



Clarinet and Oboe Cracks

By Bill Mathews & Mike Lutley

Why Does Wood Crack?

Wood, being a material that was once very much alive, and quite full of water, never loses its ability to absorb moisture from its surroundings. When it does absorb water, it expands and when it dries again, it contracts.

Temperature has an effect on wood, but has more effect on moisture. Extreme heat will cause the moisture to evaporate and thus the wood will shrink rapidly. Extreme cold causes moisture to expand and in turn cause the wood to expand as well.

How much does wood move?

The ancient Egyptians used this discovery to their advantage. One method used to mine great stones to build the pyramids was to put dry wood wedges into cracks in the stone and pour water on them. As the wood expanded it would continue to crack the stone and eventually separate it. Studies have found that in some wood, this water expansion can develop as much as 4000 pounds per square inch of pressure. To give you an idea of how much pressure that is, think of it like this: put your left index finger under a 3/4" board 12"X12", now with your other hand, stack 192 midsize cars end to end on that board. Imagine the pain. That's what the inside of the clarinet and oboe is going through every time it is played. No wonder they crack.

What can I do?

Expect it to crack sooner or later. It's Wood!

Take precautions - Don't keep wood instruments in extreme cold (car in the winter) or extreme hot (car the rest of the year) conditions. When getting ready to play, let the instrument adjust to room temperature, then warm up the bore by blowing air through it.

Proper Maintenance - Swab the bore often. Pay attention to the amount of moisture blown through the instrument and swab accordingly. Some people need to swab several times an hour while others can get away with swabbing at the end of a playing session. Use a high quality absorbent swab and do not leave it inside the bore of the instrument. Keep the swab clean, either wash it or replace it. Have the instrument checked annually for need of bore oil.

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