

Vulcan Stove Fan Manual

Warning:

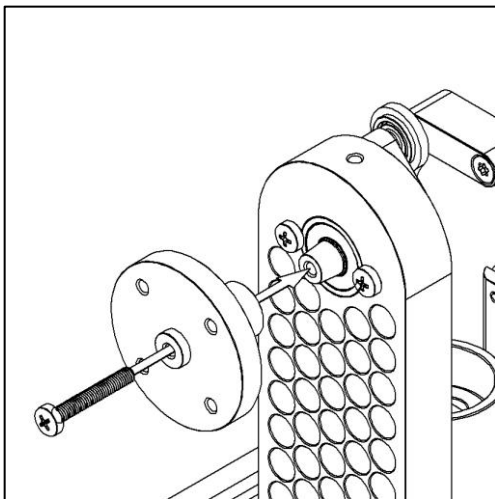
Do not oil your fan. The latest version of the fan has been designed to not need regular oiling. Keep oil away from the glass cylinder.

Keep away from any frying/sauce pans that are being used, as this has been known to splatter oil onto the stove fan and stop it from working.

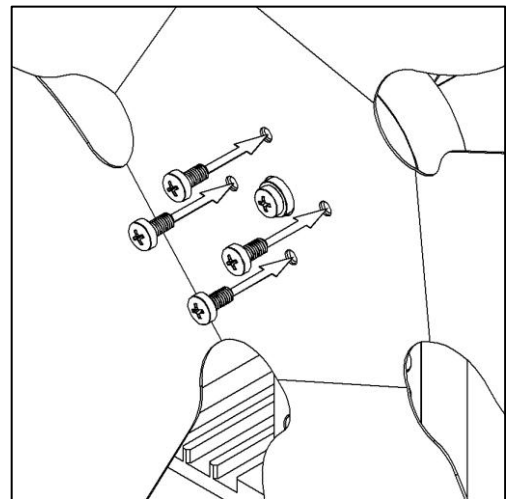
Parts of the fan will be very hot while in operation and will take time to cool down once removed from the stove. If removing from the stove make sure it is placed on something that can withstand the heat.



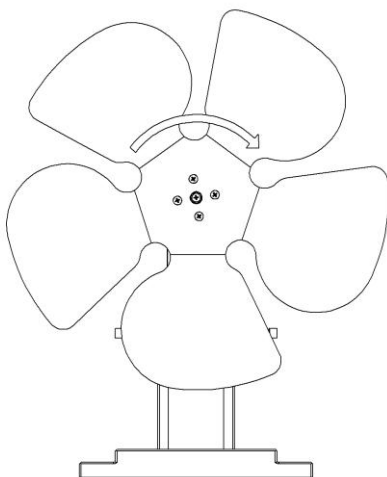
Assembling the fan blade



Fit hub onto axle and secure with 1 long screw.
Tighten screw to medium hand tightness.



Fit fan blade onto hub and secure with 4 short screws.
Tighten screws to medium hand tightness.



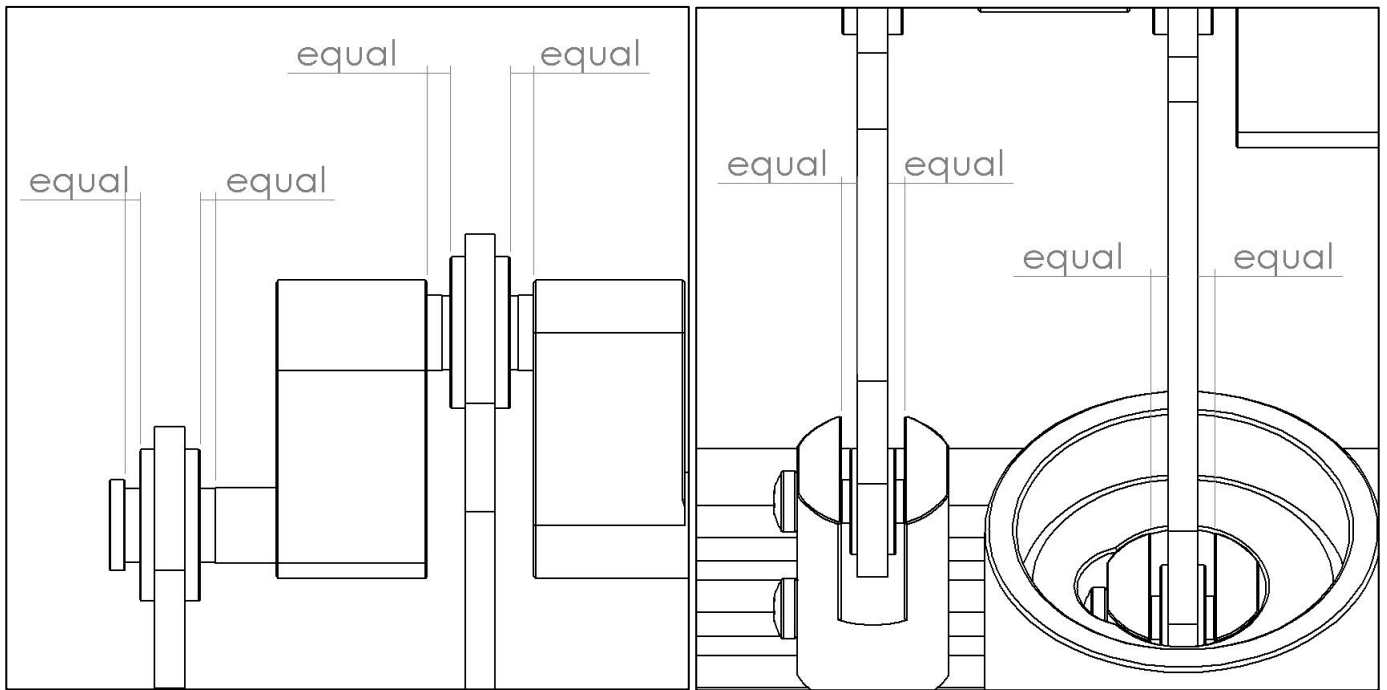
Using your fan

Once your stove is up to temperature place the Stove Fan on the stove. Wait until the base has heated (this should take only a few minutes) and then gently spin the fan clockwise, with enough force to allow the blades to rotate a few times. The fan will start to rotate slowly at first but will gain momentum. The higher the temperature of the stove, the faster the fan will operate. The surface temperature of the stove should be at least 150 C (300F).

Handling your fan

Your stove fan can be picked up by the blades when idle. This is particularly useful if the stove is still hot.

Vulcan Stove Fan Manual



Fine Tuning

Your Stove Fan has been factory-set and tested to run at over 400rpm at 450°C. If you find that your Stove Fan does not run as expected you can adjust the positions of the connecting rod ends. Optimum positioning for each connecting rod end is central, as shown in the diagrams, but you might find that your engine runs better with a slight bias to one side or the other. When adjusting, do not move the connecting rod ends so far that they become jammed on their shafts or wedged against the cranks, and do not undo any screws on the cranks, these are factory-set to the correct positions.

What does it do?

The Vulcan stove fan is a Stirling engine powered fan that quietly and efficiently circulates warm air from your wood stove, coal stove or other heat source, through your home or workshop dramatically increasing the effectiveness of your heating appliance and improving your comfort level. No longer will you have to stoke your stove to blazing hot temperatures only to end up with a VERY hot area in the direct proximity of your stove and mildly warm air across the room. The Vulcan stove fan helps to uniformly circulate the air, leaving you a cozy, comfortable atmosphere to enjoy while reducing the amount of fuel your appliance consumes. In addition, the Vulcan costs you absolutely nothing to operate!

How does it work?

The Vulcan stove fan does not require any electricity whatsoever! No batteries. No mains electricity. The Vulcan is self-powered just from the heat of the stove. It utilizes a small, quiet Stirling cycle power plant built into the fan. The Stirling cycle power plant obtains its power from rapidly heating and cooling the same volume of air. When the air is heated, it expands, pushing a piston upward; when the same volume of air is rapidly cooled, it contracts, pulling the same piston downward, providing power. The same volume of air is heated and cooled very rapidly converting the heat energy to mechanical energy used to turn the fan blade.

The Vulcan's fan speed increases relative to the temperature increase of its heat source. So, the hotter your stove, the faster the Vulcan will run and the higher the volume of air circulated. The Vulcan stove fan uses the latest and best technology, including borosilicate glass cylinder, graphite piston and ultra-low friction demagnetised bearings to ensure it is completely maintenance free. You never have to oil it !