



Removing Valves from Ductile Manifolds

When assembling cartridges in manifolds, Sun Hydraulics applies a light coat of grease to the external cartridge seals to help keep the seals in place during assembly. When removing cartridge valves from ductile manifold cavities, it is not uncommon for the threads in the cavity to grab the backup ring as it is removed, possibly resulting in damage to that backup ring.

The interaction between the backup ring and manifold is something that we expect to happen. For a Sun cavity design, the backup ring at the threaded area is in place solely to protect the O-ring. The fact that damage occurs sometimes but not every time is due to variance in tolerance stack-up conditions of the valve and manifolds, as well as the difference in surface condition with plating options. It also can be impacted by potential trapped pressure when removing the cartridge.

To ensure proper re-assembly of any manifold block, Sun recommends having cartridge seal kits on hand to replace any damaged rings during disassembly. Seal kit information can be found on the cartridge product page on the website. Information on installing the kits is available on the Sun website:

<http://www.sunhydraulics.com/tech-resources/seal-kit-installation-guidelines>.

Once seals have been properly inspected, replaced if necessary and greased, the cartridge valve should be installed by hand and then torqued to the published specification on the product page. This torque specification can be found in the technical data section on the valve product pages.