

Freezing metal door locks -- removing broken keys & is there a right side up for locks?

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Wendy in Golden, British Columbia is having constant problems with her front door lock freezing up. Actually this is common in a very cold climate when you have a positive pressure in your house for some reason. The positive pressure pushes moist warm air out the door lock, and it freezes there. Modern air-tight houses have very few air leaks, so the front door lock becomes an important one. This positive pressure is one of the reasons that properly installed ventilation systems are balanced with the same amount of air coming in as is going out -- it avoids problems like this. One of the common ventilation systems used these days is simply a fresh air duct from outdoors leading into the cold air return of the furnace. When exhaust fans go on in the house, fresh air will be drawn in through this duct and warmed up by the furnace. But when the furnace is operating and no exhaust fans are on, the furnace fan will still draw air in through this duct, and pressurize the house. This simple air intake works well in the milder parts of Canada, but can create problems like Wendy's in the colder regions. What Wendy needs is a balanced air change system, probably an HRV (Heat Recovery Ventilator).

In the meantime, use silicone spray on the lock. It should displace the water and help to keep the ice from accumulating.

If a key gets stuck in a lock, you can pull it out by catching ahold of it with the teeth of a coping saw blade, or failing that, push it out from the back side. Be careful to push on the bottom of the key (away from the teeth) or your pushing device will get caught on the spring loaded pins above.

And yes, there is a right side up to all locks. You always want the pins and springs above the key (key teeth sticking up) -- if you turn it over you will collect dust and grime in the pin shafts and the lock will eventually jam.

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