1/25/2007		Oil Performance Data																					
PT-150-O W/Mod Valve Oil Control		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	12.8	20.4	28.0	35.6	43.2	50.8	58.5	66.1	73.7	81.3	88.9	96.5	104.1	111.7	119.4	127.0	134.6	142.2	149.8	157.4	165.0	1
2	Oil Flow	GPM	1.5	2.4	3.3	4.2	5.1	6.0	6.9	7.8	8.6	9.5	10.4	11.3	12.2	13.1	14.0	14.9	15.8	16.7	17.6	18.5	19.4	2
3	Oil Control Valve Position		0.3	2.0	2.3	2.5	3.0	3.0	3.3	3.6	3.9	4.1	4.3	4.4	4.5	4.9	5.3	5.5	5.8	6.3	6.5	6.8	7.5	3
4	Oil Pressure at Train Inlet	PSI	104	104	102	100	100	100	100	100	100	98	96	95	94	93	92	91	90	88	86	84	80	4
5	Oil Pressure at Nozzle	PSI	22	26	26	30	32	34	34	38	42	43	44	45	46	48	50	51	52.5	56	56.5	58	62	5
6	Compressed air Pressure	PSI	56	57	58	59	59	60	60	62	63	63	63	64	64	65	65	66	66	66	67	67	70	6
7	Compressed air flow	SCFM	147	146	146	145	144	144	144		144	143	142	142	142	142	141	141	140	138	140	139	144	7
8	Blower Output	%	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	8
9	Blower Speed	Hz	9.0	11.0	12.9	14.9	16.9	18.9	20.8	22.8	24.8	26.7	28.7	30.7	32.7	34.6	36.6	38.6	40.6	42.5	44.5	46.5	48.4	9
10	Blower Power	HP	1.23	1.5	2.5	3.3	4.5	6.1	7.89	10	12.8	21	29.2	28	27	33	39	46	52	60.0	69	76.0	88	10
11	Blower Current	A	31	31.0	31.1	31.9	33	35.5	38.6	43	46.4	51	56.5	62	68	75	81	89	96.6	104.0	111	119.0	127	11
12	Blower Body Pressure	i.w.c.	0.61	0.81	0.97	1.20	1.50	1.76	2.12	3	2.91	3	3.77	4	4.81	5	5.88	7	7.14	7.75	8.44	9.20	10.00	12
13	Main Air Flow	SCFH	369,000	453,050	537,100	621,150	705,200	789,250	873,300	957,350	1,041,400	1,125,450	1,209,500	1,293,550	1,377,600	1,461,650	1,545,700	1,629,750	1,713,800	1,797,850	1,881,900	1,965,950	2,050,000	13
14	Flame Diameter	Feet	2.5	3.5	3.5	4	4	4.5	4.5	5	5	5	5	5	5.5	6	5.5	6	5.5	5.5	5.5	5.5	5.5	14
15	Flame Length	Feet	5.0	6.5	6.5	7.0	8.0	7.0	7.0	7.0	7.0	7	7.0	7	6.5	7	6.5	7	6.5	6.5	6.0	6.0	6.0	15
16	Excess air (Calculated)	%	203%	133%	101%	83%	71%	63%	57%	52%	48%	45%	43%	41%	39%	37%	36%	35%	34%	33%	32%	31%	30%	16

Combustion Air VFD Setup		
Min Ref	Hz	10
Max Ref	Hz	48.4
Ramp Up Time	Sec	40
Ramp Down Time	Sec	40
Nominal Motor Speed	rpm	1780
Motor Current	A	
Motor Frequency	Hz	
Motor Voltage	V	
Motor Power	kW	

Limit Switch Setup		
Blower Proof of Running	-0.2	in H_2O
Blower Proof of High Fire	9	in H_2O
Blower Proof of Low Fire	0.55	in H_2O
Low Oil Pressure	15	PSI
High Oil Pressure	150	PSI
Pilot Low Fuel Pressure	N/A	PSI

Required Oil Properties			
Viscosity	90 SSU @220 F	SSU	Max
Particulate	0.04	in	Max
Sulfer Content	0.5	% (Mass)	Max
H2SO4	0	PPM	Max
H20	5	% (Mass)	Max

Burner Fuel / Air Profile Setup

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.