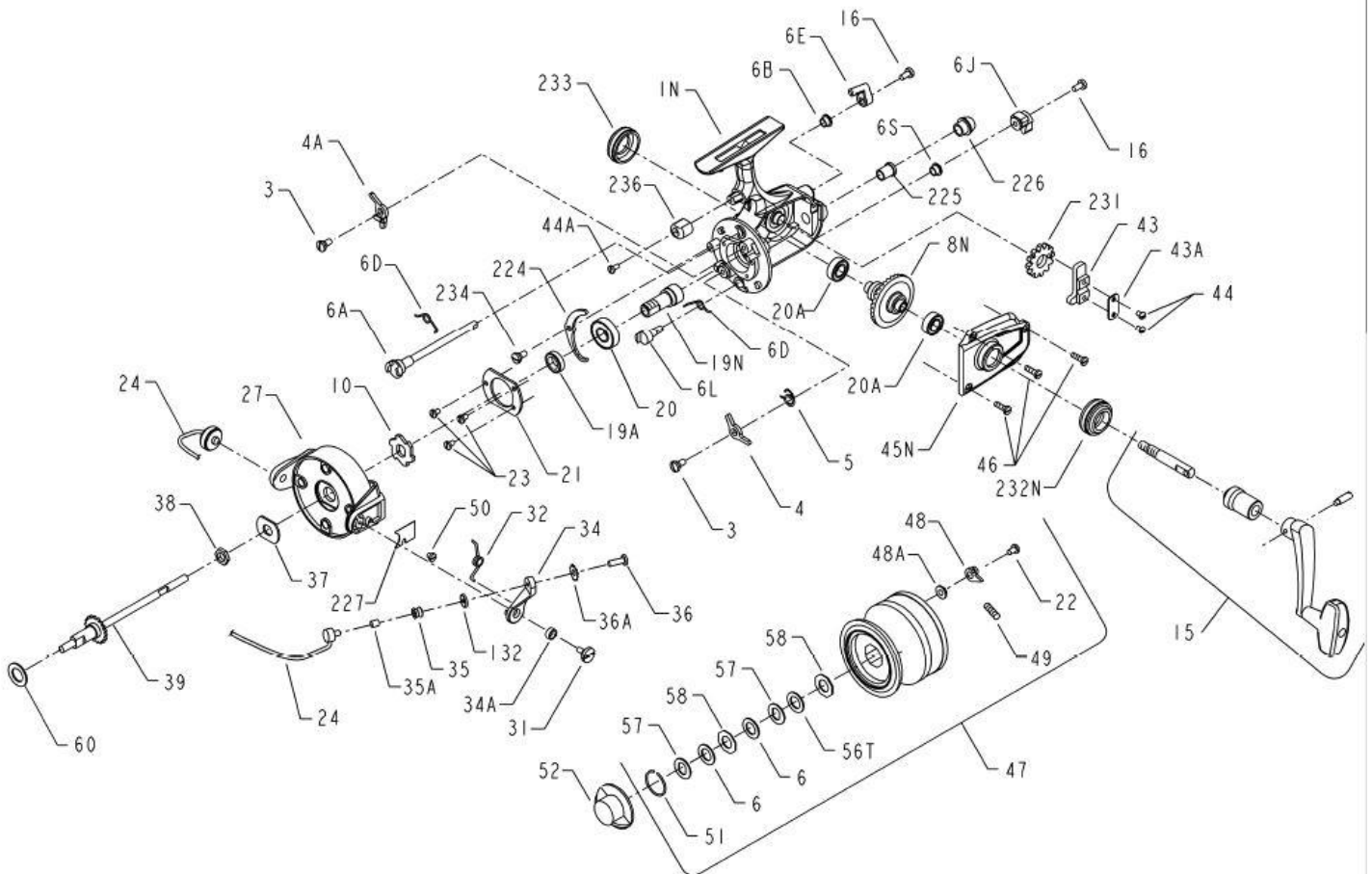


TUTORIAL: Penn Spinfisher 6500SS

By BigT « on: March 18, 2010, 10:47:54 PM »

Now, I know most of you are die-hard conventional reel users... but here's a spinner for something different. Posted with a certain amount of nervousness in the shadow of experts like Alan and I know a lot of members do this professionally. Hope this is up to scratch....

Anyway, I've had this reel for a long time and while by today's standards it's 'old tech', Penn Spinfishers can take a lot of abuse without missing a beat. They're built simple and tough (although less tough now they get a clutch bearing instead of anti-reverse dogs). Lets open this one up



<u>KEY NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1N	001N6500	Housing 231 231 650 Crosswind Gear
3	003 750	Dog Screw (2 req.) 232N 232N6500 Bearing Cover (Open)
4	004 650	Dog 233 233 650 Bearing Cover (Closed)
4A	004A650	Silent Dog 234 234 750 Transfer Lever Screw
5	005 704	Click Dog Spring 236 236 750 Trip Bumper
6	006 155	Drag Washer HT-100 (2 req.) * *300 6500 Power Handle
6A	006A650	Upper Eccentric
6B	006B750	Upper Eccentric Liner
6D	006D710	Eccentric Spring (2 req.)
6E	006E750	Anti-Reverse Lever
6J	006J750	Silent Dog Lever
6L	006L650	Silent Eccentric
6S	006B700Z	Silent Eccentric Liner
8N	008N6500	Main Gear
10	010 650	Ratchet
15	015P6500	Handle Assembly
16	016 910	Eccentric Screw (2 req.)
19A	019A650	Pinion Spacer
19N	019N6500	Pinion
20	020 704	Ball Bearing
20A	020 6500	Ball Bearing (2 req.)
21	021 750	Bearing Cover
22	022 750	Spool Click Screw
23	023 750	Bearing Cover Screw (3 req.)
24	024 650	Bail Wire
27	027 650	Rotor
31	031 750M	Bail Arm Screw
32	032 750	Bail Arm Spring
34	034 750	Bail Arm
34A	034A750	Bail Arm Bushing
35	035 750	Liner Roller
35A	035A704	Line Roller Bushing
36	036 750	Bail Stud Screw
36A	036A750	Lock Washer
37	037 650	Rotor Washer
38	038 710	Rotor Nut
39	039 650	Spool Shaft
43	043 750	Crosswind Block
43A	043A750	Crosswind Block Plate
44	044 750	Crosswind Block Screw (2 req.)
44A	044 750	Trip Bumper Screw
45N	045N6500	Housing Cover

46	046 750	Housing Cover Screw (3 req.)
47	047 6500	Spool (Complete)
48	048 750	Click Tongue
48A	048A750	Click Tongue Washer
49	049 710	Click Tongue Spring
50	050 712	Bail Spring Cover Screw
51	051 650	Retaining Ring
52	052 650	Drag Knob
56T	056T650	Drag Washer (Teflon®)
57	057 650	Drag Washer (Keyed) (2 req.)
58	058 650	Metal Keyed (Octagon) (2 req.)
60	060 750	Thrust Washer
132	132 750	Roller Washer
224	224 650	Transfer Lever
225	225 750	Crosswind Shaft Bushing
226	226 7500	Bushing Cap
227	227 750	Bail Spring Cover

Here's a link to the schematics....

<http://www.mikesreelrepair.com/schematics/displayimage.php?album=12&pos=158>



First, unscrew the drag tensioning knob (key #52) and remove the spool





Let's look after the drag next... have a look at how tiny those drag washers are for a relatively big reel... smaller than on my Shimano Stradic 2500... but testament to carbon drags, still up to tackling with big fish smoothly.



Remove the retaining spring (key #51) carefully so it doesn't go flying...



and take out the drag washers...



Give the HT-100 washers (key #6)... there are 2 of them... a rub with a clean cloth to remove any accumulated crud and to drive any old grease into the washer and out of the way, before reapplying fresh drag grease.





Then reassemble the drag, making sure everything goes back in the same order.



While we've got the spool in hand, flip it over and apply a coat of grease to the clicker and spring.



Put the spool aside and remove the handle, handle collar (key #232N), felt seal washer (key #17N) and opposite side bearing cover (key #233).





Back out the 3 screws (key #46) so you can remove the left side plate (key #45N)





Remove the left side bearing (key #20A), open it up by removing the retaining clip from the shields using the 'Alan Tani' approved fish hook method 🐟





and give it a good clean to clear out all the old lube... I did this before converting to Alan's Carb Cleaner method, so used white spirit. Put the clean bearing to one side... we'll get back to that in a minute.



The main drive gear (key #8N) just lifts out.



There are 2 screws (key #44) holding the shaft retaining plate (key #43A) on the oscillating slider (key #43)... these come out so the plate can be removed.





Then, the main shaft (key #39) slides out.

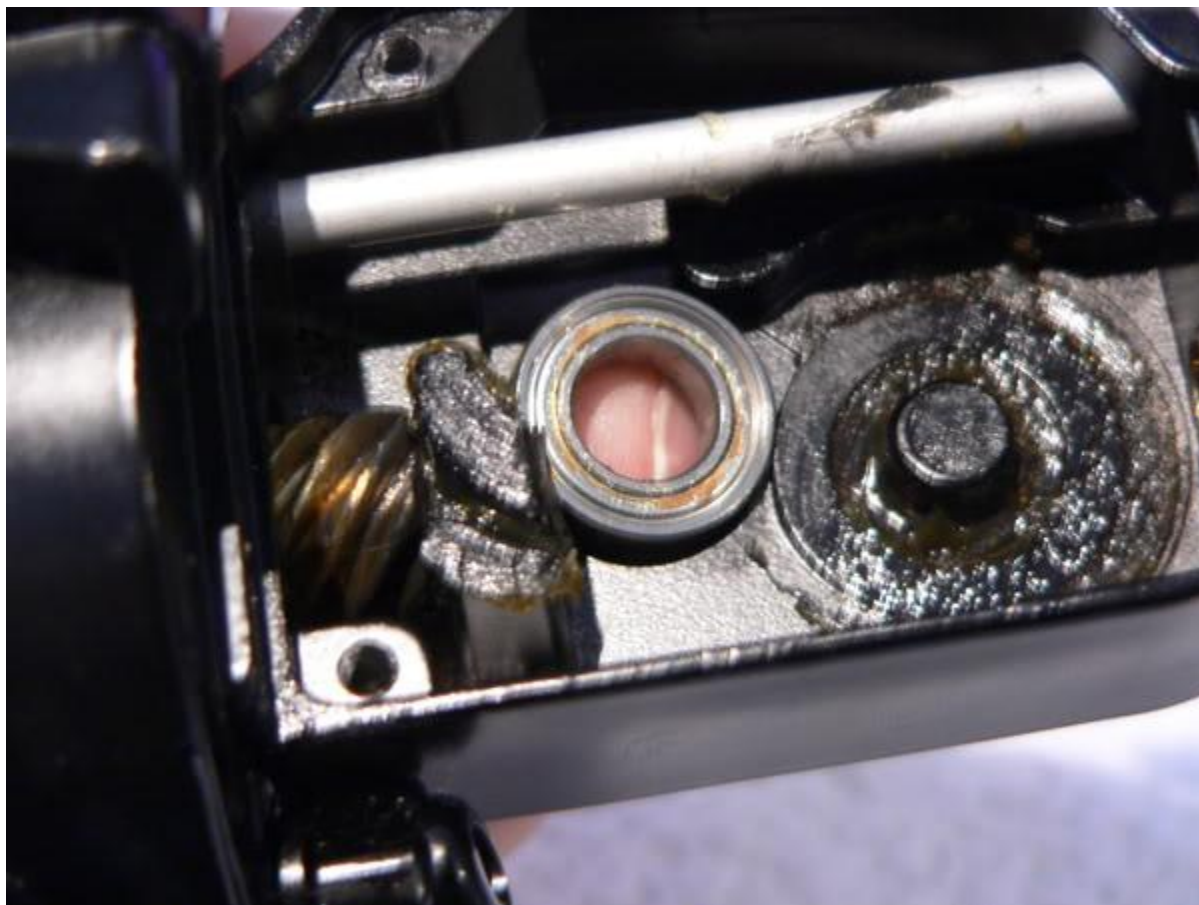


Take out the oscillating slider and the oscillating gear (key #231) beneath





The right side bearing (key #20A) is now accessible and can be pushed out from behind. It too gets opened up and cleaned.



Next, remove the rotor nut (key #38) and washer (key #37) beneath





and lift off the rotor (key #27) itself...

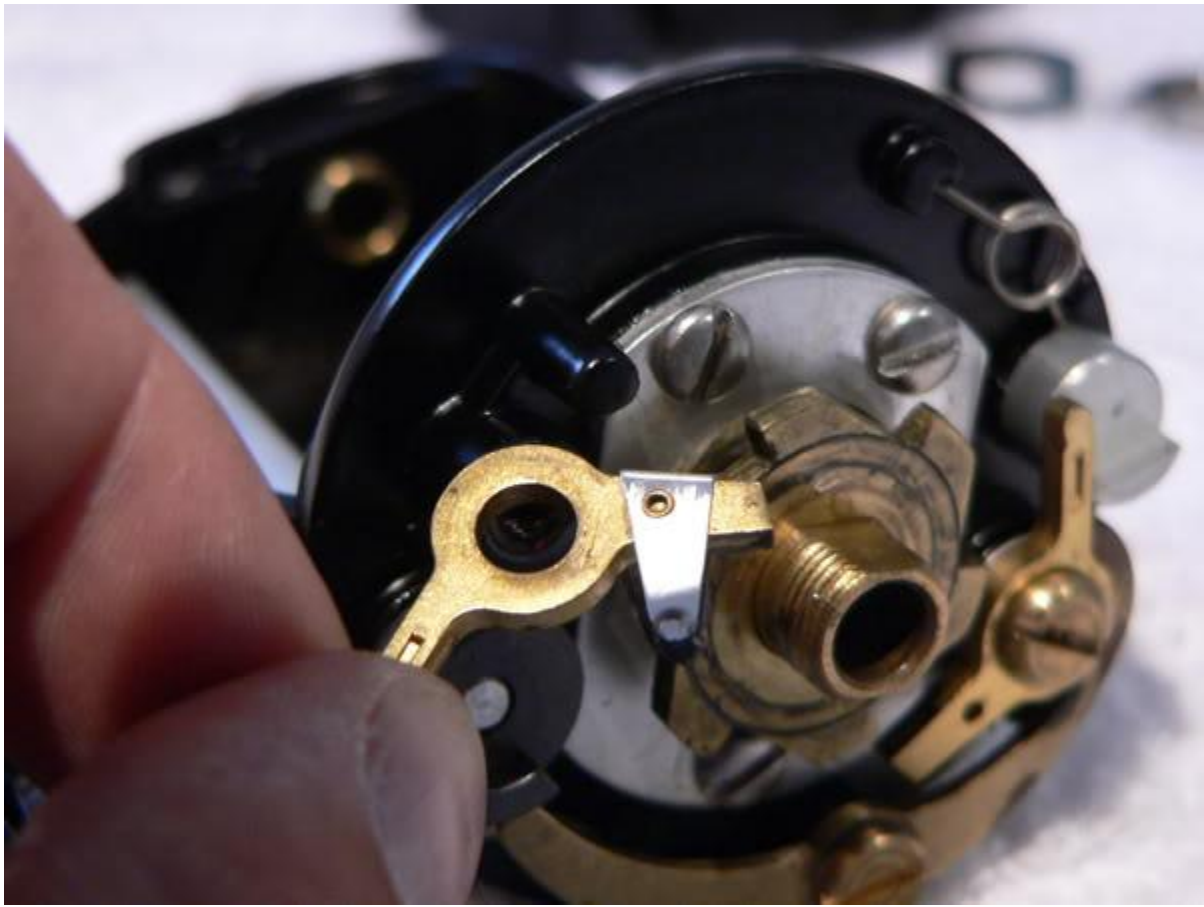


To disassemble the next stage and get at the main bearing, first unscrew and remove the anti-reverse lever (key #6E) from the rear of the reel



then unscrew and remove the anti-reverse dog (key #4A) (this is how spin reels did it before clutch bearings... we now get infinite anti reverse but at a higher risk of the anti reverse failing under load.





followed by the anti-reverse trip cam (key #236)



The ratchet gear (key #10) just lifts out (make sure you remember which way the gears are facing!)



The long transfer lever (key #224) can be unscrewed and removed and now you'll be able to access the bearing retaining plate (key #21), which can be unscrewed and removed. (There's no need to remove the remaining ratchet dog (key #4) this time so lets leave those springs and things alone... no need to tempt fate)





With the retaining plate out of the way, the pinion gear (key #19N) and main shaft bearing (key #20) simply lift out.



Open up and clean out the bearing and then lets get to putting everything back together.

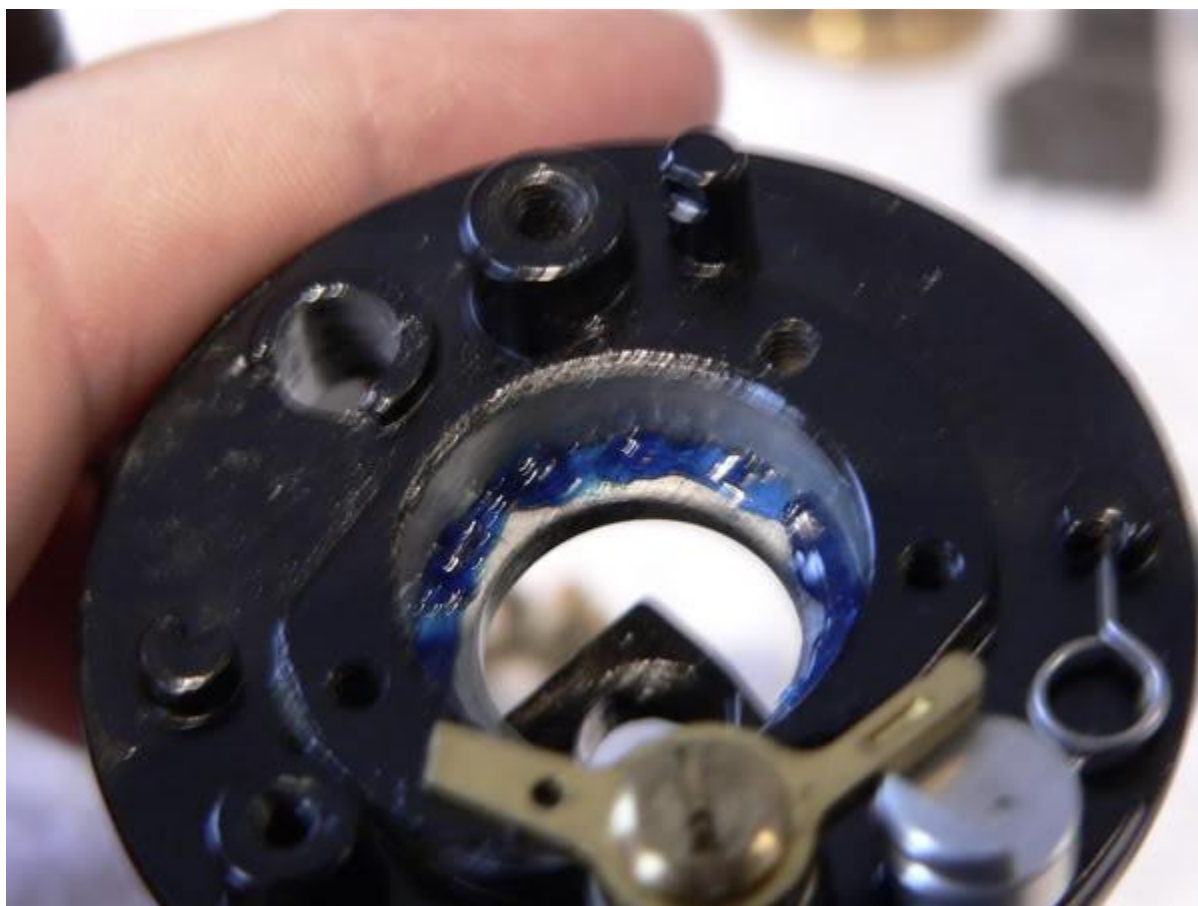


The cleaned bearings can all be packed with grease (Evinrude outboard grease in this case). To make sure there are no air pockets in the grease, pack one side first then replace the shield on that side. Pack the other side and press down on it hard with the heel of your palm. If grease squeezes evenly out through the opposite shielded side, it's good to go.





A bead of grease can be run around the main shaft bearing recess



before the bearing (key #20) and pinion gear (key #19N)(with a coat of grease) are reinstalled



Before replacing the bearing retaining plate (key #21), give it a thin coat of grease and lightly grease the screw holes





There was a little minor surface corrosion evident on the transfer lever (key #224) so let's give all of the individual parts in the sub rotor assembly a smear of grease using greasy fingers.





When reinstalling the anti-reverse trip cam (key #236), make sure the spring (key #6D) engages with its retaining mount.



And finally, a coat of grease on the mounting plate will help resist corrosion (this should probably have been done before reinstalling all those bits but go figure!)



Screw the anti-reverse lever (key #6E) back on and this bit's finished.



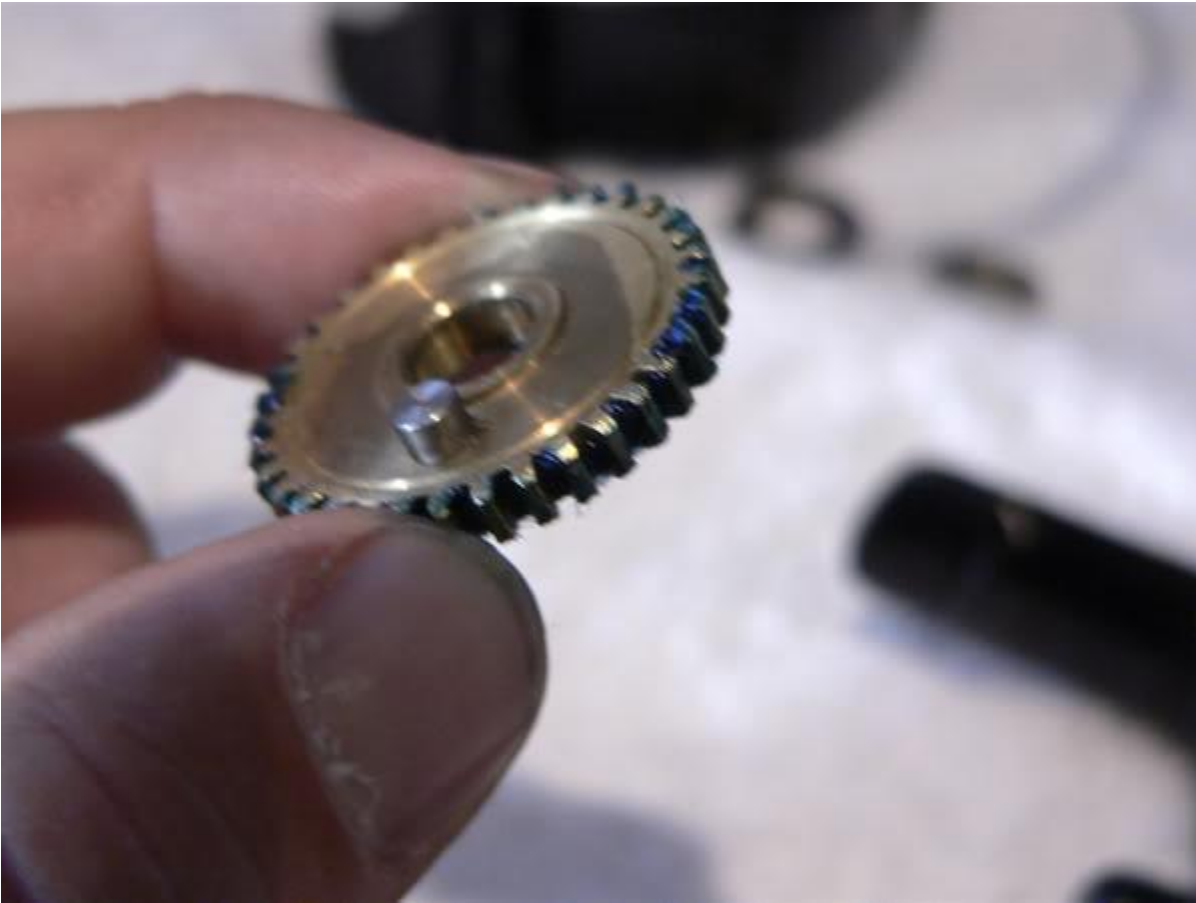
Reinstall the re-lubed right side bearing (key #20A)



Apply a thin coat of grease to the inside of the reel body (key #1N) cavity

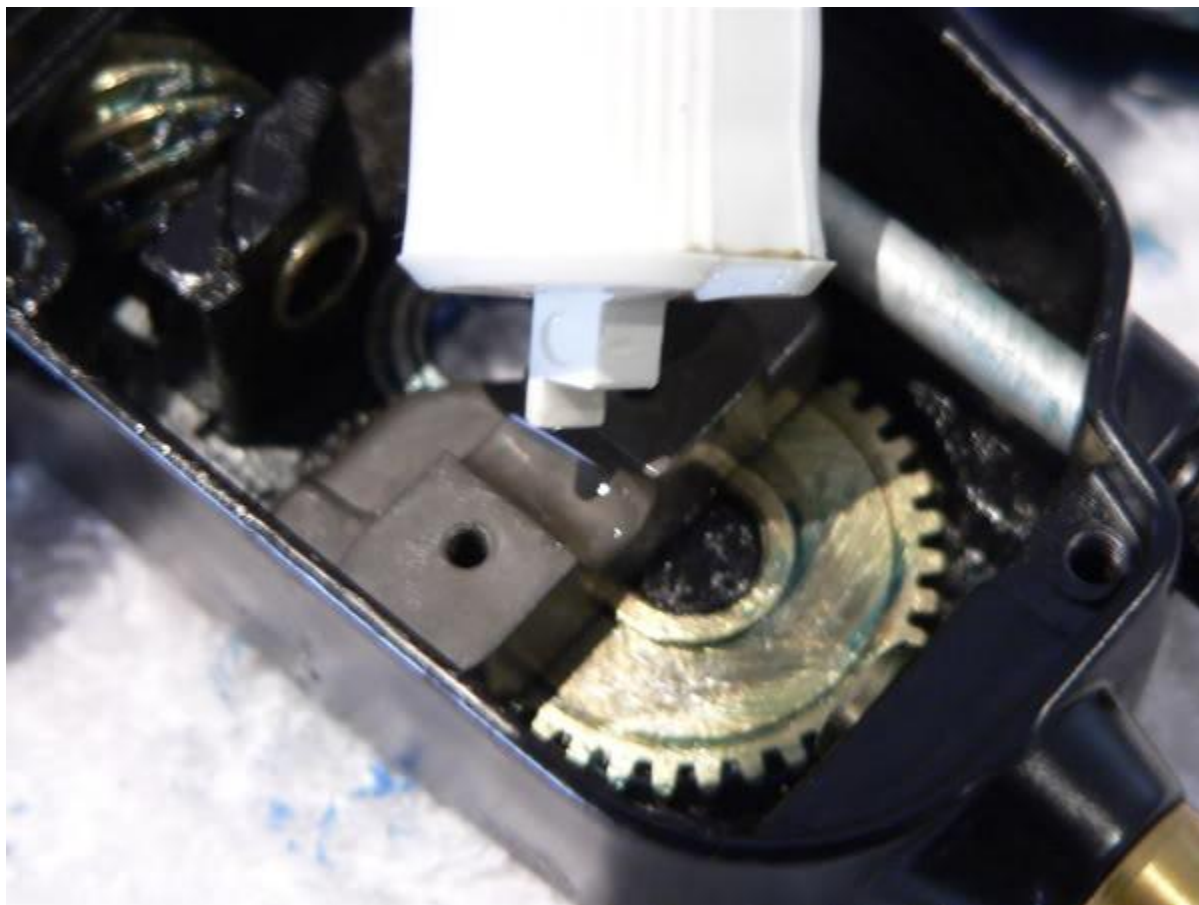


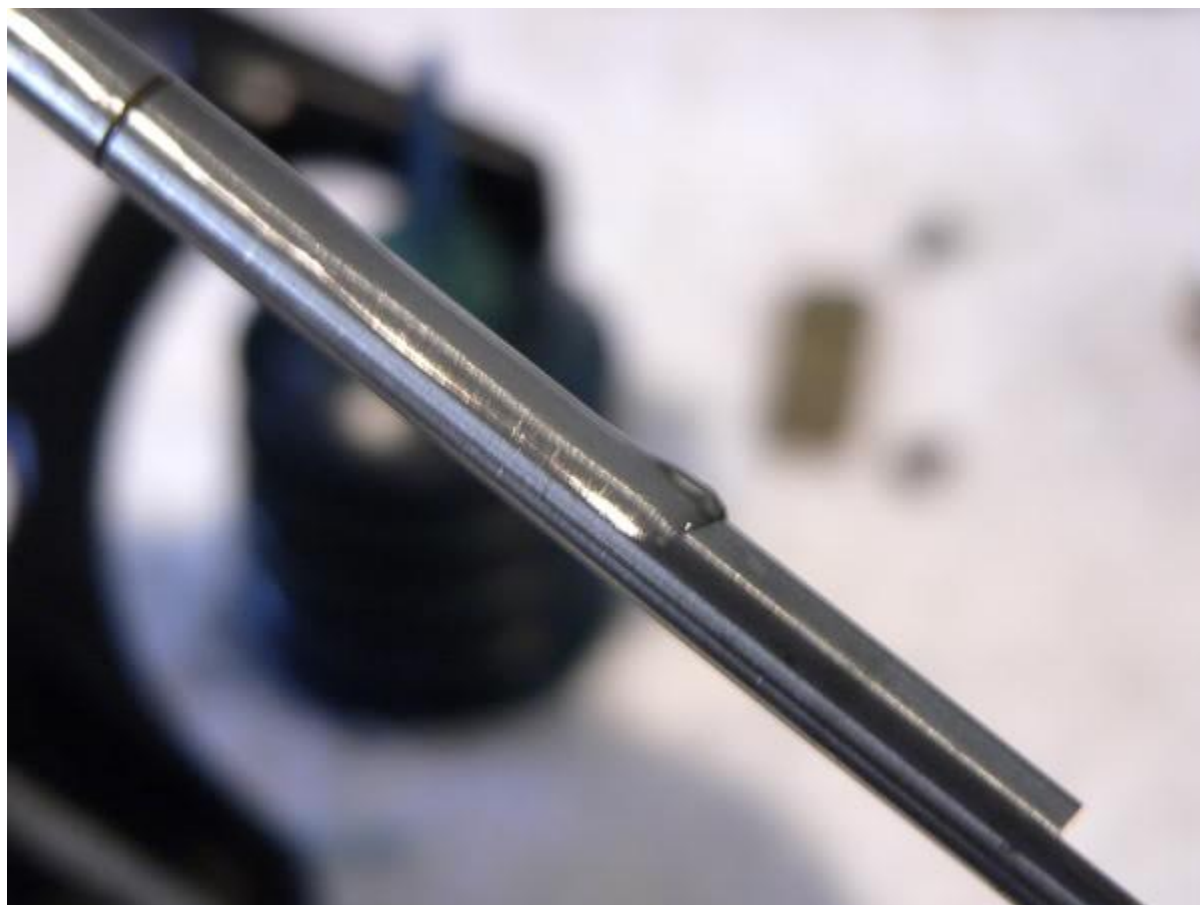
before greasing and reinstalling the oscillator gear (key #231)



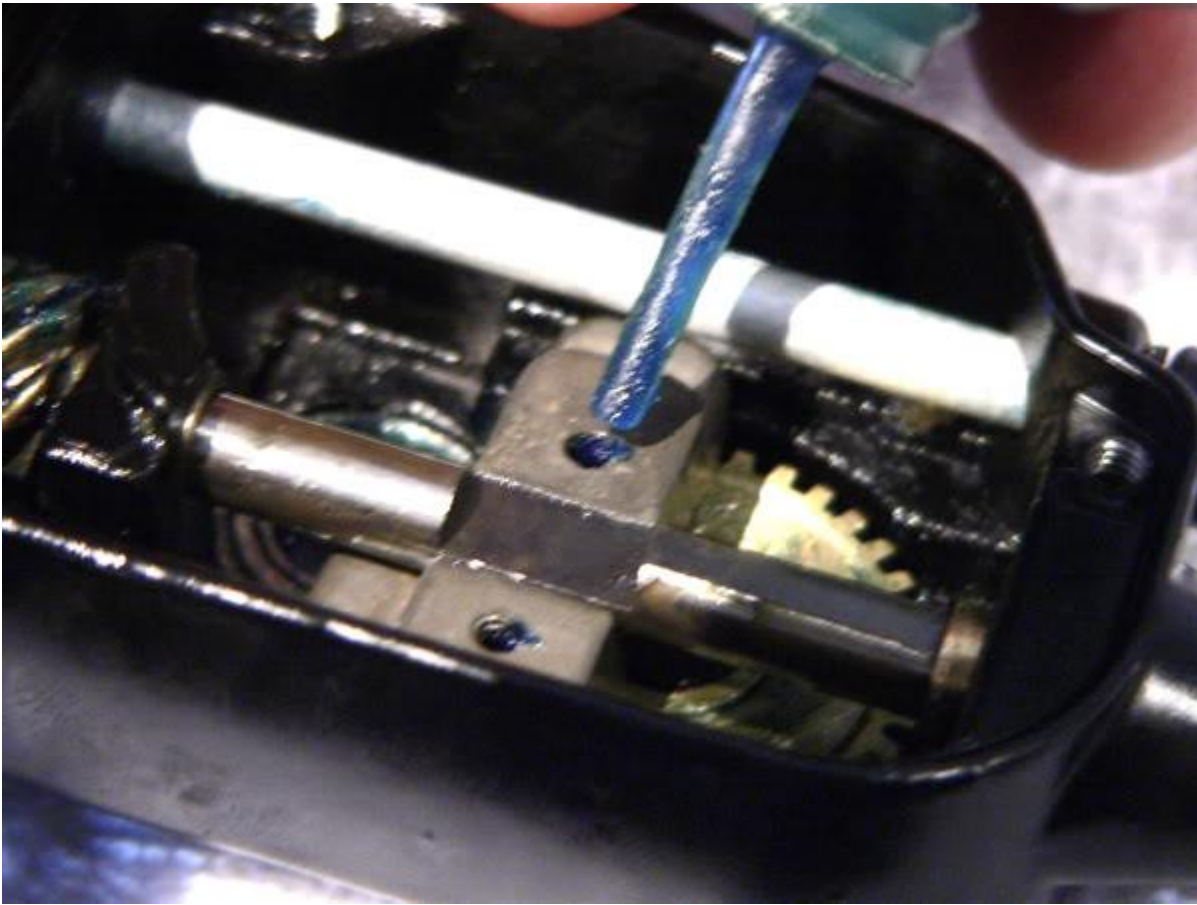


With the oscillating slider (key #43) reinstalled, add a drop of oil to the shaft recess in the slider and to the shaft (key #39) itself before slipping it back in.





Add a dab of grease to the screw holes in the slider and align the notch in the main shaft so the retaining plate (key #43A) can be returned.



The drive gear (key #8N) can now be greased and slipped back into position





And the left side bearing (key #20A), having been packed with grease, replaced.



Give the inside of the left side plate (key #45N) a coat of grease and add a dob of grease to the screw holes (I really have to get myself one of the modified mini grease guns Alan uses) before screwing the plate back on.





The screw thread and elbow of the handle (key #15) get a smear of grease



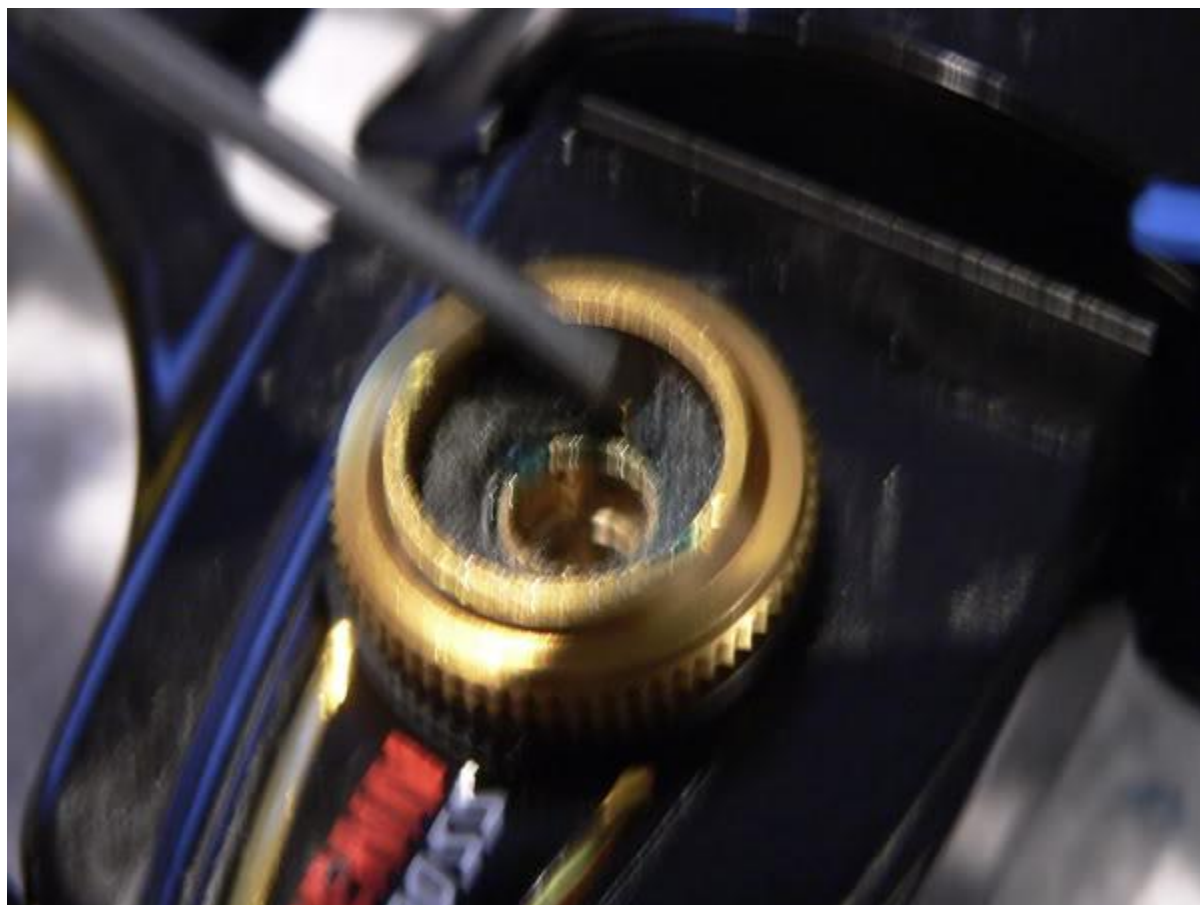


then the handle collar (key #232N) is replaced...



note that there's a felt washer (key #17N) that lives beneath the handle that serves as a rudimentary seal. If left dry, I can only imagine this would actually hold and retain water... not ideal! So it gets thoroughly soaked with Evinrude grease first (where I can I try to keep different types of lubricants from coming into direct contact, otherwise I would probably have used drag grease)





With that in place, the handle can go back on along with the opposite side bearing cap (key #233), after a light coat of grease inside.





and nearly finished... the spool goes back on.



A few final bits and pieces to attend to, starting with the line roller. Back the bail roller screw (key #36) out being careful not to lose the tiny spring washer (key #36A)





and the line roller assembly (key #'s 132, 35, 35A) can be removed.



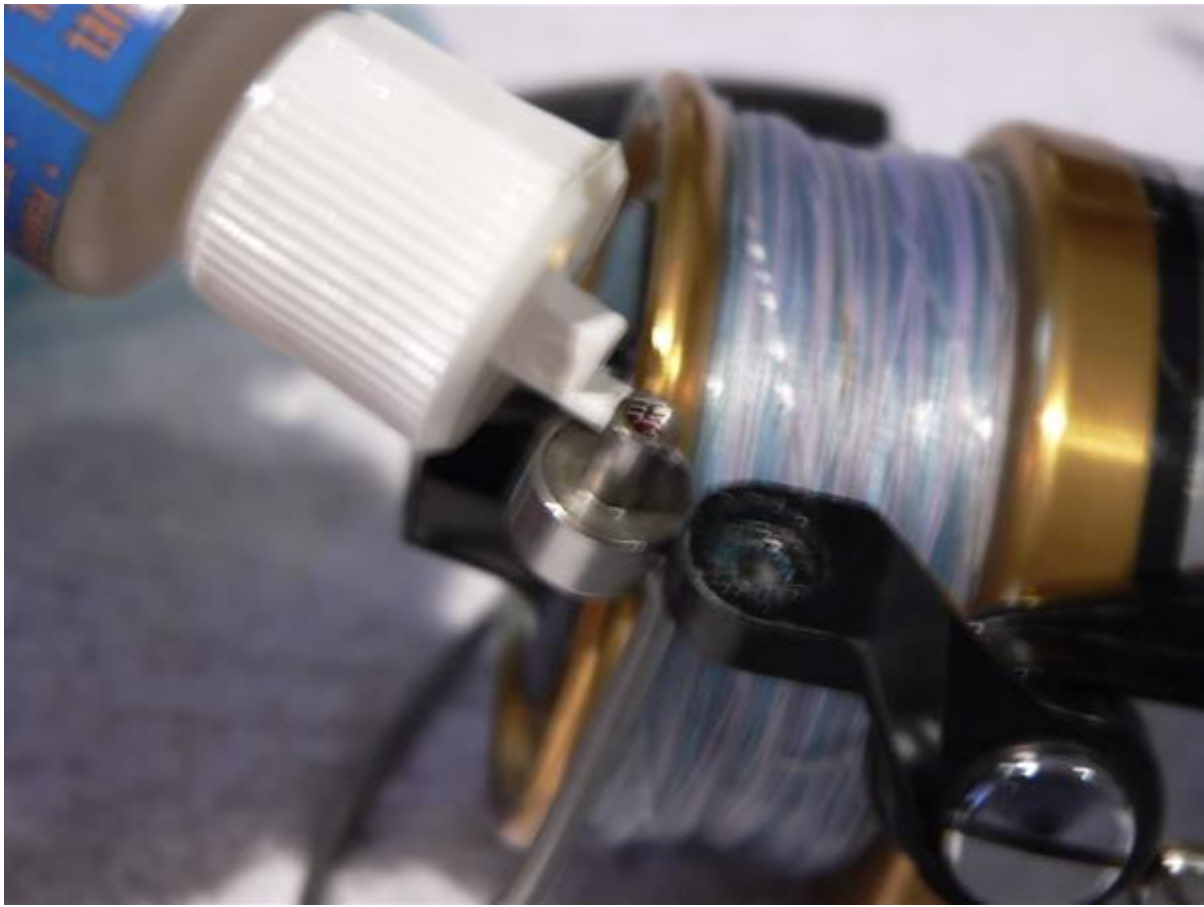
There was some grunge between the roller (key #35) itself, the roller washer (key #132) and the spindle. Along with some minor corrosion beneath the line roller screw.





After cleaning, the screw recess gets a coating of grease while the parts of the roller assembly and spindle, get a drop of oil before reassembling.



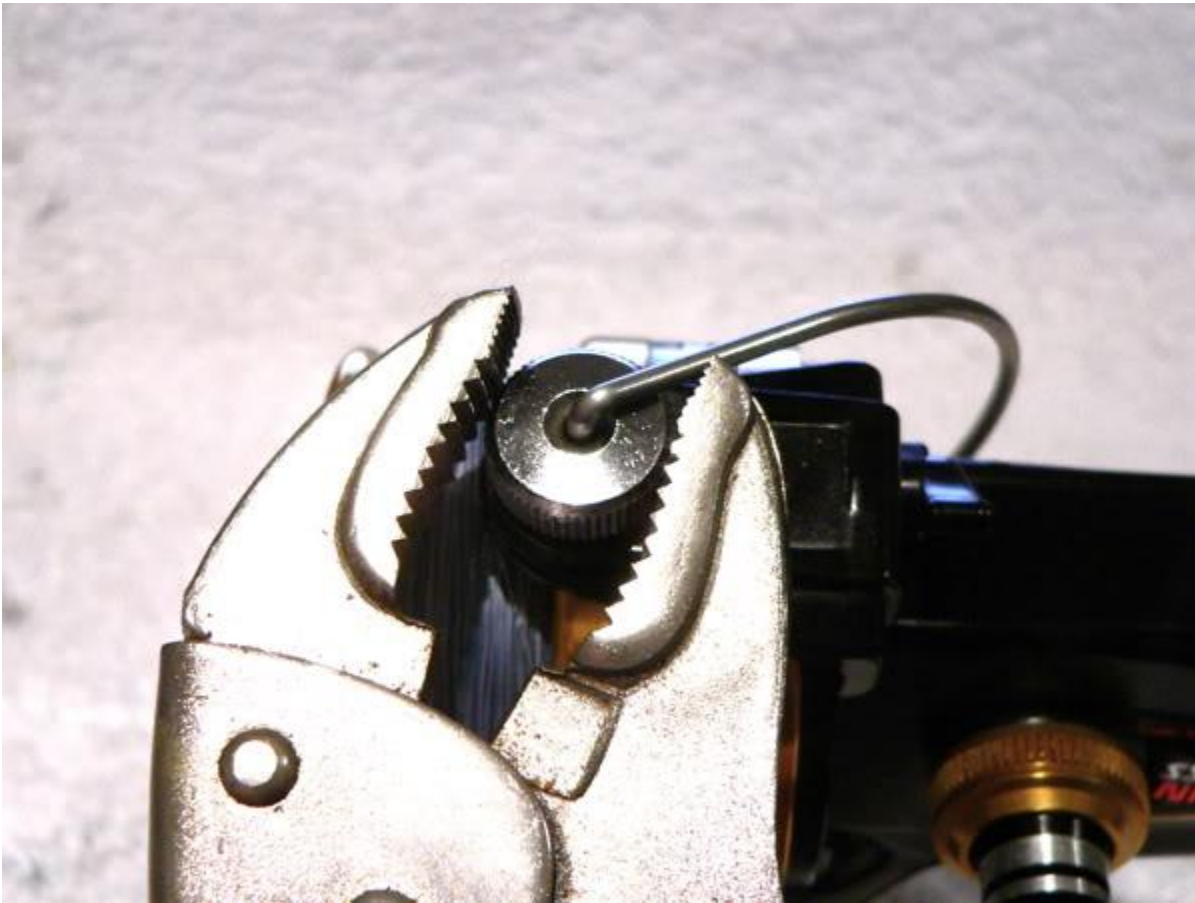




Let's not forget the bail arm assembly. Begin by backing out the bail arm screw (key #31)



and undoing the screw-in mount (this is integrated with the bail wire key #24) on the opposite side... you'll need to start this off with a pair of vise grips or multi-grips.





then the bail arm (key #34) and wire (key #24) can be removed... be careful to pull the bail arm assembly carefully off the bail arm spring (key #32) so as not to bend it. The spring is under a fair degree of tension.





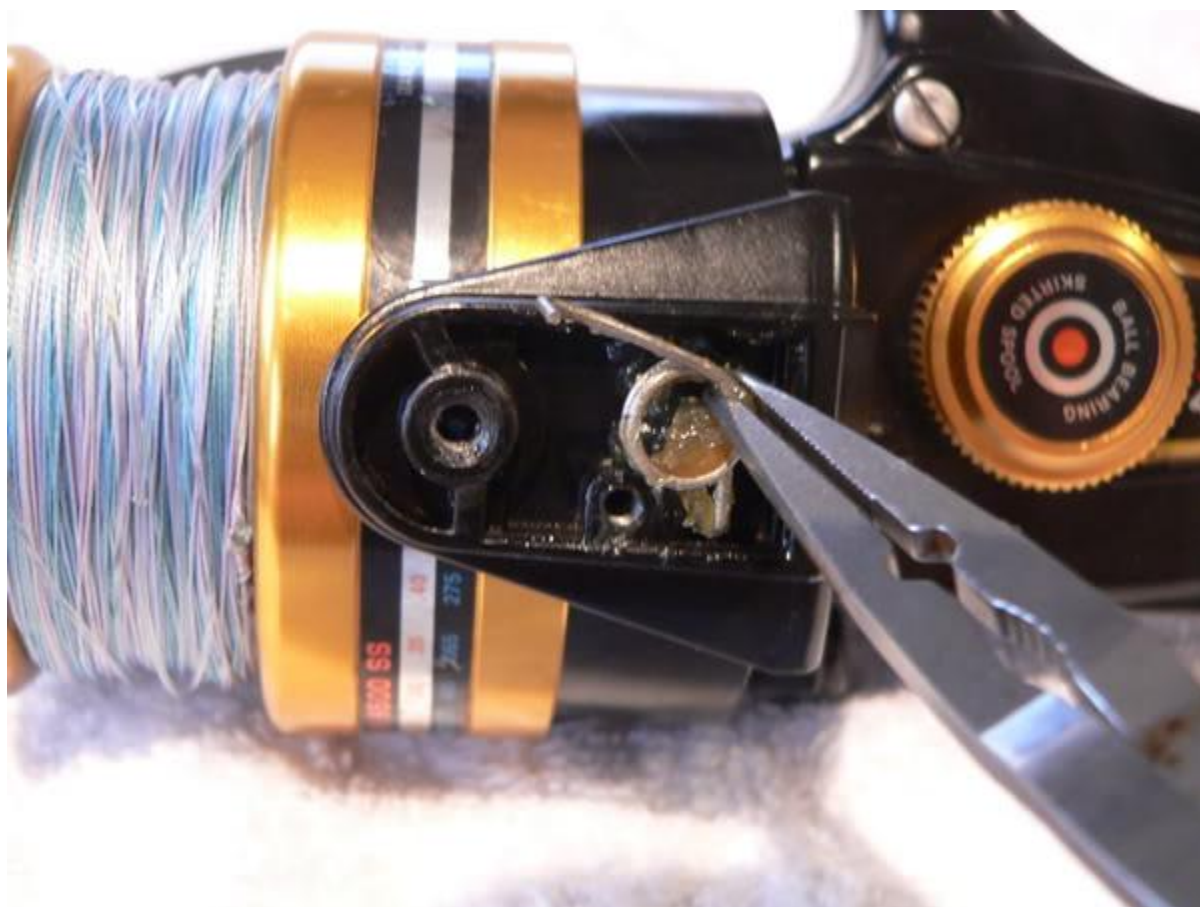
Next back the screw (key #50) out to allow the removal of the bail spring cover (key #227).





You'll now be looking at the bail spring (key #32), which needs to be removed. It's under enough tension to really need a pair of needle nose pliers. And there's always the risk when dealing with loaded springs that they'll fly off into the nearest deep-pile carpet... so hang on.



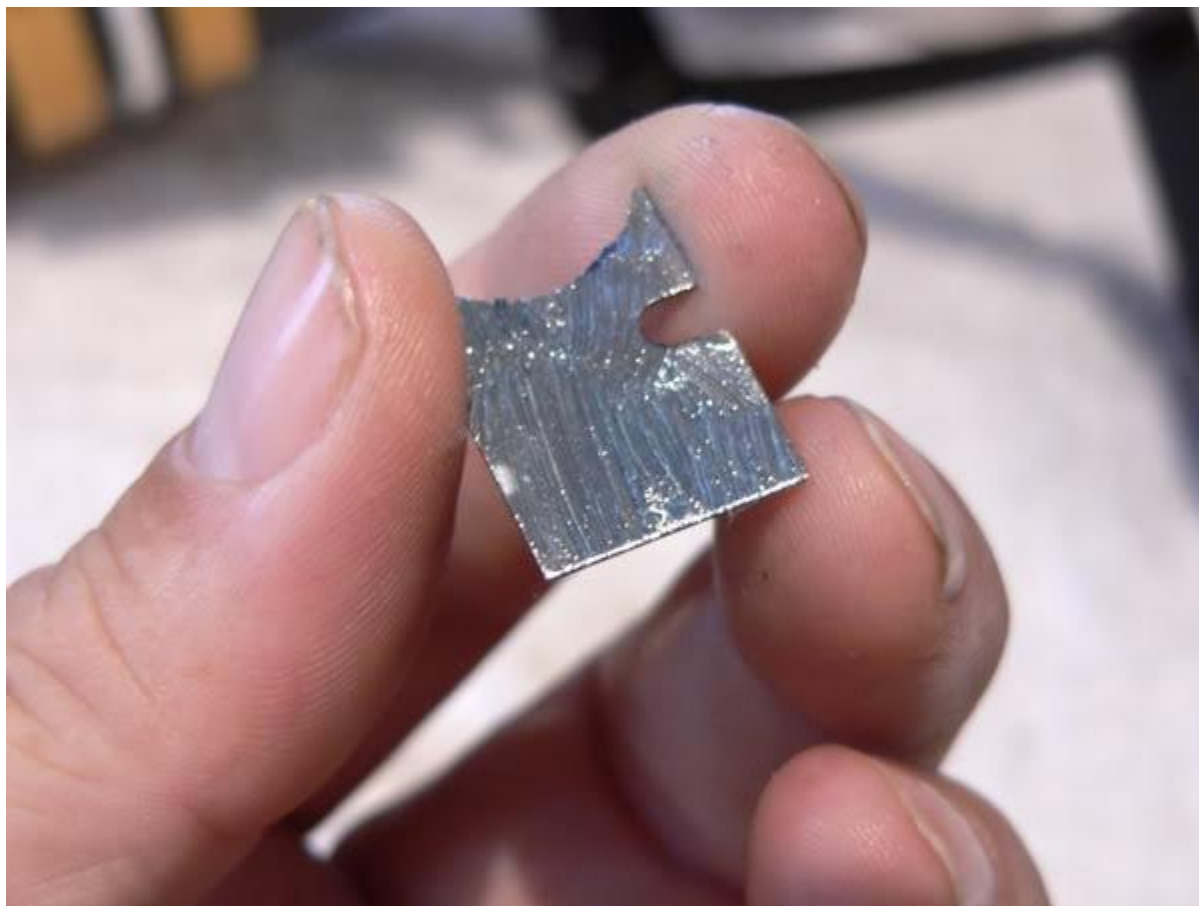


Give the bail spring cavity and the spring itself a good clean before applying a coat of fresh grease to both.

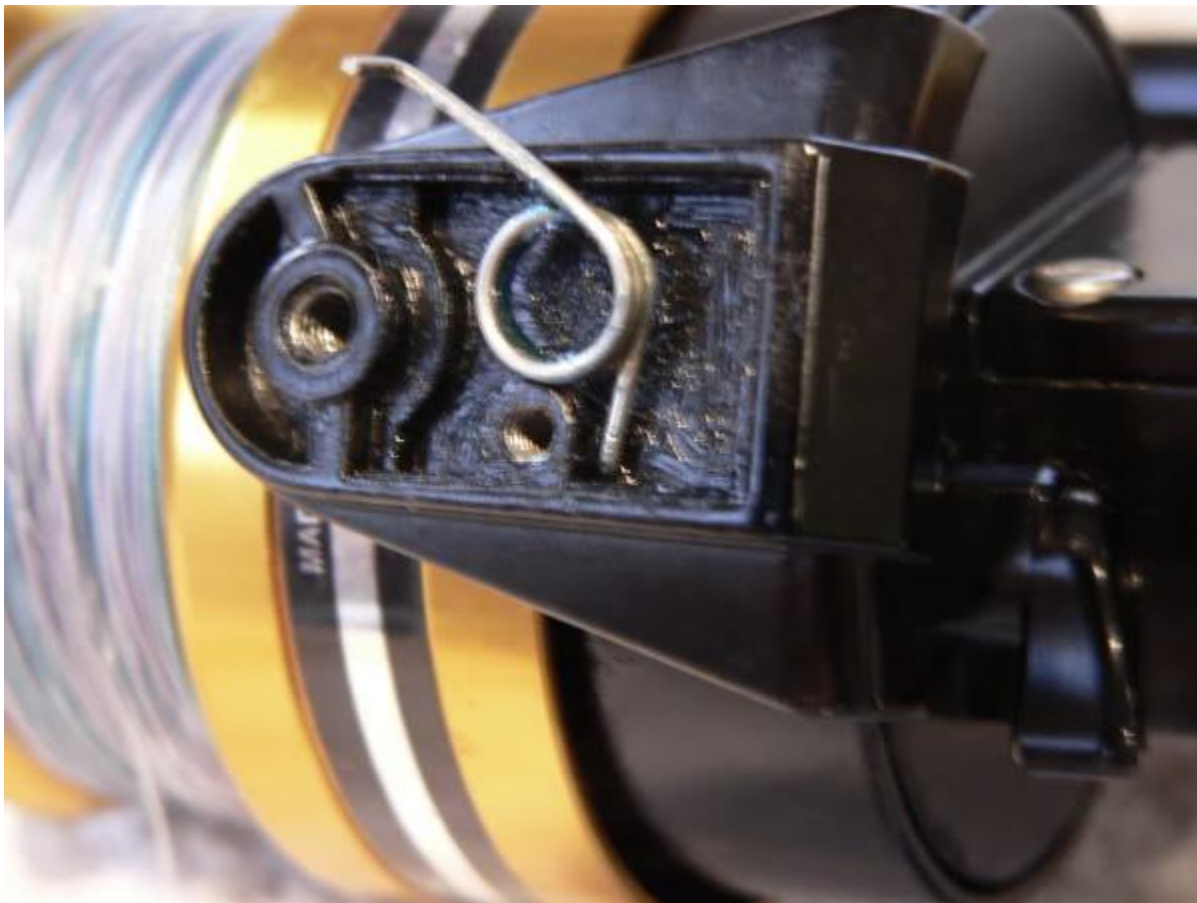




and to the inside of the metal bail spring cover



Then replace the spring, making sure that the short mounting arm is properly seated in the mounting hole.



With your pliers or fingers, the spring can then be pushed firmly to seat it back in the bail spring cavity, before replacing the cover.





Now let's clean up the bail arm and mounts... remove the bushing (key #34A) from inside the bail arm, clean it, add a drop of oil and replace it.





Add a smear of grease to the threads of the bail arm screw and screw in mount... and a drop of oil to the spindle section of the bail arm screw.





To reattach the bail arm and wire, start with the screw-in mount...



then move on to the bail arm, carefully aligning the bail arm spring with the small mounting hole in the bail arm to ensure its properly seated. Because the spring is under tension, the bail arm won't automatically align with the bail arm screw hole.





You'll need to carefully apply pressure while holding the assembly, to align the holes so that the bail arm screw can be replaced.



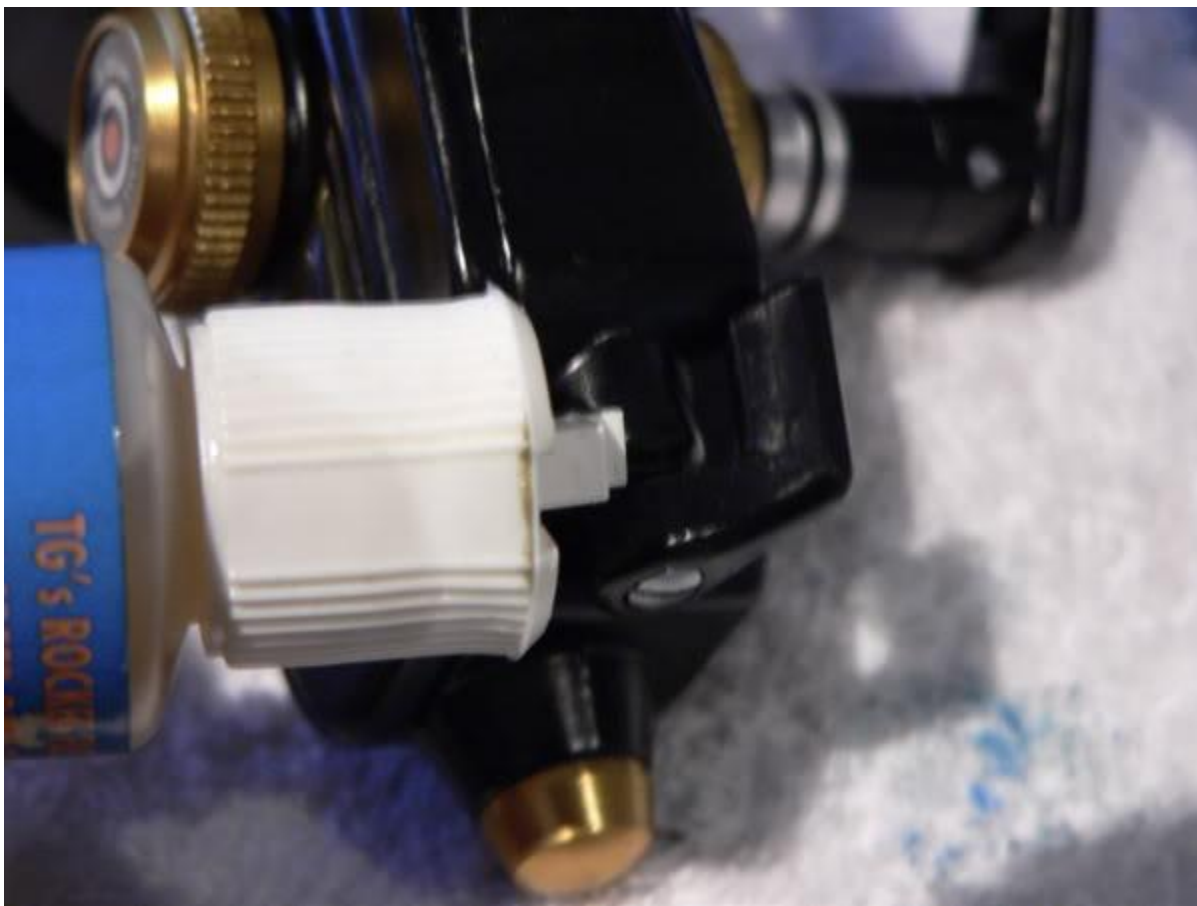
A drop of oil on the bail wire where it enters the screw-in mount.



And finally, give it a quick test to make sure it's working properly.



And to finally finish off... the anti-reverse lever and handle knob both get a drop of oil.





There you go... all finished and now this Penn is as smooth as butter and ready for battle.

A couple of quick notes. The only reason I use Evinrude rather than Yamaha grease is that my boat has an E-Tec so I've always got some lying around. Since I did this rebuild I've also managed to get my hands on some CorrosionX (not available easily in Australia) and I've started using it for all my 'oil' applications. I play with a lot of spinners... usually small ones... and the choice of lubrication is pretty important with the side plate and main bearings. Because this reel is used mostly for bottom fishing it gets heavy grease protection, with small spin reels used for luring I usually use CorrosionX for the bearings.

And just a final note of thanks to Alan and www.fishraider.com.au for allowing me to copy this across.

Cheers, BigT