

Rotor Replacement Procedure

Please read the entire procedure before beginning any maintenance on your RV or MRV valve.

Initial note: Thanks to the RV and MRV design, it is possible to disassembly only the rotor from the stator of the valve without removing the loops and tubing. However, we recommend removing the valve from the instrument for this procedure. This is to ease stator cleaning and to avoid pushing dirt and particles into valve's ports. If you do so, once the valve removed, plug all tubing to limit contamination of the instrument.

WARNING

Rotor replacement operations must be performed in a clean, well-vented and well-lighted area. Flush away any hazardous or toxic materials from the valve before beginning. Please read all the procedure before starting.

Recommended TOOLS

AFP recommends using the TK-02 tool kit to perform this operation. The toolkit TK-02 contains 1x pair of tweezers, 1x magnetic stick to remove/ place the rotor in complicated access to your rotor and 1x key to remove the preload assembly. Contact your sales representative for further information on the TK-02 kit.

Apart from this kit an additional lint-free wiper or swab is necessary for this cleaning operation.



Disassembly

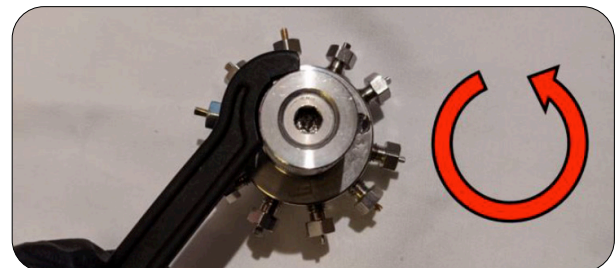
Step 1:

Identify the opening in the preload assembly shown in the image below.



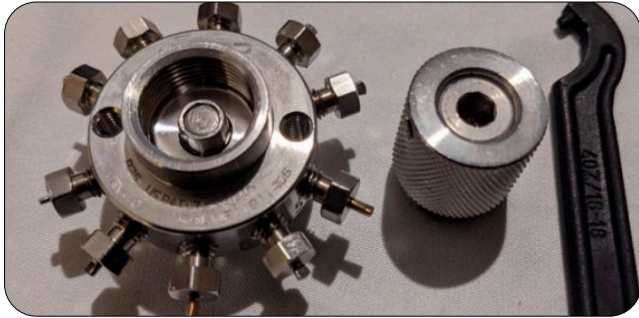
Step 2:

Insert the key contained in the TK-02 within the opening of the preload assembly and turn the key counter clockwise to remove the preload on the valve.



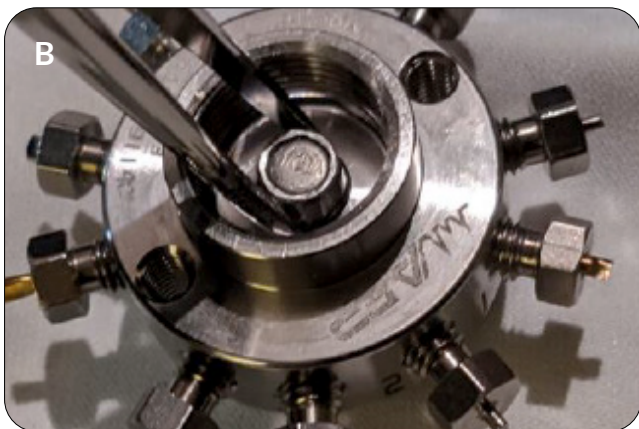
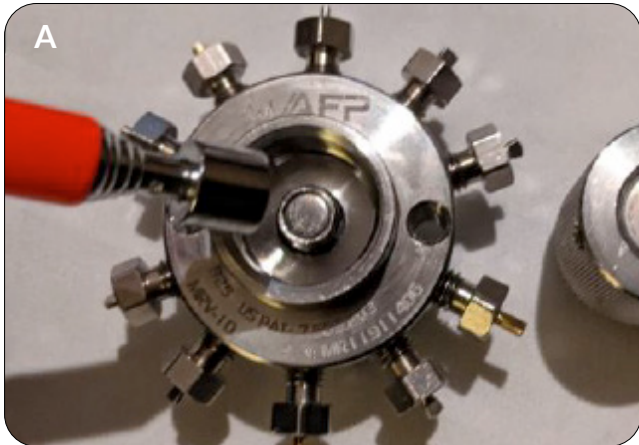
Step 3:

This will loosen the preload assembly, allowing you to remove it from the valve.



Step 4:

Engage the end of the rotor and remove it from the valve. For this step, you can use either the magnetic stick or the tweezers from the TK-02.



NOTE: An additional cycle of the valve might be necessary to break the seal between the rotor and the valve.

Cleaning the Valve Stator

1. Using a lint free swab or wiper. Gently clean the internal stator surface where the rotor sits. Make sure to remove any loose particles. Use a compatible solvent, isopropanol for example, on the lint free swab or wiper if needed.
2. Make sure that there is no particle in the valve's ports. Use a clean and particle free high pressure gas to clean ports. After this step, clean and dry the stator's surface by blowing it with high pressure clean and particle free dry gas.
3. Visually inspect the freshly cleaned stator surface finish. Use a source of light to have a better view. If there is any scratch on the stator surface, then the valve must be replaced. If there is still dirt on the surface, repeat steps 1 and 2.

Assembling a Rotor (New or Used)

WARNING:

During this step, fingers must not touch the rotor. The rotor surface must not be in contact with any other surfaces. Doing so could result in poor valve performances.

Step 1:

Take the clean rotor with the pencil magnet or with the tweezers from the TK-02 kit. Carefully, identify the small indentation dot present on the bottom of the rotor.



Step 2:

Gently and without hitting or touching other surfaces, introduce the rotor into the stator. While introducing the rotor, align the dot on the tip of the rotor with the port number 1 on the stator.

**Step 3:**

Re-install the preload assembly. Firmly hand tighten it until it is bottomed-out. Cycle the valve to seat the sealing surfaces. Be sure to always leave the valve in either fully clockwise or counter clockwise position.