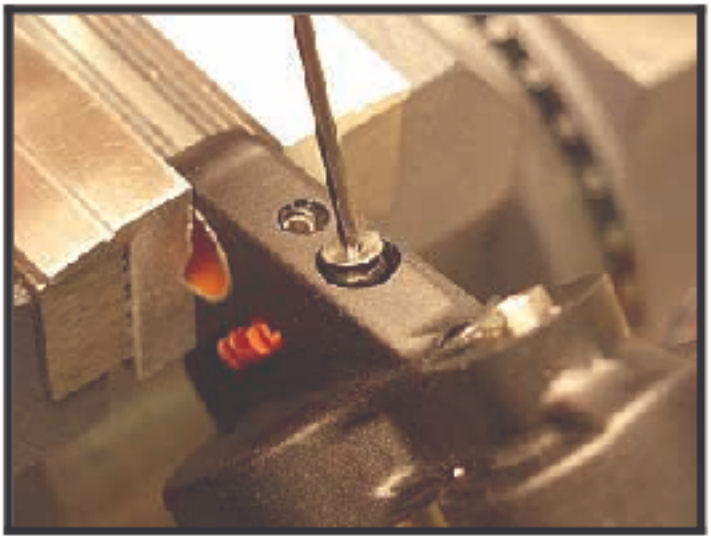
25. Place one drop of blue Loctite #24241 onto the ProPedal adjuster screw. Using a 2mm hex key and torque wrench, torque to 4 in-lbs. (0.45 N-m).

26. Grease, then drop the steel ball into the rebound adjuster detent hole. Place the spring on top of the ball. Add one drop of blue Loctite onto the set screw. Screw the set screw into the thread until it is flush with the bottom of the countersink. Test the rebound knob for detent function. The detent should be firm, but not hard to turn. Adjust the set screw to adjust the preferred rebound knob feel.





27. Thread in the bleed port screw using a 2mm hex key. Inspect the o-ring and replace as necessary.



28. Place the reservoir eyelet into a soft-jaw vise and fill the reservoir with 10 wt. FOX Suspension Fluid. Fill the reservoir to the bottom of the threads on the inside diameter of the reservoir body.

29. Using a 2mm hex key, thread the IFP bleed screw into the IFP a couple of turns only—the bleed screw will be removed again shortly.

30. Inspect the IFP o-ring and replace if necessary.

31. Slowly push the IFP into the reservoir. Push down until you see the last thread on the inside diameter of the reservoir body. Oil and air will emerge from the piston bolt hole. This is normal.

32. Unthread the IFP bleed screw and set aside.

33. Very slowly push the IFP further into the reservoir until you see a small amount of oil flow out of the bleed port. Stop pushing as soon as the oil starts flowing out. This step purges the air trapped under the IFP.
Tech Tip: Unless you want suspension fluid squirted in your face, it is imperative that you push the IFP down **SLOWLY**.

34. Thread the IFP bleed screw back into the bleed port. There will be a small amount of oil on top of the bleed port. This is normal and ensures that air does not enter the IFP chamber as you screw the bleed screw back in. A 9mm open-end wrench can be used to hold the IFP steady as you torque the IFP bleed screw to 7 in-lbs. (0.79 N-m) using a 2mm hex key.

35. Wipe off any excess oil within the reservoir body and on top of the IFP. Leave the eyelet clamped into the soft-jaw vise for now.

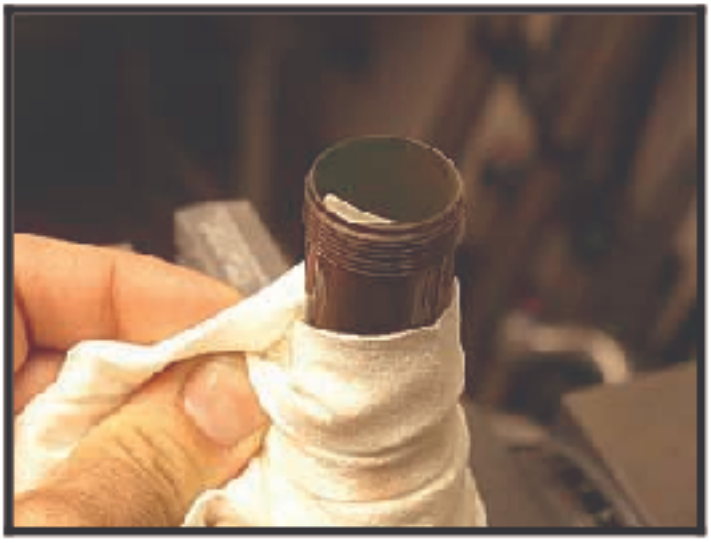
36. Holding the damper body still, pour 10 wt. FOX Suspension Fluid all the way up to the top of the body.
Tech Tip: Keep the damper body upright by securing it to the graduated cylinder with a travel o-ring. Let stand a few minutes to allow air bubbles to escape from the oil.

37. Pour FLOAT Fluid (**NOT** suspension fluid) into the middle of the piston bolt and make sure the piston and the bearing house are topped off with oil. The important point here is that you want all cavities full of oil, not air.

38. Release the reservoir from the vise then slide the bearing housing all the way up to the piston stop plate. Be careful not to spill the suspension fluid. It is import to maintain the reservoir in an upright position.

39. Place the damper body into soft-jaw vise and top off with suspension fluid (**NOT** FLOAT Fluid). The fluid should be flush with the top of the damper body. Ideally, it should form a convex meniscus.

40. Wrap exposed body with a shop towel. This will catch excess oil as the reservoir is threaded on.



41. Ensure that the bearing housing/damper is in the state shown in step 39. In **one fluid motion**, flip the bearing housing/damper piston onto the oil-filled damper

body and thread it on by hand.

42. With a 22mm crows-foot and torque wrench, torque the bearing housing/damper assembly to 360 in-lbs. (40.67 N-m).

43. Place the eyelet back into a soft-jaw vise with the bleed screw facing up. Unthread the bleed screw. A little oil and air will escape, which is normal. Wrap the bleed screw area with a shop towel. As the IFP is set, oil will flow out of the bleed screw.

44. Use the 2007 Rear Shock Cheat Sheet to locate the shock's IFP setting. Adjust the calipers to this IFP setting.

45. Slowly push the IFP into the reservoir. Oil and possibly some air bubbles will flow out of the bleed port.

46. Once the IFP is set, top off the bleed port with oil and thread the 2mm screw through the oil. Torque the screw to 7 in-lbs. (0.79 N-m).

47. Clean out excessive oil from the IFP air chamber.

48. Assemble the bottom-out adjust control. Double-check the o-ring and lube the threads of the control.

49. Push the position-sensitive volume adjuster (i.e., bottom-out adjust) into the IFP chamber and torque the end cap to 420 in-lbs. (47.45 N-m).

50. Place the bottom-out adjust knob onto the end of the reservoir. Thread in the 2mm set screws and torque to 4 in-lbs. (0.45 N-m).

51. Add grease and replace the o-ring, if necessary, then screw on the Schrader valve using a 3/8" open-end wrench.

52. Pump the reservoir assembly air chamber to 135 psi (9.31 bar) using a FOX High Pressure Pump.

53. Pump the IFP to 135 psi (9.31 bar).

54. Clean the reservoir with isopropyl alcohol, and replace decal if necessary.

55. Perform the Air Sleeve Maintenance procedure, if necessary. Otherwise, install the air sleeve and travel indicator o-ring.

56. Return the shock back to the now-happy customer. Smile.

END

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