

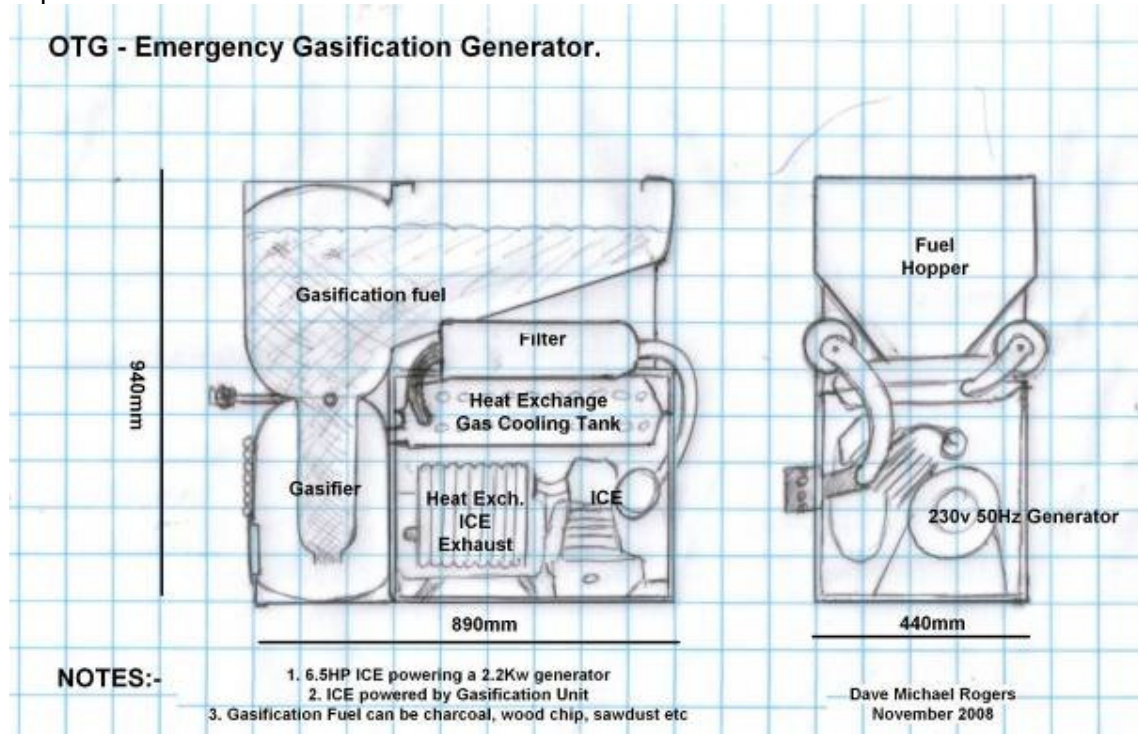
OTG

Emergency Primary Source Woodgas 2.2Kw Generator

In the event of a major power-cut, unless a true "Over Unity" primary source can be realised, any OTG setup will need to recharge its load batteries once depleted. Without the grid, an alternative Primary Source is needed. This is one option being explored.

DMR – Build Record 1st Dec 2008

OTG - Emergency Gasification Generator.



Approx to scale pre-construction plan. Reality had a few changes.

Tools Used:-
File, Drill, 9" Angle Grinder, Arc Welder



Drilled and then filed round, until the fire tube was a snug friction fit. The end of the donor fire extinguisher for the fire tube, become the grate pan with a few dozen holes.



Spring fit door awaiting door seals. Grate can be seen hung by chains.



Basic gasifier unit.



The First Feed ! Way too big for this baby.



A salvaged blower from a oil fired boiler. The oil pump has been removed and the hole left will become the woodgas inlet. There's a 240v motor on this, not sure what to do yet with this.



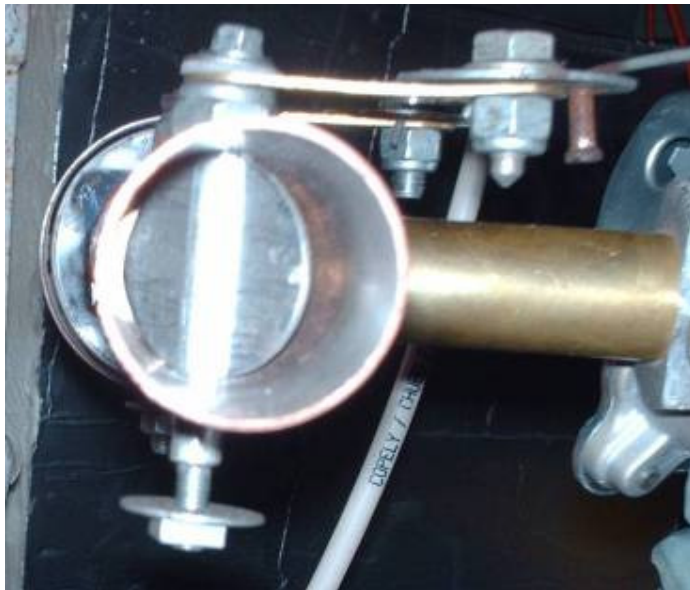
The motor and fan.



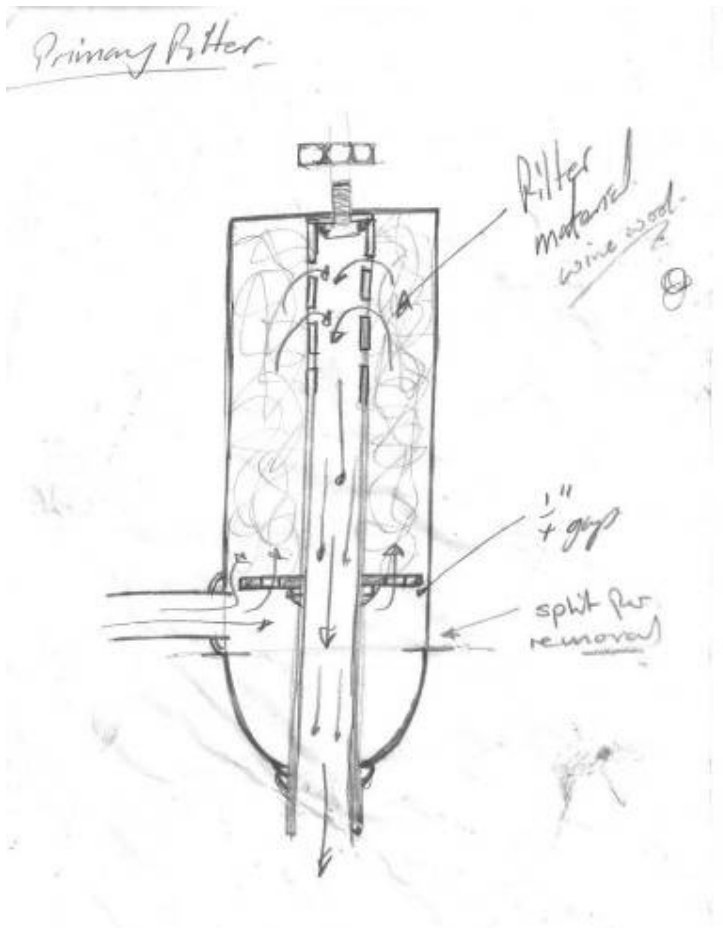
The donor ICE and 2.2Kw generator.



Woodgas carburettor linked to ICE regulator (I think?).



Butterfly valve at gas input end.



Primary Filter design using inverted fire extinguisher body and wire wool.



Initial Primary Filter made from old fire extinguisher.



Filter excluding wire wool.

The filter base will be welded to the gasifier allowing the main body of the filter to be lifted off for cleaning.





Filter top nut with tightening handle welded on.



Grate Shaker handle and grate link.



The Shaker stud is kept long for heat insulation.



Just before final assembly for this stage.



Sawdust being lit in grate.



Top off Primary filter showing SS scrubber pads. Gas flow is up through pads, then down through centre.



The fire lit, blower switched on and door sealed shut.



The setup whilst lighting.



After five minutes, just before closing the door.



15 – 20 minutes after lighting.