

How to Change the O-rings on your Shaw 531 Gas Caps (on newer Bonanzas)

Disclaimer: I am not an A&P, I have no mechanical talents, and I do not know any of the technical terms for the parts. Follow at your own risk.

Items needed per gas cap:

M25988/1-338 O-ring
M25988/1-010 O-ring
Small cotter pin

Tools needed:

Wire cutter or plier to get old cotter pin out
Small wrench 10mm or 3/8 inch
DC-4 silicone grease

More info on O-rings can be obtained from here:
<http://www.csobeech.com/o-Rings.html>

Does your cap look like this? Notice it says Shaw and part #531



Make note that the eye of the cotter pin is vertical and note the position of the two legs of the cotter pin in this pre-disassembled picture. Use some pliers to remove the cotter pin and a wrench to remove the nut and you should see the following parts going from the top of the picture to the bottom: top of gas cap, 3/4 washer, handle, full washer, spring, bottom of gas cap, washer with tab for the chain, and nut with hole in it for the cotter pin.



Take the handle and remove the small O-ring and install the new O-ring. Mike suggested some DC-4 to lubricate the shaft.



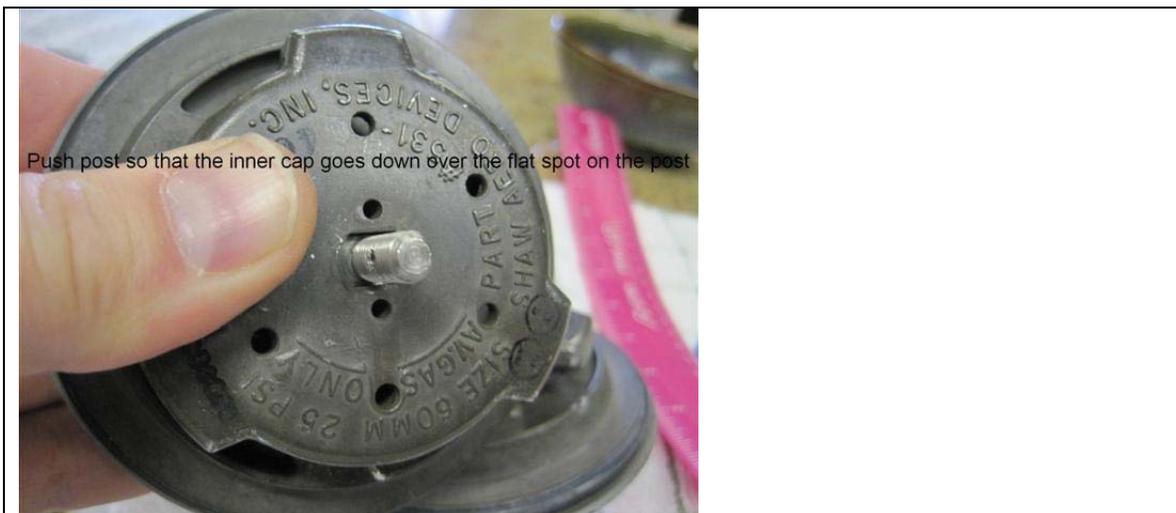
Now the next part is a little tricky because you have to push the handle (and $\frac{3}{4}$ washer) all the way down on the top, put the full washer on, put the spring on, put the bottom of the cap on while lining up the notch on the handle with the notch on the bottom cap, add the tab washer, and finally the nut. Here are some pictures to help.

Note the handle is in the open position and fully seated in the top cap.





Underside of the top cap with full washer and spring in position



Side view of the assembly just prior to the tab washer and nut with hole in it



Tighten the nut until it feels pretty good to open and close the handle but do not put the cotter pin in yet. Go back to the plane and try the gas cap on. Fiddle with the nut until it is tight but not so tight that you need to pry the handle up with a crow bar. When it feels comfortable put the cotter pin in as show in the first picture.

I waited till the end to put the large O-ring on but it could be placed at any time before you hook the chain back on the cap. Good luck! Hope this helps you.



Cracking O-rings

