

## HOW TO SERVICE NOVA CHUCKS

### **SAFETY WARNING**

**Safety glasses must be worn when dealing with snap rings on the chucks. Snap rings can fly off in any direction. Use caution and wear safety glasses.**

- **Note:** *Remove jaws or any other accessories attached on the chucks before disassembling the chucks. Wipe/blow off visible dust from the chucks before disassembly.*



### **Preparation:**

Before starting the disassembly, lay a disposable thick towel or cloth on top of the working area as the disassembly process can get messy. The towel will protect the chuck body during this process.

## SuperNova2 – Disassembly




Tools Required:

1. External Circlip Pliers
2. Flat Head Screw Driver
3. Disposable Rag

STEPS	DESCRIPTION	IMAGE
1.	Place chuck face down. The jaw slides can be at any position.	 A top-down view of the SuperNova2 chuck. The outer ring is black with 'SUPERNOVA2' and 'made in Canada' embossed on it. The central threaded section is silver. A red circular sticker is visible on the left side of the black ring.
2.	Use the external snap ring plier to remove the retaining ring (as shown in the image).	 A close-up view of the chuck's retaining ring being removed. A pair of external snap ring pliers is shown gripping the ring, which is being lifted away from the central threaded section. The pliers are silver and black.



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## SuperNova2 – Disassembly





STEPS	DESCRIPTION	IMAGE
<p>3.</p>	<p>Once retaining ring is removed, the backing plate can be removed from chuck body.</p> <p>Option 1: When removing the backing plate, use two flat-head screw drivers to lift it straight out from the chuck body.</p> <p>Option 2: Or thread an insert into the chuck (if chuck is an Insert type – not direct thread) and use a soft mallet to give it a sharp impact. This would release the backing plate from the chuck body.</p> <p><b>NOTE:</b> <i>This step might be tricky as the backing plate can be stuck onto the chuck body with old lubricants.</i></p>	
<p>4.</p>	<p>Remove the pinion gears by pushing them outwards.</p> <p>This may require a bit of force as dirt can get caught in the gaps.</p>	
<p>5.</p>	<p>Remove the scroll ring from the chuck body. This should just slide out but, if stuck, might need a bit of tapping.</p>	

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## SuperNova2 – Disassembly continued




STEPS		IMAGE
<p data-bbox="204 982 237 1024">6.</p>	<p data-bbox="285 695 789 898"><i>Mark with a permanent marker before sliding the jaw slides out since each jaw slide will have a corresponding slideway to it. #1 jaw slide fits where there is a dimple.</i></p> <p data-bbox="285 1003 789 1108">After removing scroll ring, the jaw slides will be free to slide out of the chuck body.</p>	
<p data-bbox="196 1591 228 1633">7.</p>	<p data-bbox="285 1482 683 1514">Make sure you have all parts:</p> <ol data-bbox="334 1520 675 1717" style="list-style-type: none"> <li>1. Chuck Body</li> <li>2. Pinion Gears</li> <li>3. Backing plate</li> <li>4. Scroll Ring</li> <li>5. Retaining ring (EC48)</li> <li>6. Jaw Slides #1-4</li> </ol>	

## SuperNOVA2 – Cleaning

STEPS	DESCRIPTION	IMAGE
1.	<p>Using a disposable cloth/ towel to wipe off much of the visible dirt as possible on each part.</p> <p><b>NOTE:</b> <i>Scroll ring will be used as an example but the procedure should be carried out on all the main parts of the chuck (i.e. scroll ring, jaw slides and chuck body).</i></p>	
2.	<p>To remove built up grime, apply a degreaser/rust remover (e.g. WD40) on each part. Leave on for at least two hours (or as directed on product instructions).</p>	
3.	<p>Use a wired brush to remove the rust and grime.</p> <p>Make sure to run the brush in between the slits of the scroll ring and jaw slides to get to the hard to clean areas.</p>	
4.	<p>Use a clean disposable cloth/ towel to wipe the part after brushing.</p> <p>The parts should feel dry and shouldn't leave any sticky residue on your fingers.</p>	






## SuperNova2 – Reassembly

STEPS	DESCRIPTION	IMAGE
1.	<p>Before reassembling the chuck, apply a generous amount of lubricant to all surfaces that come in contact with other parts.</p> <p>We recommend applying the lubricant (before assembly) on the inner surface of the chuck body as well as the jaw slide slots . Be sure to apply lubricant on spiral teeth side.</p>	
2.	<p>Reinsert the jaw slides back into their original slots.</p> <p><b>NOTE:</b> <i>The jaw slide number should be counting up from 1~4 in the clockwise direction (looking from front)</i></p>	
3.	<p>Flip the chuck on its face and position the jaw slides to form a square in the centre as shown.</p>	


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## SuperNova2 – Reassembly

STEPS	DESCRIPTION	IMAGE
4.	<p>Slide the scroll ring back into the chuck body. Once in place, rotate the scroll ring back and forth until it engages with the jaw slides.</p> <p>You should feel the scroll rings engage as it drops into place, exposing the slot where the snap ring will fit.</p> <p><b>NOTE:</b> Make sure that the jaw slides do not move before sliding the scroll ring in.</p>	
5.	<p>Apply a generous amount of lubricant on the geared side of the scroll ring.</p>	
6.	<p>Insert pinion gears back into the chuck body as shown in the image.</p>	

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## SuperNova2 – Reassembly continued

STEPS	DESCRIPTION	IMAGE
7.	<p>Rotate scroll ring with chuck key to check that jaw slides correctly match up at centre.</p> <p>If the jaw slides match up at centre by forming a square in the middle, put the backing cover on.</p> <p>If the scroll ring is found hard to turn (not smooth), possible causes are:</p> <ol style="list-style-type: none"><li>1. Pinion gears are binding</li><li>2. Not enough lubrication</li><li>3. Defective parts</li></ol>	
8.	<p>Once the back plate is in place, put the snap ring back on to finish.</p> <p>Make sure the snap ring is correctly installed in its groove.</p>	