Fuel tables, thermocouple questions

Posted by teosinte - 25 Jan 2013 19:43

Hi all. This week's arctic cold confirmed my suspicion that the current Bixby stove (year two) is not burning pellets at or near maximum rate, unlike Bix number one stove in previous years. Both stoves run 2.06, horizontal 3 ft exhaust, same pellets (I stocked up several years ago). As Bix number one is currently in the neurological ward, I cannot view its programming. Before I alter fuel tables or other parameters, I'd like some information. First, current stove running on level 8, fan -2; feed +2. Going thru 80 lbs pellets/day (3.4lb/hr). Thermocouple reads 140-144. W/ my first bix, I regularly achieved overtemp pullback on level 8. Selected fuel table is wood, rich. For all levels, the fan and feed numbers are the same; 9 for feed, a higher number for fan. Corn table values do vary w/ level. As I only looked at the previous stove's program once prior to its nervous breakdown, I can't compare values. Does anyone offhand know the numbers in the original programming? Second, what is the difference between wood, lean vs wood, rich? To further support my suspicion it's the feed values, not the thermocouple, is that this stove's convection fan cut out multiple times on L1 and L2. Corny and Mr T suggested lowering the 25% fan setting to 30. I also changed 100% fan to 130 for the higher settings. Problem solved.

Any info welcome; I want as much info as possible before playing w/ the fuel tables.

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Re: Fuel tables, thermocouple questions

Posted by blume98 - 25 Jan 2013 21:21

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first thing i look at with wood is feed wheel, they can raise in hours withsawdusty pellets, also tables for wood changed in 2.71 for the better, i would not play with tables MR T said a lot of time was spent on them, a cable just makes you want to play

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Re: Fuel tables, thermocouple questions

Posted by Corny - 06 Feb 2013 12:57

Good advice from Blume,there.

I'd add that the thermocouple readings are not necessarily a fair comparison of the two stoves' heat output. Those Type K TCs aren't calibrated, they are subject to drift, and as little as 1/4" difference in insertion depth into the flue can make a noticable diff. So if one stove was doing high temp pullbacks (i.e., nominal TC reading hitting ~250), it doesn't necessarily mean that the stove was pushing more heat than the other.

To see the factory default fuel settings, open a Fuel Table, select the appropriate bullets to identify you stove and fuel types, then click on Calulate Fuel. The factory default settings will show in orange.

I'm not much of a pellet person, so like teosinte, I'm interested in the thinking behind wood-lean and wood-rich. For 2.71, I see that the default settings are quite different (between wood-rich and wood-lean), and the fan setting is not constant across the heat levels for wood-rich as it is for wood-lean. Just curious.

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