

Axial Flow Valve Maintenance

Your axial flow valve can provide you with a lifetime of usage if properly maintained. Maintenance is easily done and will be described in detail within this page. For tools, lubricants, and any miscellaneous items, please contact Edwards. In addition, use only Edwards' oils as they work best with axial flow valves.

You should only have to disassemble your valve once every six months to a year if you oil the valve every two weeks through the slide receiver and main tuning slides. When oiling in this manner also put a drop of rotor (clear) oil on the valve spindle. Only take apart your valve if oiling it from the outside does not work as well as you would like. It is easy to take these valves apart but one must be careful to not: 1) drop the valves, 2) accidentally use F valve in Gb casing (on bass), and 3) drop oil onto your wife's new carpet. These procedures do require using oil that can stain your clothes or carpet so be careful.

Every two to three years you should inspect your rod end bearings for wear. Replace as needed. Edwards does offer an upgrade of rod ends that are of higher quality. The German upgrade rod end bearings are \$10.00 each. The trigger springs may wear after a few years of usage so have spares to take to your local repairman when the spring tension becomes loose.

As a general rule if a valve is noisy it needs spindle oil on external parts. If a valve is slow or sluggish, it needs rotor oil on the inside of the valve.

Be careful not to over tighten and strip out the stop arm screw.

Tools needed:

1. Allen wrench that comes with horn purchase in accessory kit
2. Small common (flathead) screw driver
3. Edwards Rotor Oil
4. Edwards Spindle Oil

It will take approximately 1 hour for a first time disassembly. You will need to double this time for a bass valve section.

Parts of the valve section:

1. Valve body
2. Rotor / Spindle
3. Top Plate with bronze bearing
4. Lock Ring
5. Stop Arm
6. Stop Arm Screw
7. Rod end linkages assembly
8. F (Gb) Trigger arm with spring

Disassembly:

1. Remove valve section from bell and tuning slide. Set on clean towel on the floor or a workbench.
2. Remove all tuning slides.
3. For the bass trombone you will need to remove second valve from first valve section. With a common (flathead) screwdriver remove the rod end assembly screw and set the Gb trigger into the unengaged position. Loosen the side cap screw that is in between the two valves with the provided Allen wrench. With the trigger disconnected and the rod end assembly disconnected remove the second valve section and set it on a clean work area.
4. With all tuning slides removed take the Allen wrench and remove the top round stop arm set screw that holds the stop arm to the valve.
5. Remove the stop arm and slowly allow the spring to carry the F arm into the resting position.
6. Loosen the cross brace that connects the F & Gb tuning slides to each other (see diagram).
7. Grasp the valve lock ring completely with thumb and the bird finger. Be careful not to grasp only on two sides as you can make the lock ring out of round and not seal correctly. Loosen until the lock ring is no longer connected to the outer valve casing.
8. Carefully remove the top plate and the valve from the valve casing. Make sure not to drop the valve as you can damage it.
9. Set the valve casing down on clean cloth.
10. Remove the valve from the top plate and set all components down. (Be sure to keep bass valves with the correct casing; do not mix up valves when reassembling)
11. With isopropyl alcohol and a soft cotton cloth rub down all components, cleaning any and all residual elements. Use a cotton ear swab on the top plate-bearing surface with alcohol on the swab.
12. Once all components are cleaned it is time for reassembly.

Reassembly:

1. Take the valve casing and drench the inside with the clear Edwards rotor oil.
2. Set the valve into the valve casing.
3. Put clear rotor oil on the spindle and top of the valve.
4. Carefully put the top plate back into the correct position and tighten the large valve lock ring into place. (Once this is tightened your fear of dropping the inner valve is greatly diminished)
5. Reassemble in opposite fashion you disassembled.
6. Once reassembled use a spot of Edwards spindle oil on each side of the rod end bearings, valve springs, and both sides of the trigger spindle (trigger spindle is what trigger spring goes around). **DO NOT USE SPINDLE OIL ON THE VALVE SPINDLE! This oil will slowly seep into the valve and make it sluggish and slow.**

Edwards will assume no responsibility for accidents caused by players who attempt to do their own repairs.