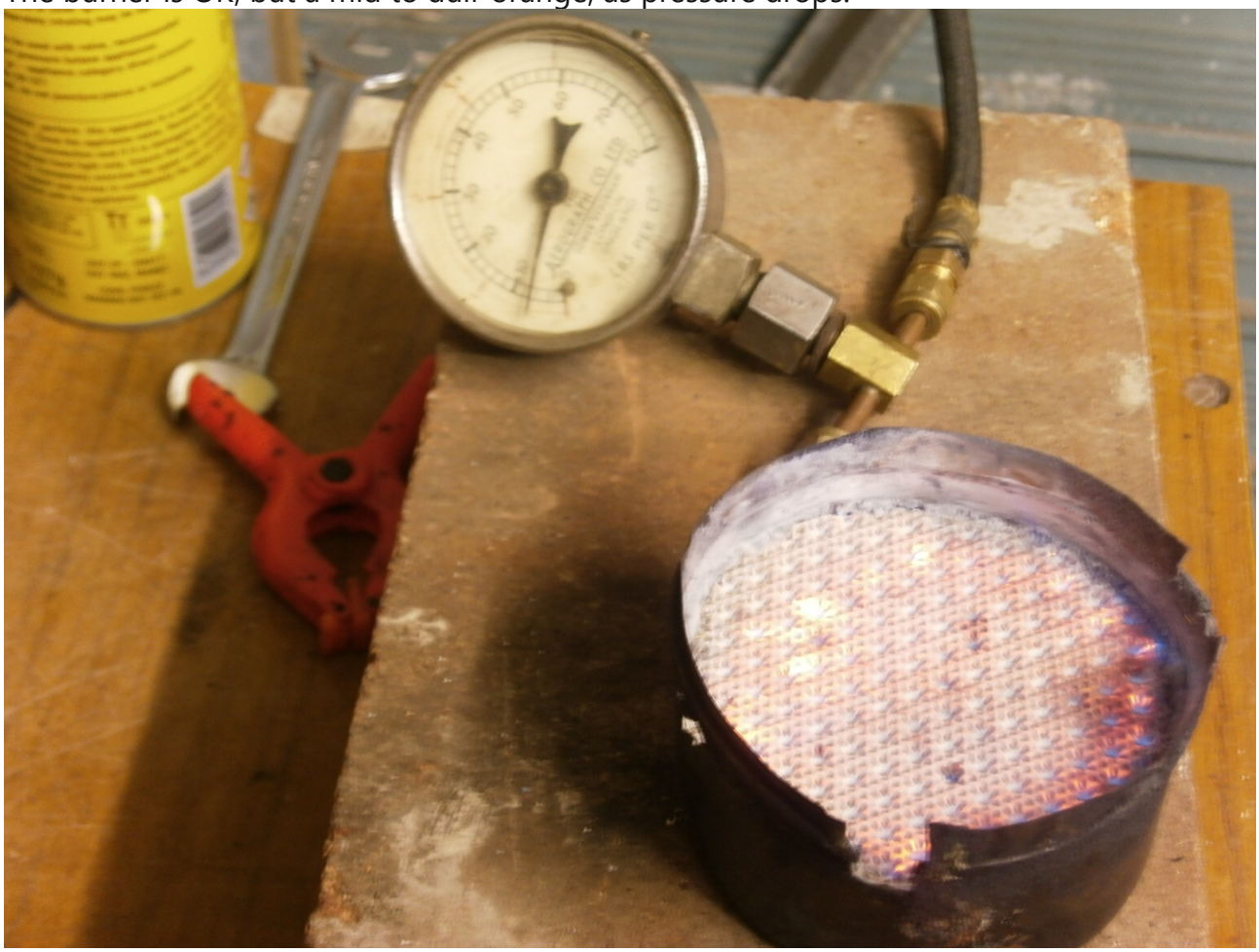
Comparison of Butane and 70% Butane + 30% Propane mix:

Message to Djoksch:
This morning I mocked-up the 3in. Round ceramic by taking the burner out of my 25 year old 3in. Vertical boiler... I use it with butane, usually in warmer weather, so pressure is nearer to 15psi. But today is quite cold - maybe 6 or 7 °C?
In the garage, butane in a small canister started at 10psi and drops to around 5 or 6psi. The burner is OK, but a mid to dull-orange, as pressure drops.



With butane-propane 30%mix, the canister can hold 28 psi max.

But that is too much for the burner. But as it is designed for 15psi butane it actually works OK with 15psi mixture.

So I reckon on Propane, you'll be OK at somewhere between 10 and 20 psi max. The burner has a no 8 jet, 0.25mm drilling. The mixer tube is 8mm (5/16") bore, with 2 x 6mm air holes.

The 0.30 mm (no 12) jet is too big for the higher pressure. Basically, it doesn't draw enough air at low pressure with butane, but at pressure above 15 psi the extra gas cannot draw in enough air as it chokes by the mixture tube being too small, so the top flame is too big and will send CO as unburnt gas up the chimney.

Conclusion: With this design of 3inch round ceramic burner, The jet should not exceed 0.25mm (No.8) with the 8mm (5/16 in.) bore mixer and diffuser tube. With Butane, or 70% Butane-30% Propane mixture, the pressure applied shall not exceed 15psi.