



# Michael Rath

ENGLAND

## Maintenance Guide

In this step by step guide we advise you how to maintain, clean and lubricate your trombone. This will prolong its life, maximise its value, keep it looking great and most importantly playing its best.

We've broken each section down into the main components of the instrument, then advised on monthly and weekly care with some helpful hints along the way.

### Hand slide –

#### Monthly maintenance

Take the two parts of the slide apart and remove the leadpipe if you have an interchangeable model.



Pump warm (not hot) water through the slide legs to remove any loose debris. You can do this by removing the showerhead from the hose in the bath or shower.



Take a flexible cleaning brush and apply some laundry soap to the bristles and brush out thoroughly. Take care when brushing out the slide bow and if the brushing action becomes tight, back up slowly. A stuck and separated brush head could be costly to remove.



Pump the slide through with warm water until there is no more soap in the slide. Soap and slide lubricant don't mix well together and will result in a poor action.

If you have a removable leadpipe, clean this out separately by flushing the debris out first with warm water, brushing out with a flexible brush and laundry soap and then rinsing until all the soap is removed.

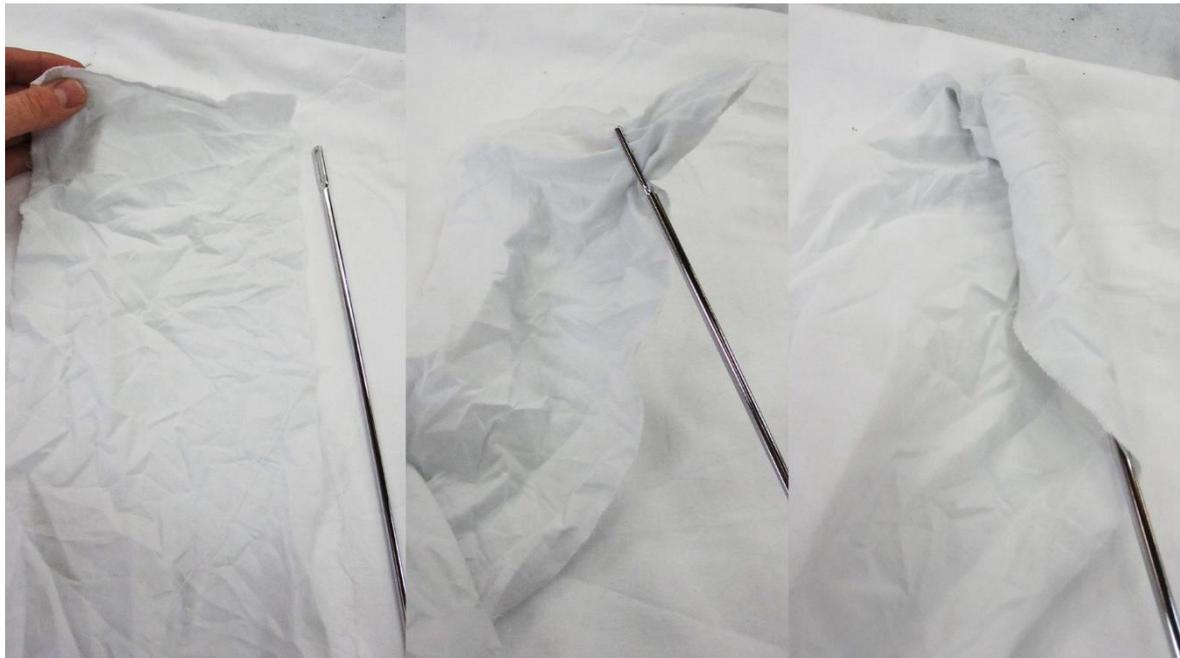
Dry out the slide legs with a strip of cloth and cleaning rod (explained below).

### Weekly maintenance

You need to rod out your slide regularly to remove the old slide lubricant from the inside of the outer legs and to stop the build-up of debris. For this you need to use a straight cleaning rod that has a round and smooth end and strips of cotton sheets. A rod with a sharp or rough end could damage the inside of the slide and slide bow if you are not very careful.



Tear a strip of cloth 4 to 6 inches wide; the cloth will need to be narrower for small bore and wider for large bore/bass trombones. Thread one corner of the cloth through the loop and wrap the sheet around several times so that the slide bow will be protected from the end of the cleaning rod. The cloth needs to be thick enough to have good contact with the inside of the slide leg but must not get stuck or distort/bend the tubing.



Carefully wrap the cloth around the rod down to the handle so that the slide leg does not come into contact directly with the rod, the cloth does not need to be wrapped multiple times for this.

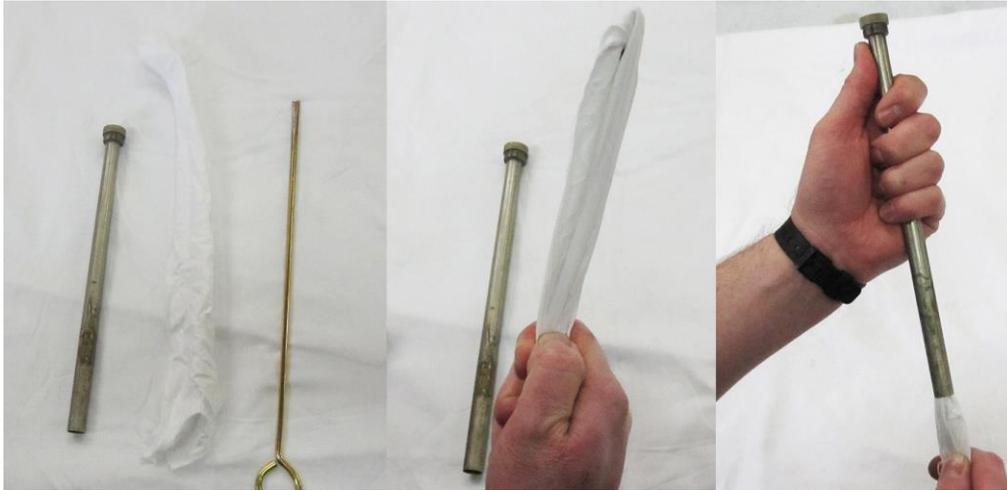
Carefully rod out the slide legs so that you can feel you are getting good contact with the inside of the leg. The slide leg should warm up **a little** from the friction but you should be sure that the rod will not get stuck. Be careful not to rod too far down the outer slide as you will most likely dent the slide bow, you can use your index finger or thumb as a stop on the rod to help prevent this.



**Do not** allow the thick part of the cloth to go beyond the end of the inner leg as the rod may get stuck.



**Do not** rod out the leadpipe with the same rod and cloth that you use for the inner legs. This must be done separately as the leadpipe can be easily damaged and so needs to be rodded carefully with a thinner strip of cloth of around 1-2". Leadpipes are made from tube with a smaller wall thickness than inner slide legs so are more delicate and any damage to it may affect how the instrument plays.



Put a small amount of tuning slide grease on the thread of the leadpipe before putting it back in the slide, this will help to prevent it getting stuck but be careful not to get grease in the rest of the slide.



Wipe off the inner leg with a clean cloth and remove any dried lubricant. If you do this regularly the old lubricant should be easy enough to remove, if not use some laundry soap and water then rinse thoroughly.



Once the inner and outer slide is clean and dry you can lubricate the stockings on the slide, work it into the outer legs, wipe off the inner with a clean cloth and dilute with water as you prefer. Make sure that the tip of the bottle of lubricant is clean otherwise you will transfer dirt to the inner legs and then into the outer slide. If this happens you will need to rod the slide out all over again.



### Helpful hints

If you are playing very regularly we would advise that you have your slide serviced by an instrument technician once a year including a chemical clean to remove the limescale build up. They will also check the slide leg alignment as bent legs will increase the wear on the slide legs which affect the action of the slide and potentially damage the chrome plating resulting in costly repairs. They should also check for dents and remove them once the slide is clean.

If you live in a hard water area it is beneficial to use distilled water to spray on your slide rather than tap water as it will help reduce limescale build up.

## Tuning Slides and Straight Goosenecks—

### Monthly Maintenance

Carefully remove the tuning slide/s from the bell section. Wipe off the grease with a clean cloth and laundry soap.

Brush out the tuning slide (and/or gooseneck) with some laundry soap with a flexible brush or appropriately sized bottle brushes and flush through with warm water till all debris and soap have been flushed and rinsed out.



Rod out with a strip of cloth until dry but make sure there is enough cloth over the end of the rod to protect the bow. Hold the cloth quite tight to prevent the rod slipping and denting the tuning slide.



Put a ring of grease on the tuning slide legs and work it in to get an even coating, then put the tuning slide back into the playing position. As with the slide lubricant, make sure the tip of the grease bottle is clean to prevent any dust or dirt transferring to the trombone. Applying tuning slide grease regularly seriously reduces the chances of your tuning slides getting stuck which will result in unnecessary repair bills.



### Helpful Hints

When drying the outside of your tuning slides (or any part of your trombone whilst cleaning) always make sure the cloth is clean and free of any dirt first as you will scratch your lacquer or plating.

## Valve/s -

### Monthly Maintenance

The lever, linkage (mini-ball joints) and springs should be lubricated with a thick oil – engine oil or 3 in 1. This will keep the lever action quiet and smooth and prolong their life. A bottle with a needle tip will be helpful.



It is also advisable to put a very small amount of tuning slide grease on the threads of the caps or the rubber 'O' ring of the main cap on Hagnann valves. This will reduce the risk of the caps getting stuck. Make sure you do not get any grease inside the valve as this will slow the action and may require the valve to be taken apart.



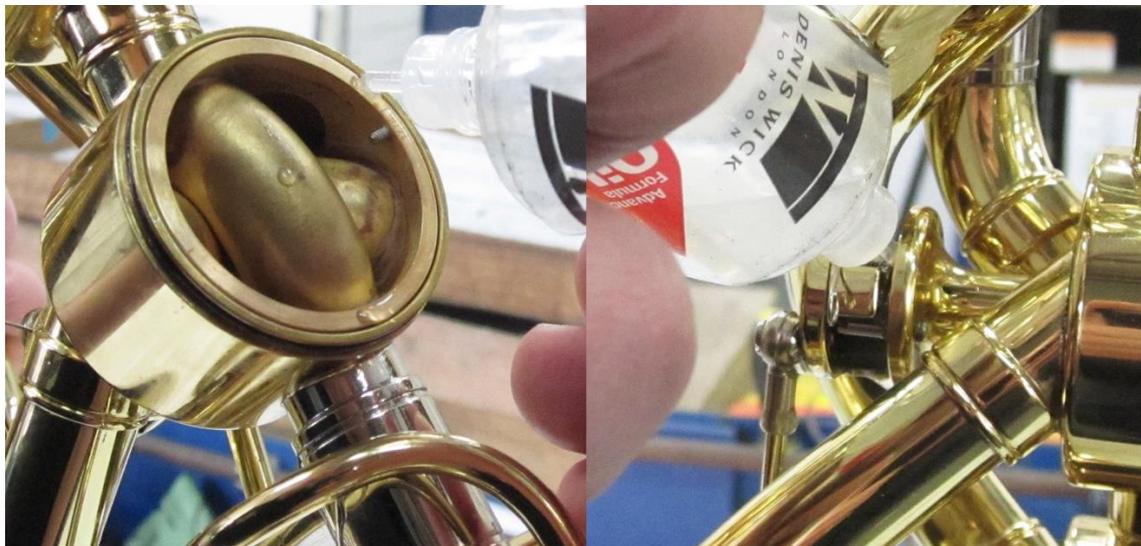
### Daily to Weekly Maintenance

Valves need oiling with a thin oil regularly to keep them working at their best and reduce limescale build up. How often you do this will depend largely on how much and how regularly you play.

Traditional rotor and Rotax valves need oil inside the valve and on the two bearing surfaces. The bearing surfaces just need a drop each and then put several drops down the tuning slide legs and work the lever a few times to spread the oil around the casing. You may wish to use 'Bearing Oil' on the bearing surfaces but **do not** use this inside the valve itself as it is too thick and will slow the action of the valve.



Hagmann valves require oil inside the valve and on the spindle inside the top spring. A few drops inside the valve regularly and one drop on the spindle are best for these high tolerance valves. **Do not** use Bearing Oil on these valves.

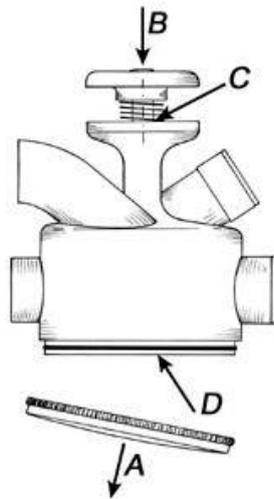


Here is Rene Hagmann's own recommended weekly routine for oiling their valves;

## Maintenance

### Weekly Care

The valve should be lubricated once a week, only using piston type valve oil (such as La Tromba T2, Besson, Yamaha, AL Cass, Bach, Olten, etc). Please proceed as follows :



1. Remove the A cap: no tool is required. Just rotate while pulling.
2. Spray about ten drops of oil inside the D section.
3. Lubricate the stem underneath the C spring (three drops).
4. Put the cap back over the valve.
5. Action the valve several times while pressing on the B part, faced towards the ground.

#### REMARKS:

Just like a ordinary piston valve, the R.H. Free-Flow should constantly be well lubricated. Please note it will perform poorly when too dry.

Under cold temperature, condensation may acumulate inside the valve. Make sure to wipe off excess water before lubricating the valve.

In order to give you years of satisfaction we recommend professional maintenance every two years.

### Helpful Hints

We do not advise soaking a valve in water to clean it. We would suggest that you rod out the tuning slide legs with a cloth and then lubricate as advised above.

Try to avoid oiling your valve when short of time (eg. just before the start of rehearsal), chances are you will over oil it or you may drop the cap on the floor or worse the bell which will result in an expensive and needless repair. It is always best to get your valve serviced by an experienced technician who will be able to take the valve apart and fully chemically clean it. Hagmann valves ideally need this once a year depending on how regularly they are played.

### Preserving the look of your trombone –

Your lacquer or in some cases silver plate needs to be cared for to prolong its life. It is particularly important to do this where the instrument comes into contact with skin. Our skin (and sweat) is slightly acidic and this will erode the lacquer over time.

You can purchase lacquer cleaning clothes or you can use a clean microfiber cloth with a small amount of polish on to maintain the instruments shine. We would recommend a car or

beeswax/furniture polish but certainly nothing abrasive. This will remove any grease and grime from handling and add a protective layer to the lacquer to preserve it.



### Helpful Hints

Always store your polishing cloths in a sealable bag after use. This will stop them from picking up any dust or dirt which may scratch the lacquer or plating when used next time and if you are using a cloth with polish on it, it will help to stop it from drying out.

### General Care

Many brass players tend to carry out their basic maintenance in a rush before rehearsal and as mentioned above, this can result in accidents or hasty care which may cause more problems than they solve.

A good time to oil your valve would be at the end of rehearsal (or practice) when you are about to put your trombone back in the case, the oil will force out water and reduce limescale build up.

The same goes for the slide; empty all the water out of the key before you put the instrument in the case. Again, this will reduce limescale build up and prolong the life of your slide and the need for a service.

Always wipe parts of the trombone that come into contact with skin once you have finished playing. This will remove any oily or acidic deposits from you which may damage the lacquer over time.



Thanks for taking the time to read this and we hope you have many happy years with your Rath trombone.

If you have any questions about the above please do not hesitate to contact us by email at: [info@rathtrombones.com](mailto:info@rathtrombones.com)