



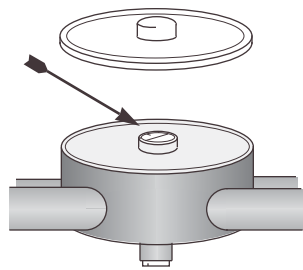
Studio of Andrew B. Spang

The Proper Method for

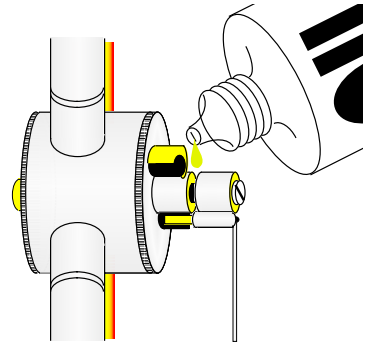
Oiling Rotary Valves

Rotary valves should be oiled once or twice every month. Unlike typical piston valves, proper oiling of rotary valves requires *two or three* separate kinds of oil: a lightweight “rotor” oil (such as Hetman Rotor lubricant or MusiChem’s Rotor Oil), a midweight “spindle or bearing” oil (such as Hetman Bearing/Lever lubricant or Paxman ‘Spindle/Bearing’ oil), and a heavyweight oil (such as Hetman Ball-Joint lubricant or ‘Lever/Linkage’ oil by Paxman). Why three oils? A piston valve has basically only one type of contact: the valve core and the inner valve sleeve. With a rotary valve, you have three different areas of contact, all deserving special attention. The first is similar to the piston valve: the valve core and the inner sleeve (light oil). The second is the valve stem and valve casing (medium oil). The third area is all the joints along the mechanical linkage found on rotary valves not using string linkage (the heavy oil).

Here is the proper method for oiling rotary valves. First, push in all valve slides with the valves depressed. Next, remove each valve’s backplate one by one. Place a drop or two of the medium-weight oil (again, Hetman’s Bearing/Lever lubricant) on the raised circle now visible after removing the backplate. Now pull out that valve’s tuning slide (without depressing the valve). The resultant suction will pull the oil up the spindle. Replace backplate, and repeat for each valve.



in. Now, place a drop of the medium oil on the spindle on the front of the valve, just above the bumpers. Then pull its slide, using the vacuum to pull the oil up the other end of the spindle. Repeat for each valve.



Now, remove each valve slide and squirt a fair bit of lightweight oil (Hetman’s Rotor lubricant) into the slide. Replace the valve slide, flipping the valve rapidly to distribute the oil evenly over the valve core. Repeat for each valve. If you have brand new valves, or especially “tight” rotors, you might want to use an especially lightweight oil during this step, such as Hetman’s “Light Rotor” lubricant. Experience will show you the best oil to use.

Finally, oil all moving parts of the linkage with the heavyweight oil. Especially important areas include the screws (or ball-and-sockets) above the spindles and the hinges (or, again, ball-and-sockets) below the springs. If you have string linkage (like on most french horns) you may skip this step.

Plan on the whole process listed above to take 15 minutes to half-an-hour. It is imperative that you oil your valves frequently and properly to maintain their maximum efficiency. Be sure to oil them whenever the slightest drag or slowing occurs or if they become especially noisy. This technique should be used on all rotary valves, including the attachments found on trombones, fifth valves on piston tubas, and all usual rotary valves found on french horns and tubas.