

# Assembly Instructions: Gen 3 Plunger Pin Rotor to Cartridge Sleeve

**Important! Please read through these instructions before attempting assembly.**

Before assembling a rotor with plunger pins over the cartridge sleeve, ensure that all pins work properly by pressing (compressing) pins against inside of rotor by hand. Repeat 2-3 times.

Note: If pins are difficult to compress or get stuck, consult with factory before proceeding to Step #1.

## Step #1 – Setup

Position seal vertically with the gland end of the cartridge resting on a flat surface and the rotor end facing upwards. You should be able to clearly see 2 or 3 holes in cartridge sleeve. (fig.1)

**Note: if at any time during the next step, you feel excessive resistance, STOP. This is an indication that the rotor may be misaligned with the sleeve. Remove the rotor and begin again.**

## Step #2 – Positioning the rotor onto the cartridge sleeve

Position the rotor perpendicularly over the chamfered end of the sleeve, with the pins OFFSET from the holes in the sleeve. (fig. 2A) At this point, the pins should be touching the top edge of the sleeve and the sleeve's holes are NOT aligned with the rotor's pins.



With your fingers, gently push down on the rotor's pins to compress them against the inside of the rotor. As you continue to compress the pins with your fingers, begin to slide the rotor down over the cartridge sleeve. Once the rotor is seated/resting firmly against the edge of the sleeve, turn the rotor until the pins align and engage (snap) into the holes of the cartridge sleeve. (fig. 2B)

Visually inspect that all pins are fully and equally engaged in the holes. (fig. 2C) As a final check, manually attempt to pull the rotor off the sleeve. If the rotor moves off the sleeve, the pins were not fully engaged and locked into the holes.

Visually check pins, rotor, and sleeve. If these parts appear undamaged, retry Step 2. If you have any concerns, please contact the factory.

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**Important! Please read through these instructions before attempting disassembly.**

Before removing the plunger pin rotor from the cartridge sleeve, visually inspect the pin area for damage, corrosion, contaminants, etc. Test each pin by pressing on the top half of each pin with either a 1/8" Allen wrench or a tool with a soft brass or hard plastic tip. The pins should depress freely. Be careful not to over-tilt or compress the pins unevenly.

## Step #1- Setup

**Note: Reattaching the cartridge seal's set clips before proceeding will provide additional spring force which will assist in the disassembly.**

Position seal vertically with the gland end of the cartridge resting on a flat surface and the rotor end facing upwards. You should be able to see the 2 or 3 sleeve holes with the plunger pins engaged. (fig. 1)

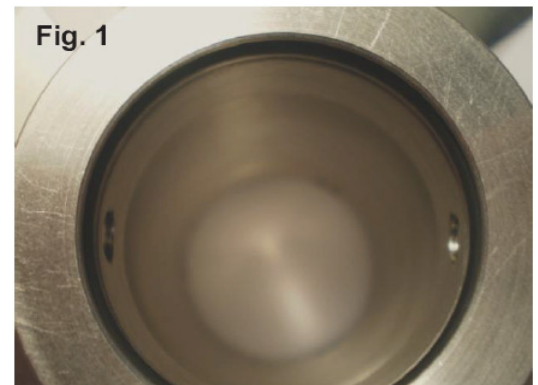
## Step #2 - Removing the rotor from the cartridge sleeve

Using the same tool as previously noted (Allen wrench), press down evenly and firmly on the top half of one pin so that it bottoms out against the inside of the rotor. AT THE SAME TIME, pull back on the rotor so this pin disengages from the sleeve hole (fig. 2A)

Visually check to see that the pin has not sprung back into the sleeve hole. It is important to note while pressing down on the pin, you may need to press on the side of the pin closest to you.

## Step #3 - Releasing the remaining pin(s)

Use the same tool and process as Step #2 to press down on the top half of the second pin. If the rotor is a two pin design, the rotor will easily slide off the cartridge sleeve. If the rotor is a three pin design, ensure pins 1 and 2 are disengaged before compressing pin 3 and sliding the rotor off the sleeve.



### Notes:

1. Do not attempt to remove the rotor from the sleeve until all plunger pins have been disengaged. Failure to disengage all the pins before attempting to remove the rotor may cause severe damage to the seal.
2. If at any point during the removal, the pins should spring back into the holes, repeat Steps 2 and 3 before proceeding further.
3. If the rotor cannot be removed from the sleeve, please contact the factory.