Ambassadeur Eon 5600C service

Eons have a reputation for being difficult to service; I have even heard of some shops that are reluctant to work on them. This reputation is undeserved as they are actually quite simple to work on.

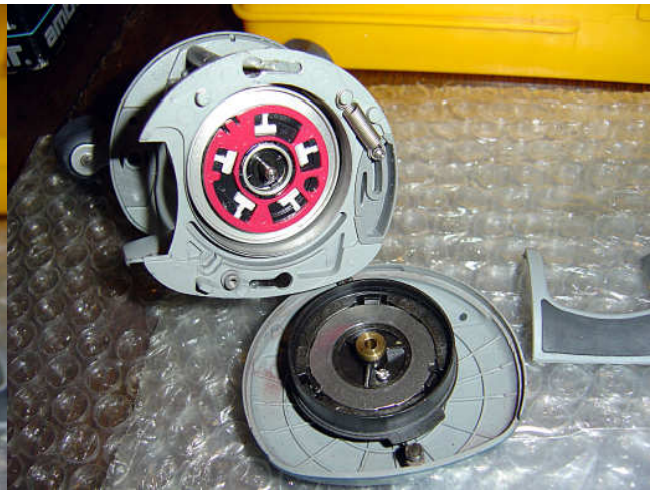
This particular Eon belongs to Wayne of www.realsreels.com . He purchased it with the level wind mechanism removed but all of the level wind parts were present. Apart from a very slight amount of back play in the handle and terrible free spool it felt very nice.

The 00 and 01 version Eons came with a disengaging and free floating level wind for casting. The specifications in the 2001 Tight Lines shows the Eons' level wind as being 'xxx/float', the xxx referred to the line laying pattern. Called 'triple cross' by ABU, it was a cross laying pattern designed to prevent line digging into the layers underneath-especially useful with braid.

Unfortunately on the Eon the 'floating' part didn't work so well. The 'fix' from ABU was to simply remove the parts used for the floating level wind in the updated 02 version (you can see this if you compare the schematics for the 00/01 and the 02 version-there are a few parts missing from the left side of the frame). The 'fix' means that the level wind disengages for casting but does not float i.e. it remains in the same position it was in when you disengaged the spool. This reel has the 02 upgrade.

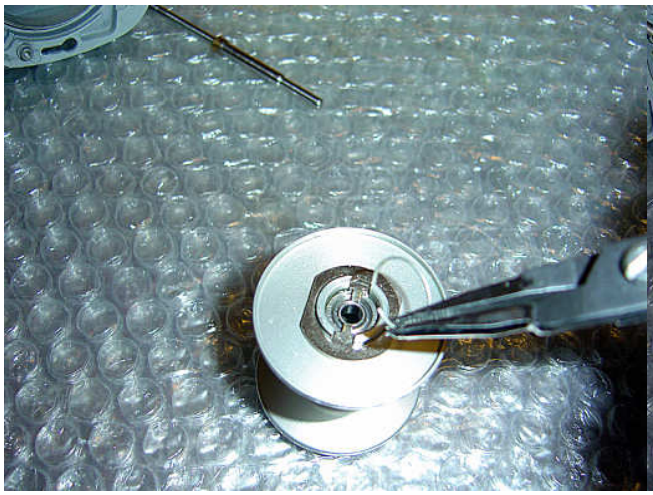
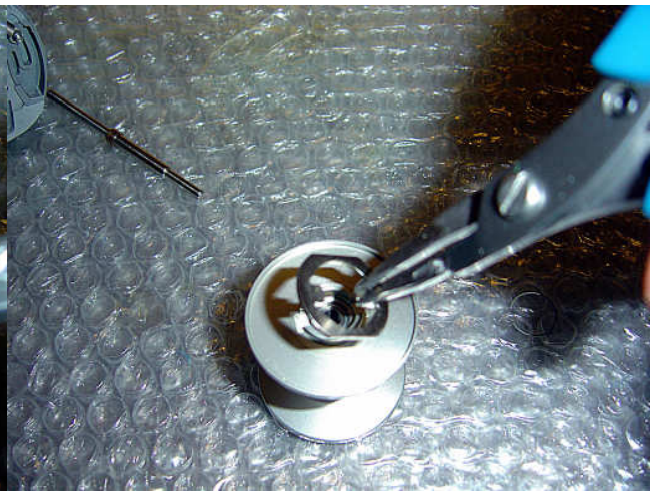
SPOOL & BEARINGS


The thumb rest simply pulls off.

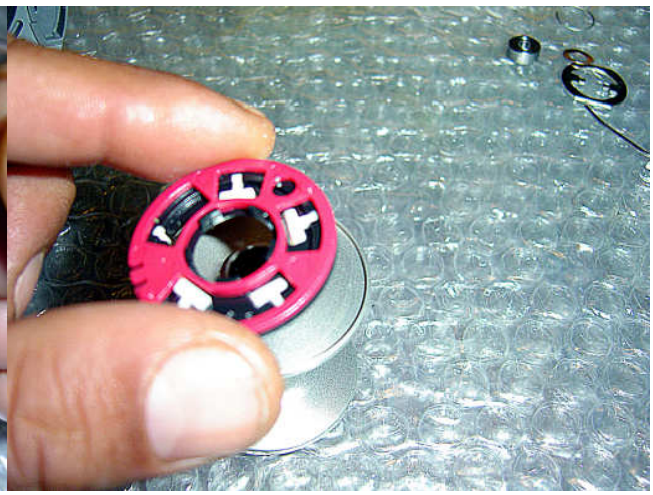


Twist the left side plate anti-clockwise and it can be removed.


The spool and spool shaft can then be removed from the left side of the frame.

Remove the snap ring from the right hand side of the spool followed by the clutch washer.

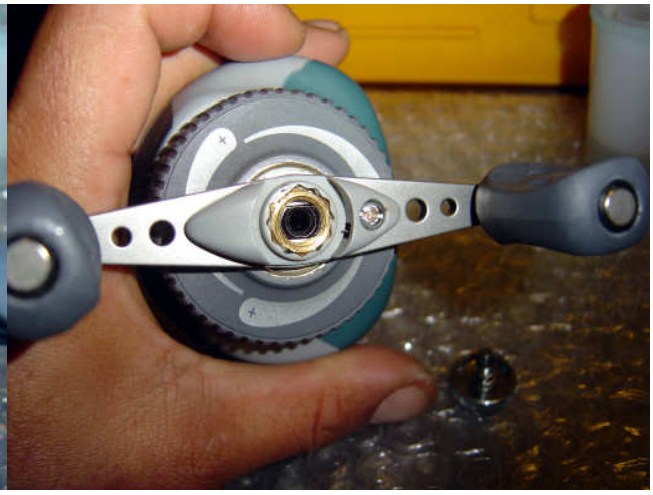
The right side bearing can then be removed.

The brake block holder and adjustment washer can be lifted off as a unit from the other side of the spool.


Note the two recesses in the spool where the studs on the brake block holder locate in. Remove the plastic washer holding in the left side bearing and then remove the bearing. Note that these bearings are different sizes – 4x10x4 on the right side of the spool and 3x10x4 on the left side of the spool. Normally you would clean these bearings with a solvent such as lighter fluid or brake cleaner before re-oiling. However, these bearings are worn out so they will be replaced with new ones.

Add a drop of oil of your choice to the bearings and then reassemble the spool remembering to ensure that the studs on the brake block holder are aligned with the recesses in the spool.

GEARS & DRAG ASSEMBLY

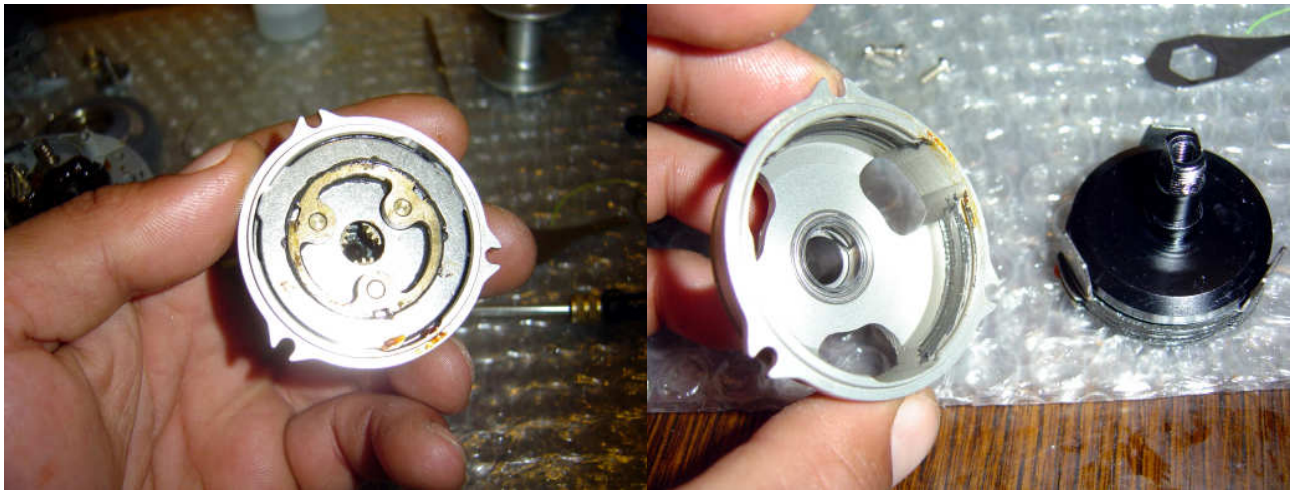


Unscrew the brake knob and then remove the handle nut cover lock screw and the handle nut cover.


Remove the handle nut and the handle will lift off. Note the two copper washers that sit under the handle. Remove the snap ring and then unscrew the drag knob.


Remove the retaining wire. There are three tabs holding the side plate on. Carefully pry these open and lift off the side plate.

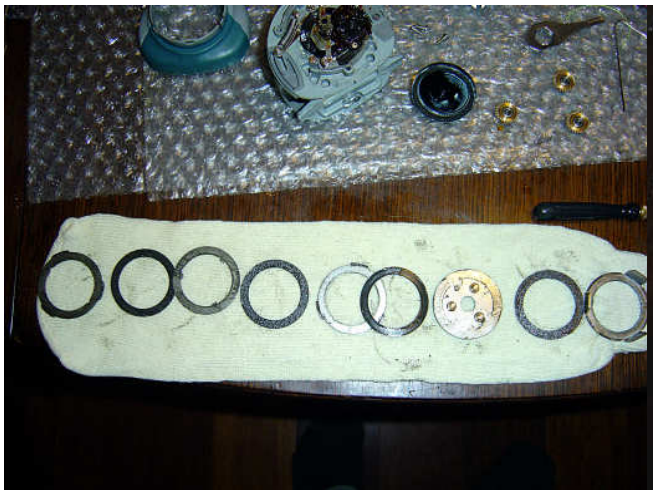
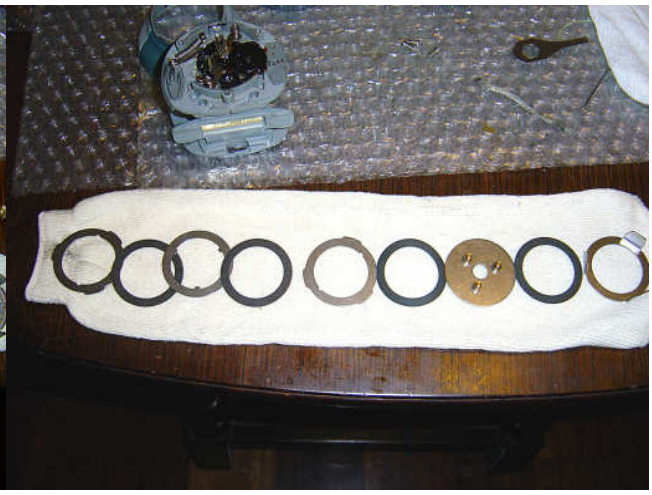

Remove the three screws holding on the inner side plate and then lift it off, no shortage of grease here! The pinion gear looks pretty dry though; most of the grease has been flung off onto the idler cog.



If you turn over the inner side plate you can see that the bottom metal drag washer is holding the drag assembly in the inner side plate. You need to turn the bottom metal drag washer so that the three prongs on the washer align with the three recesses on the inner plate. The inner side plate can then be lifted off. The second photo shows the recesses and prongs more clearly.

Note that the inner side plate contains the one way bearing (IAR bearing). When you lift off the plate the bearing sleeve (clutch bushing) and the bearing it sits on may be retained in the inner plate (as in this case), or they may remain on the drive shaft.

Remove the drive shaft to expose the three planetary gears and drag stack. The planetary gears will need to be removed from the satellite carrier before the pressure ring can be removed.

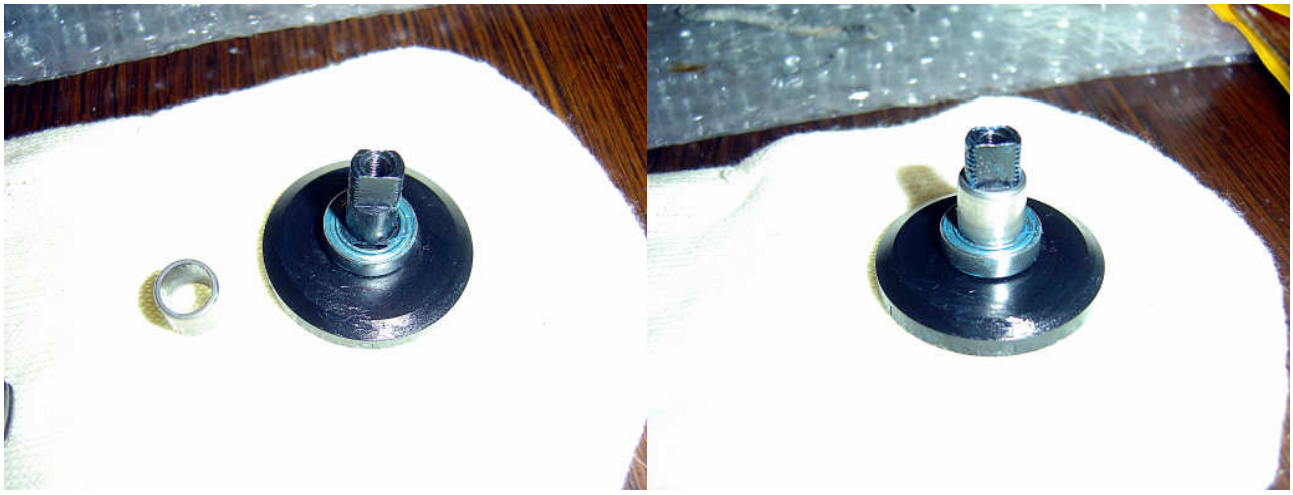
Remove the three planetary gears and separate the drag assembly. Reassembly is easier if you lay it out in the correct sequence. In this case left to right = bottom to top. Clean all of the washers thoroughly with a lint free cloth dipped in lighter fluid or brake cleaner.

The pressure ring is to the far right of the photo, the satellite carrier is the metal plate with three studs for the planetary gears.

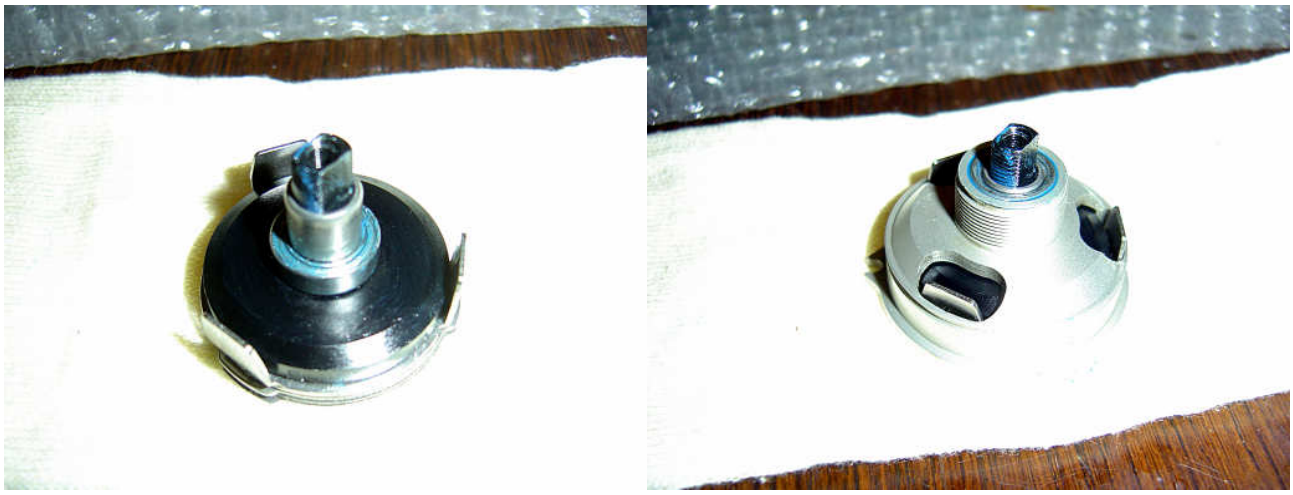
Add a *thin* smear of drag grease to the fibre washers and reassemble the drag stack taking care to align the metal washers correctly.

Thoroughly clean the bearings on the planetary gears (soak in lighter fluid) and allow them to dry completely before packing with grease. Coat the gear teeth with grease – a toothbrush or paint brush is useful for ensuring proper coverage at the base of the teeth,

In this reel the handle had very slight back play-most probably due to contaminants or over lubrication of the one way bearing. Dip a cotton bud in lighter fluid and run it around the inside of the IAR bearing to clean it. When the bearing is completely dry add a drop of oil to a clean cotton bud and lightly run it around the rollers on the inside of the one way bearing. Be *very* sparing with oil on the IAR bearing. The bearing sleeve and other bearing are seen in the right of the photo above the spanner.

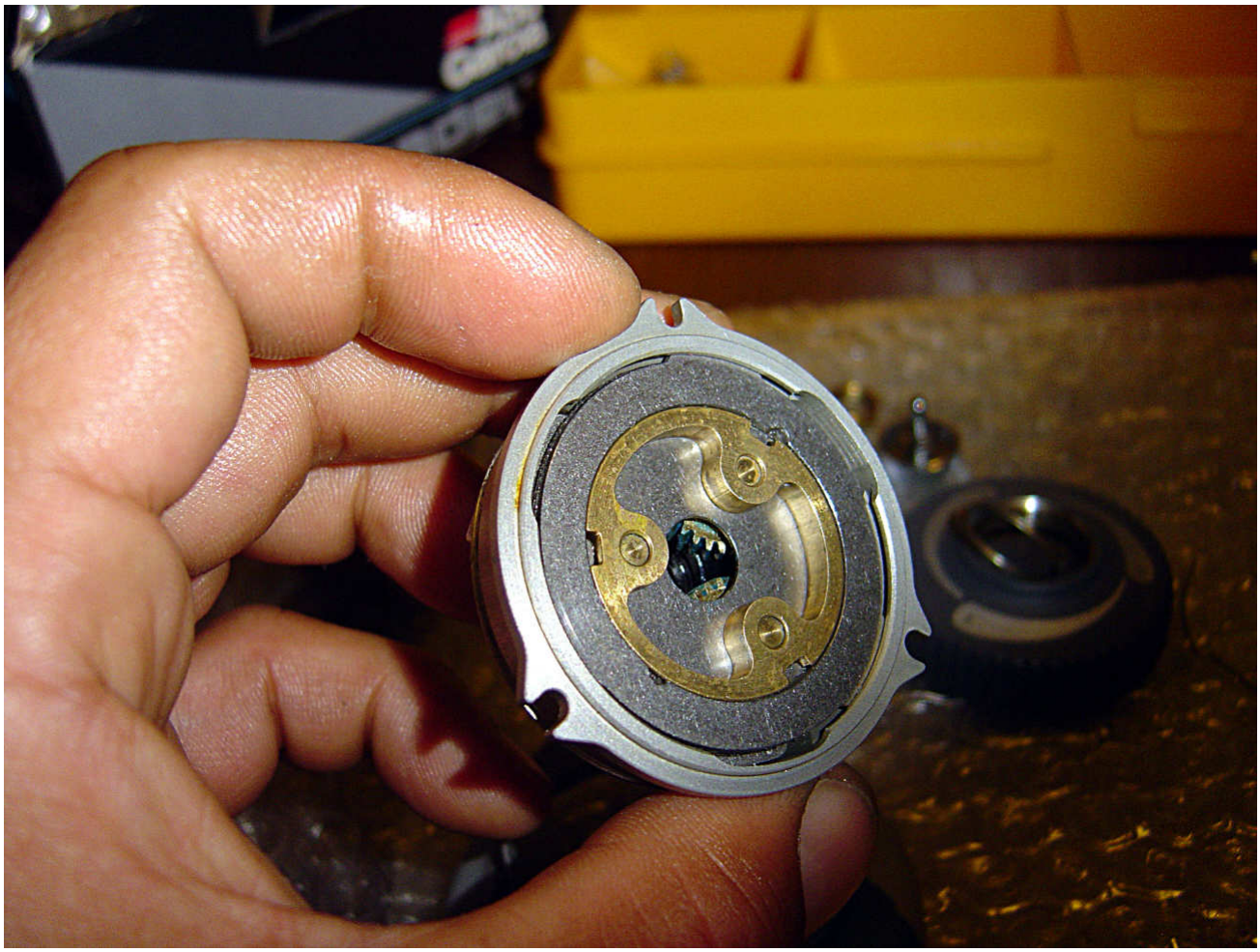


Thoroughly clean the other bearing by soaking it in lighter fluid. When it is clean and dry pack it with grease and replace on the drive shaft. Replace the bearing sleeve noting how the two prongs on it fit into the drive shaft. Grease the threads on the drive shaft.



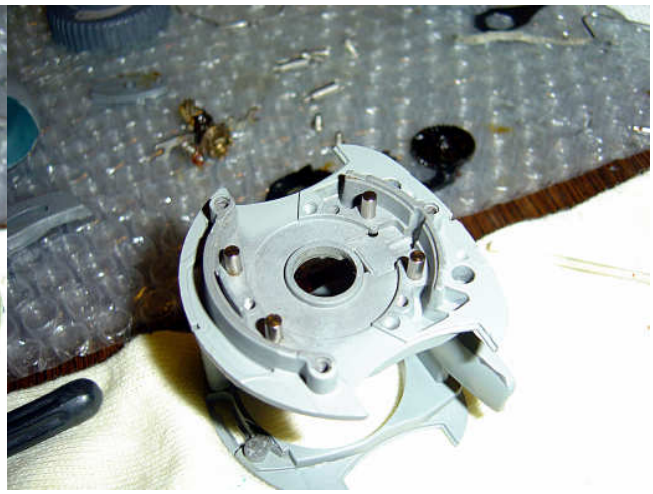
Replace the drive shaft onto the drag stack making sure that the planetary gears are meshing properly with the drive shaft.

Replace the inner side plate making sure that the ‘prongs’ on the metal washers and the recesses in the inner side plate match up. Flip the entire assembly over.



Rotate the base metal drag washer so that the entire drag assembly is held captive in the inner side plate. The ‘prongs’ of the bottom washer must clear the recesses completely as in this photo. If they do not clear completely you will not be able to fit this assembly onto the frame.

FRAME

First thing is to clean off all the excess grease. It's not really necessary but I decided to remove all of the parts from the frame for a thorough clean.

Start off by removing the idler gear (cog) and then the middle shaft it sits on. Remove the pinion and the pinion retainer yoke, taking care not to lose the two springs. Two screws hold on the lift disc and these need to be removed. The click spring and spring will remain on the frame-you don't really need to remove these.

Assembly is the opposite of removal. Smear some grease on the back of the lift disc before attaching it to the frame.


Add a drop of oil to the middle shaft before attaching the idler gear. The level wind assembly slots into the grooves in the frame. Add a smear of grease where the pinion sits in the pinion retainer yoke.

Add some grease to the teeth on the idler gear and level wind gear-turn the gears to make sure there is grease on the pinion gear. Note where the pinion retainer yoke will contact the lift disc when you put the reel in free spool-add a smear of grease to these points. Add the two springs and then the two screws holding in the lift disc (in these photos the screws have not yet been replaced).


Place the inner side plate assembly on the frame ensuring that the screw holes line up. At this point the inner side plate will not sit flush. Gently rotate the drive shaft; this will cause the pinion gear and the planetary gears to mesh enabling the inner side plate to sit flush on the frame. Do not use any force-it is not necessary and may damage the gears.

Replace the three screws holding on the inner side plate (don't forget to grease the threads), and then replace the outer side plate ensuring that the three tabs that hold it onto the inner plate have clicked into place.

In the above photo it looks like the level wind gear and idler cog are pretty dry-I did add grease before replacing the side plate but forgot to take a photo….trust me!


Replace the retaining wire and then screw the drag knob back on. You will need to push in the protruding part of the retaining wire as you are screwing down the drag knob.

Replace the snap ring and the two copper washers on top of the drive shaft.

Replace the handle, the handle nut, handle nut cover and the handle nut cover screw. Screw in the brake knob; I like to have it set so that there is barely discernible side to side play in the spool when it is in free spool. **If you screw down the cast knob to control the cast be aware that this places lateral load on the spool bearings causing them to wear out prematurely.** It doesn't take long at all to destroy a set of bearings by doing this.

Replace the spool and spool shaft and then the left side plate. Don't forget to replace the thumb rest.

Don't forget to add a drop of oil to the worm gear and then you're all done. Free spool is much better and there is no back play in the handle.

Maybe a bit more time consuming than other Ambassadeurs but by no means difficult.