



Eco Alternative Fuels Commission Sheet

Customer		Precision Drilling								System Model		GTI Plus					
Location		Waynesburg, PA								Panel S/N		1104					
Rig or Unit #		539								Display S/N		1106					
Dealer/ Installer		ECO Alternative Fuels								Terminal S/N		1109					
Master Dist.		ECO Alternative Fuels								Display Firmware Date		July 10, 2014					
Eng. Model /SN		Cat 3512 LLA03455								Terminal Firmware Date		July 9, 2014					
Gen. Model /SN		Kato 278779-04								Generator Rating (KW)		1365					
Engine Hours		15062								Generator Ser. Rating							
KW	Fuel	21A-GSP	22A-VAC-1	23A-MAP-1	24A-MAT-1	25A-EGT-1	26A-VIB-L	22B-VAC-2	25B-EGT-2	26B-VIB-R	27A-KW	28-AGV 5	ECM F.C.	ECM C.T.	ECM O.P.	% Subst.	
100	Diesel Only	0	2.3	91	725	0.24	-0.1	730	0.21	105	-7.76	12.3	175	70			
100	BI	3	0	2.5	91	740	0.24	-0.1	750	0.21	105	-7.54	10.0	175	70	19%	
200	Diesel Only	0	5	91	887	0.24	-0.1	900	0.21	205	-9.54	19.0	175	70			
200	BI	3	0	5.3	87	908	0.24	-0.1	930	0.21	205	-9.33	13.0	175	69	-32%	
300	Diesel Only	0	7.2	96	953	0.25	-0.1	960	0.23	304	-11.5	24.0	175	69			
300	BI	2.8	-0.1	8	96	1007	0.25	-0.1	1015	0.23	304	-11	14.5	175	68	-40%	
400	Diesel Only	-0.1	11.6	103	1012	0.25	-0.2	1019	0.24	407	-14.4	32.0	175	67			
400	BI	2.5	-0.1	12.1	105	1072	0.26	-0.2	1092	0.24	407	-13.8	13.0	179	67	-59%	
500	Diesel Only	-0.1	14	107	1043	0.26	-0.2	1067	0.24	505	-17.3	36.0	180	67			
500	BI	2.3	-0.1	15.4	112	1135	0.26	-0.2	1139	0.26	505	-17	18.0	180	67	-50%	
600	Diesel Only	-0.1	18.9	116	1090	0.28	-0.2	1100	0.26	605	-21.3	44.0	186	65			
600	BI	2.5	-0.2	19.5	121	1195	0.28	-0.2	1205	0.26	605	-21.4	26.0	189	65	-41%	
700	Diesel Only	-0.2	19.6	125	1119	0.28	-0.2	1130	0.26	704	-24.5	51.0	189	65			
700	BI	2.7	-0.2	20.7	128	1190	0.28	-0.2	1200	0.26	704	-24.9	41.0	191	65	-20%	
Safety Low	-0.5	-1.5	0	0	0	0	-1.5	0	0	0	-50	Notes					
Safety High	5	2	30	180	1250	1.2	2	1250	1.2	1000	0						
Control Low	0.5	-1	0	0	500	0	-1	500	0	90	-45	Air Filters Replaced			Yes		
Control High	4	1	26	150	1200	0.8	1	1200	0.8	740	-4	CT'S Installed 2 or 3			3		
Cal. Low												L.B. Hose		46"			
Cal. High												R.B. Hose		48"			
Vibe Time	3	Bi Fuel Delay	5	AGV5 Delay			6	Ambient Temp. (F.)			73	GT Hose		50"			
Actual KW		105	205	304	407	505	605	704	0	0	0	Jumper Hose		50"			
S: Value on Diesel	11.26	10.90	10.03	9.38	8.85	8.03	7.38	Project Manager (Kevin Skogen)									
S: Value on Bi Fuel	11.46	10.99	10.16	9.44	8.92	7.98	7.27	Project Installer (Wade, Derik)									
AGV5 Valve Pos.	3	7	14.5	22.5	28	27	10	Installation Date :									
D: Value Target	10.89	10.34	9.91	9.29	8.7	7.68	6.95	Commission Date : 23-May-18									



Eco Alternative Fuels Commission Sheet

Customer		Patterson Drilling										System Model		GTI Plus			
Location		Williston, ND										Panel S/N		1094			
Rig or Unit #		286										Display S/N		1097			
Dealer/ Installer		ECO Alternative Fuels										Terminal S/N		1090			
Master Dist.		ECO Alternative Fuels										Display Firmware Date		July 10, 2014			
Eng. Model /SN		Cat 3512 LLA04164										Terminal Firmware Date		July 9, 2014			
Gen. Model /SN		Kato 31653-08										Generator Rating (KW)		1365			
Engine Hours		22878										Generator Ser. Rating					
KW	Fuel	21A-GSP	22A-VAC-1	23A-MAP-1	24A-MAT-1	25A-EGT-1	26A-VIB-L	22B-VAC-2	25B-EGT-2	26B-VIB-R	27A-KW	28-AGV 5	ECM F.C.	ECM C.T.	ECM O.P.	% Subst.	
100	Diesel Only	0	2.3	91	687	0.24	-0.1	690	0.21	113	-6.1	12.3	175	67			
100	BI	3	0	2.5	91	700	0.24	-0.1	710	0.21	113	-6.4	10.0	175	67	19%	
200	Diesel Only	0	5	91	797	0.24	-0.1	801	0.21	214	-7.1	19.0	175	67			
200	BI	3	0	5.3	87	805	0.24	-0.1	813	0.21	214	-6.4	13.0	175	67	-32%	
300	Diesel Only	-0.1	7.9	86	910	0.24	-0.1	932	0.21	313	-9.4	25.5	175	67			
300	BI	3	-0.1	8.3	85	949	0.24	-0.1	970	0.21	313	-8.2	14.5	175	67	-43%	
400	Diesel Only	-0.1	10.9	85	1003	0.24	-0.1	1036	0.22	413	-12.3	31.0	176	66			
400	BI	2.9	-0.1	12	88	1052	0.25	-0.1	1080	0.22	413	-10.5	13.0	176	66	-58%	
500	Diesel Only	-0.1	14.3	90	1086	0.25	-0.1	1075	0.22	512	-15.2	38.0	176	66			
500	BI	2.9	-0.2	16.3	94	1131	0.27	-0.1	1141	0.23	512	-13.5	18.0	177	65	-53%	
600	Diesel Only	-0.2	17.6	95	1128	0.27	-0.2	1112	0.23	611	-19.5	45.0	177	65			
600	BI	2.9	-0.2	19.7	100	1159	0.29	-0.2	1187	0.24	611	-18.5	30.0	178	65	-33%	
700	Diesel Only	-0.2	20.7	102	1175	0.29	-0.2	1163	0.24	709	-24.2	51.0	178	64			
700	BI	2.9	-0.2	22.1	106	1187	0.29	-0.2	1198	0.24	709	-22.8	40.0	178	64	-22%	
Safety Low	-0.5	-1.5	0	0	0	0	-1.5	0	0	0	-50	Notes					
Safety High	5	2	30	180	1250	1.2	2	1250	1.2	1000	0						
Control Low	0.5	-1	0	0	500	0	-1	500	0	90	-45	Air Filters Replaced			Yes		
Control High	4	1	26	150	1200	0.8	1	1200	0.8	740	-4	CT'S Installed 2 or 3			3		
Cal. Low												L.B. Hose		46"			
Cal. High												R.B. Hose		48"			
Vibe Time	3	Bi Fuel Delay		10	AGV5 Delay			10	Ambient Temp. (F.)			50	GT Hose		50"		
Actual KW		113	214	313	413	512	611	709	0	0	0	Jumper Hose		50"			
S: Value on Diesel	11.23	10.98	10.57	10.05	9.31	8.29	7.44	Project Manager (Kevin Skogen)									
S: Value on Bi Fuel	11.25	11.11	10.79	10.25	9.37	8.44	7.46	Project Installer (Wade, Derik)									
AGV5 Valve Pos.	3	8.5	16	26.5	30	25	6	Installation Date :									
D: Value Target	10.69	10.34	10.01	9.64	8.96	8.05	7.2	Commission Date : 18-Apr-18									



Eco Alternative Fuels Commission Sheet

Customer	Nabors					System Model	DN-65					Valve	Seal #	Turns I/O		
Location	Carlsbad, NM					Panel S/N	1023					Zero Gas Reg.		19 in		
Rig or Unit #	7507 #4					Display S/N	1178					GTI By pass		2		
Dealer/ Installer	Eco-Alternative Fuels					Terminal S/N	1289					Step-Con-1		2 1/4		
Master Dist.	Eco-Alternative Fuels					Display Firmware Date	4/13/2011					Step-Con-2		2 1/2		
Eng. Model /SN	3512					Terminal Firmware Date	4/1/2011					Step-Con-3		2 3/4		
Gen. Model /SN	Kato					Generator Rating (KW)	1365					Power Valve-L		6 out		
Engine Hours						Generator Ser. Rating	1050					Power Valve-R		6 out		
KW %	Fuel	21A-GSP	22A-VAC-1	23A-MAP-1	24A-MAT-1	25A-EGT-1	26A-VIB-L	22B-VAC-2	25B-EGT-2	26B-VIB-R	ECM F.C.	ECM C.T.	ECM O.P.	Actual KW %	Ambient Temp.	% Subst.
10	Diesel Only	-0.1	2.3	111	679	0.25	-0.1	662	0.27	13.0	165	72	105			
10	BI	3.2	-0.1	2.3	112	702	0.25	-0.1	696	0.27	10.0	165	72	105	-23%	
20	Diesel Only	-0.1	4	111	730	0.25	-0.1	739	0.27	20.0	169	71	205			
20	BI	3.2	-0.1	4	116	777	0.26	-0.1	786	0.27	14.0	169	71	205	-30%	
30	Diesel Only	-0.1	6.3	116	889	0.26	-0.1	893	0.28	26.0	172	71	305			
30	BI	3.1	-0.2	7	119	950	0.27	-0.2	940	0.28	15.0	172	68	305	-42%	
40	Diesel Only	-0.2	9	121	981	0.27	-0.2	970	0.29	33.0	173	68	405			
40	BI	3	-0.2	10	124	1047	0.27	-0.2	1044	0.29	14.0	173	68	406	-58%	
50	Diesel Only	-0.2	11.5	125	1031	0.27	-0.2	1024	0.29	40.0	176	68	506			
50	BI	2.9	-0.2	13	128	1118	0.27	-0.2	1110	0.29	18.0	176	67	506	-55%	
60	Diesel Only	-0.2	16.8	129	1090	0.27	-0.2	1096	0.3	48.0	176	67	605			
60	BI	3	-0.2	17.5	132	1165	0.28	-0.2	1167	0.31	37.0	178	66	605	-23%	
70	Diesel Only	-0.2	21	136	1124	0.28	-0.2	1127	0.31	55.0	178	66	705			
70	BI	3	-0.2	22.5	137	1196	0.28	-0.2	1198	0.31	50.0	178	66	705	-9%	
Safety Low	-0.5	-1.5	0	0	0	0	-1.5	0	0	Notes To Altronic						
Safety High	5	2	28	180	1250	1.2	2	1250	1.2							
Control Low	0.5	-1	0	0	500	0	-1	500	0							
Control High	4	1	25	150	1200	0.8	1	1200	0.8							
Cal. Low																
Cal. High										Kw Cal (Low)	10	Kw Cal (High)	75			
Vibe Time	3	Bi Fuel Delay	5	ROP	2					Kw Set Points Safety	0	1000				
Step - Con Valve Setting's										Kw Set Points Control	12	70				
KW % Load	10%	20%	30%	40%	55%	65%	70%	80%	Project Manager (Kevin Skogen)							
Step Con Valve # 1		On	On	On	On	On			Project Installer (Wade, Derik)							
Step Con Valve # 2			On	On	On				Installation Date :							
Step Con Valve # 3				On					Commision Date : Sunday, June 16, 2019							



Eco Alternative Fuels Commission Sheet

Customer		Nabors Drilling										System Model		GTI Plus			
Location		North Dakota										Panel S/N		1123			
Rig or Unit #		B-20										Display S/N		1134			
Dealer/ Installer		ECO Alternative Fuels										Terminal S/N		1138			
Master Dist.		ECO Alternative Fuels										Display Firmware Date		July 10, 2014			
Eng. Model /SN		3512 4AW00691										Terminal Firmware Date		July 9, 2014			
Gen. Model /SN		Kato 18411-05										Generator Rating (KW)		1365			
Engine Hours												Generator Ser. Rating					
KW	Fuel	21A-GSP	22A-VAC-1	23A-MAP-1	24A-MAT-1	25A-EGT-1	26A-VIB-L	22B-VAC-2	25B-EGT-2	26B-VIB-R	27A KW	28 AGV 5	ECM F.C.	ECM C.T.	ECM O.P.	% Subst.	
100	Diesel Only	-0.1	2.3	115	634	0.21	-0.1	639	0.22	103	-4.6	12.0	170	65			
100	BI	3.2	-0.1	2.5	115	654	0.21	-0.1	671	0.22	103	-4.7	9.5	170	65	-21%	
200	Diesel Only	-0.1	5	119	800	0.22	-0.1	802	0.23	208	-8.5	19.0	173	65			
200	BI	3.2	-0.1	5.4	119	826	0.22	-0.1	845	0.23	208	-8.9	13.0	174	65	-32%	
300	Diesel Only	-0.1	9	119	905	0.22	-0.1	916	0.23	308	-11.1	25.5	174	65			
300	BI	2.8	-0.1	9.5	120	960	0.22	-0.1	985	0.23	308	-11.4	15.0	174	65	-41%	
400	Diesel Only	-0.1	13	122	963	0.21	-0.1	1010	0.26	408	-13.7	32.0	178	63			
400	BI	2.5	-0.1	14	123	1039	0.21	-0.1	1072	0.25	408	-14	13.0	178	63	-59%	
500	Diesel Only	-0.1	17.3	123	1008	0.22	-0.1	1053	0.26	508	-18.4	37.5	178	63			
500	BI	2.5	-0.2	18.5	129	1099	0.22	-0.1	1134	0.28	508	-19	18.0	180	63	-52%	
600	Diesel Only	-0.2	21.3	132	1054	0.24	-0.1	1102	0.29	609	-24.8	45.0	180	62			
600	BI	2.7	-0.2	22.5	136	1141	0.25	-0.2	1174	0.29	609	-25.1	30.0	180	62	-33%	
700	Diesel Only	-0.2	26.3	140	1105	0.26	-0.2	1098	0.26	703	-26	54.0	182	62			
700	BI	3	-0.2	27.3	143	1128	0.28	-0.2	1120	0.27	703	-26.7	43.0	184	62	-20%	
Safety Low	-0.5	-1.5	0	0	0	0	-1.5	0	0	0	-50	Notes					
Safety High	5	2	30	180	1250	1.2	2	1250	1.2	1000	0						
Control Low	0.5	-1	0	0	500	0	-1	500	0	90	-45	Air Filters Replaced		Yes			
Control High	4	1	26	150	1200	0.8	1	1200	0.8	740	-4	CT'S Installed 2 or 3		3			
Cal. Low												L.B. Hose		46"			
Cal. High												R.B. Hose		48"			
Vibe Time	3	Bi Fuel Delay		5	AGV5 Delay			6	Ambient Temp. (F.)			70	GT Hose		50"		
Actual KW		103	208	308	408	508	609	703	0	0	0	Jumper Hose		50"			
S: Value on Diesel	10.45	10.22	9.57	8.81	7.81	6.83	5.98					Project Manager (Kevin Skogen)					
S: Value on Bi Fuel	10.35	10.22	9.72	9.2	8.25	6.92	6.34					Project Installer (Wade, Derik)					
AGV5 Valve Pos.	5.3	14.5	28	43	46	33	15					Installation Date :					
D: Value Target	10.34	10.24	9.77	9.25	8.31	7.03	6.13					Commission Date :		22-May-18			