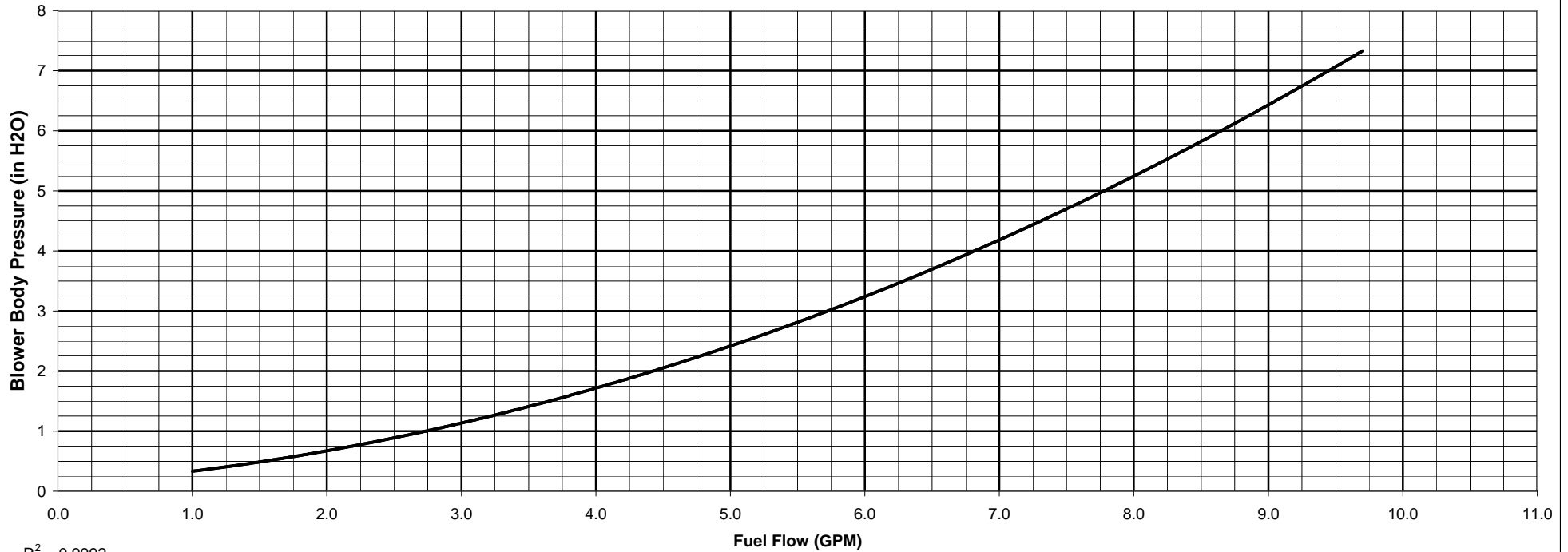


10/15/2010		Oil Performance Data																					
PT-75-O (2010)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
% Burner output		0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%	
1 Heat input	MMBtu/hr	8.5	12.2	15.9	19.6	23.3	27.1	30.8	34.5	38.2	41.9	45.6	49.3	53.0	56.7	60.4	64.1	67.8	71.5	75.2	78.9	82.6	1
2 Oil Flow	GPM	1.0	1.4	1.9	2.3	2.7	3.2	3.6	4.0	4.5	4.9	5.4	5.8	6.2	6.7	7.1	7.5	8.0	8.4	8.8	9.3	9.7	2
3 Oil Control Valve Position		0.0	2.5	3.5	3.9	4.0	4.5	4.7	4.8	5.0	5.2	5.7	5.8	5.9	6.0	6.1	6.9	7.0	7.1	7.9	8.5	10.0	3
4 Oil Pressure at Train Inlet	PSI	84	84	84	84	82.5	82	82	82	82	82	80	80	80	80	78.5	78	78	78	78	76	76	4
5 Oil Pressure at Nozzle	PSI	22	22	26	28.5	30	32	32	34	36	38	38	40	42	42	44	46	46	48	50	50	52	5
6 Compressed air Pressure	PSI	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	6
7 Blower Output	%	5	10	13	17	21	25	29	33	38	42	47	51	54	58	62	65	69	73	76	78	82	7
8 Blower Speed	Hz	10.2	12.0	13.3	14.8	16.4	17.9	19.5	21.0	22.8	24.6	26.3	28.0	29.2	30.7	32.3	33.5	35.0	36.5	37.5	38.5	40.0	8
9 Blower Power	HP	0.6	0.8	1.1	1.4	1.8	2.5	3.1	3.9	4.6	5.5	6.7	8.2	9.4	10.8	13.1	15.0	16.5	19.5	22.5	25.7	27.6	9
10 Blower Current	Amp	16.5	16.3	16.2	16.6	17.2	18.5	19.8	21.3	22.8	24.5	27.1	29.6	31.8	33.9	37.2	39.5	41.8	45.3	48.5	51.6	53.1	10
11 Blower Body Pressure	i.w.c.	0.32	0.45	0.62	0.78	1.00	1.30	1.50	1.80	2.00	2.30	2.70	3.10	3.40	3.80	4.30	4.70	5.10	5.70	6.30	6.93	7.20	11
12 Main Air Flow	SCFH	200,000	237,000	274,000	311,000	348,000	385,000	422,000	459,000	496,000	533,000	570,000	607,000	644,000	681,000	718,000	755,000	792,000	829,000	866,000	903,000	940,000	12
13 Flame Diameter	Feet	2.5	2.5	3	3	4	4.5	5	5	6	6	6	6	6.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	13
14 Flame Length	Feet	5.0	5.0	6.0	6.0	6.0	6.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	14
15 Excess air (Calculated)	%	146%	103%	80%	66%	56%	49%	44%	40%	36%	33%	31%	29%	27%	26%	25%	24%	22%	22%	21%	20%	19%	15

Combustion Air VFD Setup			Limit Switch Setup			Required Oil Properties				Burner Fuel / Air Profile Setup
Min Ref	Hz	8.3	Blower Proof of Running	-0.2	in H <sub>2</sub> O	Viscosity	90 SSU @220 F	SSU	Max	Match oil flow rate (GPM) with blower body pressure. The chart below shows this graphically. To use it, find the fuel flow on the horizontal axis, then move vertically to the curve and then horizontally to the left to find the required blower body pressure. Increase or decrease the fan speed or the fuel flow as needed to match the values. The low fire position for oil should be 0 and the high fire position should be 100. Every other oil position will have to be determined by reading the fuel flow meter. All "light off" positions must be 0. Fine tuning must be done using a flue gas analyzer.
Max Ref	Hz	47.0	Blower Proof of High Fire	6.92	in H <sub>2</sub> O	Particulate	0.04	in	Max	
Ramp Up Time	Sec	40	Blower Proof of Low Fire	0.55	in H <sub>2</sub> O	Sulfur Content	0.5	% (Mass)	Max	
Ramp Down Time	Sec	40	Low Oil Pressure	30	PSI	H <sub>2</sub> SO <sub>4</sub>	0	PPM	Max	
Nominal Motor Speed	rpm	1780	High Oil Pressure	150	PSI	H <sub>2</sub> O	5	% (Mass)	Max	
Motor Current	A	70.2	Pilot Low Fuel Pressure	N/A	PSI	All data collected as the burner firing rate was decreasing.				
Motor Frequency	Hz	60	Oil Valve Hauck GL-1-29							
Motor Voltage	V	460								
Motor Power	kW	37.3								

Blower Body Pressure Vs. Fuel Flow  
PT-75-OIL



R<sup>2</sup> = 0.9992