

# *Oiling Piston Valves*

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- *Valve oil does four things:*
    - Lubricates the valve and casing surfaces*
    - Flushes debris down into bottom caps*
    - Seals space between piston and casings*
    - Protects valves and casings from corrosives found in saliva*
  - *Valves should be oiled daily.*
  - *If one valve is sticking or sluggish, oil all three.*
  - *Keep your instrument clean.*
  - *There are several effective ways to oil valves.*
  - *There are also several ineffective ways to oil valves.*
    - *DON'T put oil on the valve stems.*
    - *DON'T put oil in holes in the bottom valve caps.*
    - *DON'T put oil down the lead pipe.*
    - *Placing oil in each individual valve slide does achieve some degree of lubrication, and may be better for beginners. [See 7, 8, and 9 below.]*
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- 1) First, open your valve oil container.
  - 2) Hold the instrument in your left hand with the valves tilted up at about a 45 degree angle.
  - 3) Unscrew all three valve caps, and pull each valve partway out of the casing.
  - 4) Try not to rotate the valves as you pull them up.
  - 5) Put a few drops of oil on the smooth [*possibly shiny*] area of each valve.
  - 6) Don't put oil on the spring, felts, cork, and/or valve guides.
  - 7) Carefully slide the valves back down to their original positions. Try not to spin them.
  - 8) On most valves there is a number [1, 2, 3] in the spring area. On Bach trumpets these numbers usually face the lead pipe. The numbers on Schilke valves face the bell. Determining the system used for your instrument can be helpful when reinserting valves.
  - 9) Each valve must be in its proper valve casing. Valves are not interchangeable.
  - 10) When the valves are in the proper position, gently screw the valve caps back on. They should just be finger tight.
  - 11) Finally, always blow a little air through the horn or play a few notes to make sure everything works! It is better to find out sooner than later that you've misplaced a valve. And, sooner or later, everyone does it.
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- *Use a quality valve lubricant [oil or synthetic]. Don't mix brands. Not all types of lubricants are compatible with each other, and will cause the valves to become sluggish or stick entirely. Some quality brands include Blue Juice, Al Cass, Hetman, Alisyn, Fat Cat and Spacefiller. However, lubricants branded as Holton, Yamaha, Selmer, and Jupiter that are often supplied with instruments are acceptable.*

- *Lubrication achieved through regular oiling helps ensure the very small tolerances between the valve and its casing are maintained for many years.*
- *Oiling valves helps prevent staining in monel valves. The lubricant shields the piston from the corrosive elements found in saliva. Stained valves move slowly or stick.*
- *Be careful. Piston valves are actually hollow, and quite fragile. Tolerances are very close, and a very slight nick or scratch can make the valve stick.*
- *Setting a trumpet on its bell eventually will result in damage to the instrument. So will laying it on its right side. This puts pressure on the protruding second valve slide, and may eventually slightly twist the valve casing, causing the second valve to stick.*
- *Discourage students from wiggling their valves back and forth. This tends to wear and round the edges of the valve guides, possibly causing alignment problems.*
- *Mouthpieces [and other items] should never be left loose in the case. They should be placed in the proper storage locations. A loose mouthpiece can create tiny dings in the valve casings, and cause the valves to stick.*
- *Never try to force a stuck valve out of its casing with a drum stick or screw driver. Remember, they're hollow and fragile.*