

## EUPHONIUM

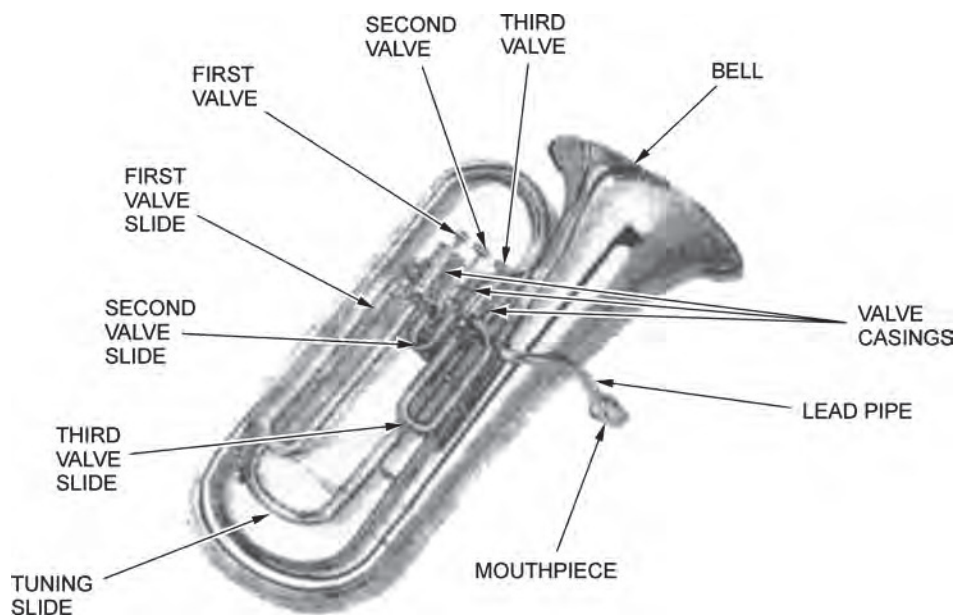


Figure 18 The Parts of the Euphonium

*Note.* Created by Director Cadets 3, 2004, Ottawa, ON: Department of National Defence.

### Assembly

To assemble the euphonium, use the following steps:

1. Set the instrument case on a flat and stable surface. Make sure the case is facing up. The case latches are the best indication to verify this. Open the case.
2. Gently place the mouthpiece into the receiver and twist it gently to seat it.



It is important to avoid hitting the mouthpiece, even lightly, after it is seated in the receiver as this will likely get the mouthpiece stuck. Do not try to remove a stuck mouthpiece; ask for help from an instructor, as they have tools to do this.

### Disassembly

The disassembly process is the reverse of the assembly process.

### Storage

Most euphonium cases are designed to fit only the instrument, its mouthpiece and maintenance supplies. Storing anything else in the case may cause damage to the instrument.

## Maintenance

### TYPES OF OIL AND CREAMS

There are a number of different types of lubricants used to maintain a brass instrument. Each type is used on a different part of the instrument. While they all serve the same general purpose, they should not be mixed or used on the wrong part as it may hinder the movement of the part.

**Valve oil.** A light, often clear, mineral oil used to lubricate piston valves such as those found on the trumpet, the euphonium, and most tubas.

**Rotary valve oil.** A light, often clear, mineral oil used to lubricate rotary valves. It is thicker than valve oil. It is used to lubricate rotary valves on the French horn, trombones with the F attachment, and certain tubas.

**Slide cream.** Slide cream is used on the inner slide of trombones. Slide cream is a white, fairly thick cream, similar to cold cream. If the slide cream starts to separate and there seems to be a liquid in the container, it is time to replace it as it will not perform to the required standard.

**Slide oil.** Another type of lubricant for trombones is slide oil. This is a clear mineral oil used on the inner slide. Slide oil can be found in one step and two step processes. It is a matter of preference as to which one to use, however the two-step process often lasts for a longer period before requiring reapplication.



Never mix slide cream with slide oil as it may hinder the movement of the slide.

**Slide grease.** Slide grease is a thick grease used to lubricate the tuning slide on brass instruments. It is often an amber colour and has the consistency of petroleum jelly.

### REMOVAL OF PISTON VALVES

To remove the piston valves:

1. Number the valves by placing a piece of masking tape on the top of each valve and writing the number of the valve on it. The first valve is the valve closest to the mouthpiece.
2. Unscrew the top valve cap from the valve casing. Remove the valve by pulling it out in a straight line; do not twist the valve as this could scratch the casing.
3. Repeat Step 2 for the remaining valves.

Some piston valves have springs under the valve rather than built into the valve. If there are springs in the valve casing, make sure to place the spring with the correct valve to ensure they are placed in the correct valve casing. Some of the springs could have different wear and tensions and work best in the casings where this wear has occurred.

### LUBRICATION OF PISTON VALVES

To lubricate piston valves:

1. Hold the valve by the top and apply valve oil, coating the entire valve.
2. Place the valve back into the valve casing, making sure to align the valve guides with the guide slots. Instruments may have one or two guides.

3. Tighten the top valve cap and press the valve several times to ensure an even coating.
4. Repeat Steps 1 to 3 for the remaining valves.

### LUBRICATION OF TUNING SLIDE

It is very important to keep the tuning slides well lubricated. The tuning slides need to move with ease. The tuning slide grease also helps maintain a proper air seal around the slide.

To apply slide grease:

1. Remove the slide from the instrument.
2. Wipe the slide clean.
3. Apply the tuning slide grease completely around the slide, about 2 cm from the end.
4. Replace the tuning slide and move it back and forth.



When tuning slides are removed, remember to press the valve for that slide (if applicable) before removing and replacing the valve.

### CLEANING THE EXTERIOR OF A BRASS INSTRUMENT

The exterior of brass instruments should be cleaned every day before storage to remove dust and fingerprints from the instrument. Fingerprints have an acid base that can damage the finish.

To clean the exterior of brass instruments, use a polishing cloth to remove the dust and fingerprints. If there is dirt or residue, lukewarm soapy water and a clean soft cloth can be used to wipe down the instrument. Use a clean soft cloth to dry the instrument. Use the polishing cloth once the instrument is dry.



Grease and oil from your hands can be corrosive to the lacquer on an instrument. It is important to ensure the instrument is cleaned to maintain the polish and shine.