

HEAT TRANSFER SYSTEM

Customer: PTRHTF40090
 QUICKLY BEST SELLERS BV
 AKKEKSE WEG 136
 MEDEL, 5321M6 NETHERLANDS
 Attn: Maintenance Manager
 Tel: NA
 E-Mail:

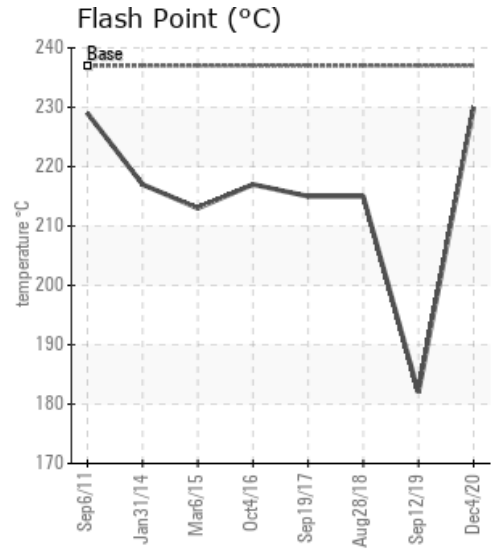
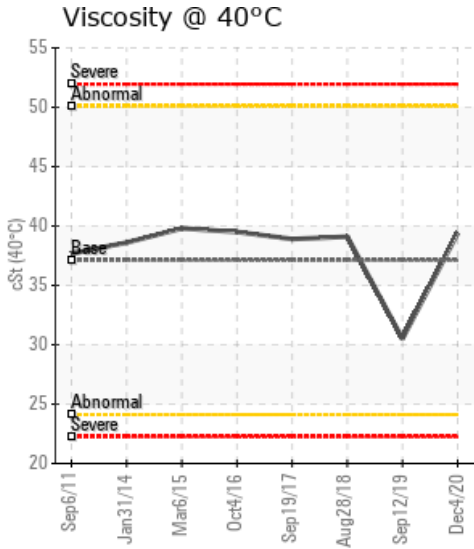
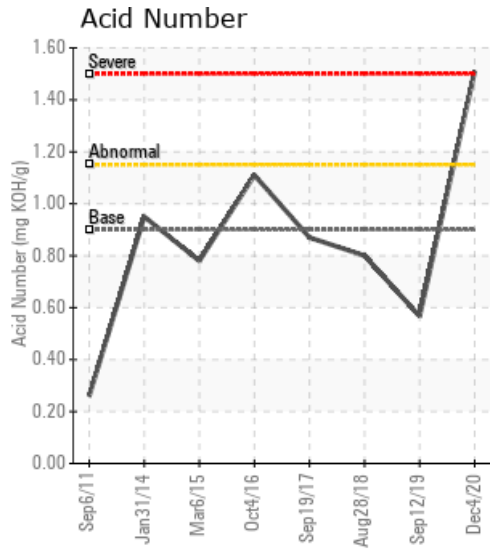
System Information
 System Volume: 3500 ltr
 Bulk Operating Temp: 270F / 132C
 Heating Source:
 Blanket:
 Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID
 Make: MAXXTEC

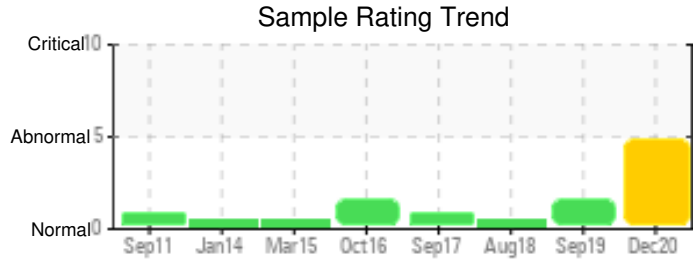
Sample Information
 Lab No: 02392467
 Analyst: Matthias Voss
 Sample Date: 12/04/20
 Received Date: 12/11/20
 Completed: 12/16/20
 Matthias Voss
 Matthias.Voss@petrocanadalsp.com

Recommendation: Reason for high Acid Number and Insolubles has to be investigated and problem has to be fixed. If not oil will rapidly degrade and can lead to corrosion.

Comments: Pentane Insolubles levels are severely high. Acid Number (AN) is severely high.

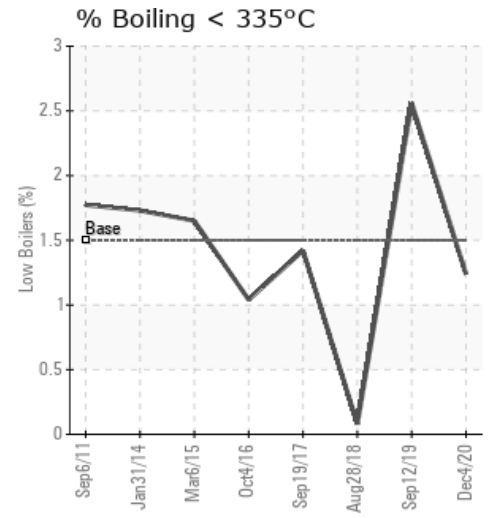
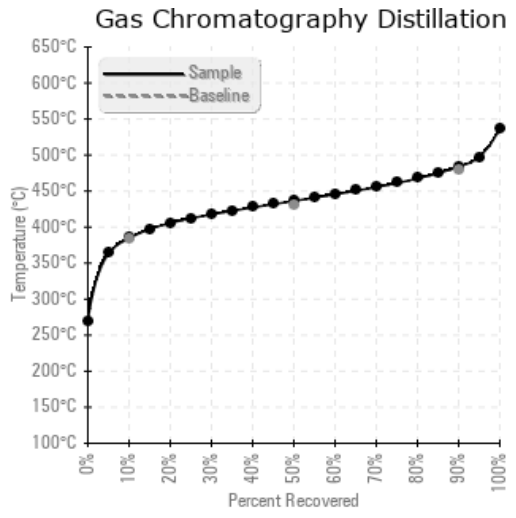
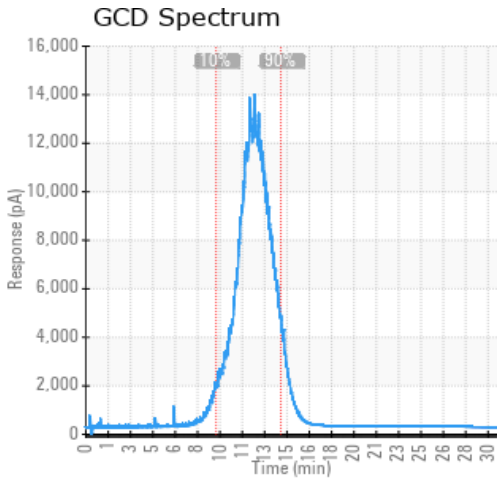
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
12/04/20	12/11/20	14y		446 / 230	19.9	39.4	1.51	0.702	724 / 385	817 / 436	903 / 484	1.24
09/12/19	09/19/19	13y		360 / 182	55.0	30.5	0.567	0.143	726 / 385	825 / 440	920 / 494	2.56
08/28/18	09/04/18	12y		419 / 215	40.1	39.1	0.80	0.321	721 / 383	812 / 433	897 / 481	0.08
09/19/17	09/22/17	11y		419 / 215	23.0	38.9	0.87	0.559	718 / 381	814 / 435	897 / 481	1.42
10/04/16	10/11/16	10y		423 / 217	467.2	39.5	1.11	0.338	721 / 383	818 / 437	899 / 482	1.04
Baseline Data				459 / 237		37.12	0.90		721 / 383	807 / 431	892 / 478	1.5





Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
12/04/20	10	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	59	2
09/12/19	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	0
08/28/18	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	8
09/19/17	20	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	93	3
10/04/16	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	2
Baseline Data			0	0						0			0	0				0	0				230	

Elemental analysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]



Historical Comments	
09/12/19	COC Flash Pt marginally low, with little evidence of light ends. If safe to do so, try some form of venting to recover if possible. Fit for further use and resample at next planned frequency. Step change in viscosity from previous sample(s) (GCD) 90% Distillation Point is abnormally high. COC Flash Point is abnormally low.
08/28/18	All parameters within allowable limits. Some light ends present but COC unaffected. Based on sample results fluid fit for further use
09/19/17	Beware of the insoluble matter that is creeping up, all other parameters look OKAn increase in the iron level is noted. All other component wear rates are normal. Pentane Insolubles levels are abnormally high.
10/04/16	Unusual amount of water detected. Could be condensation from sample - check where water may have ingress. Oil appears to be in good condition and fit for further service. Water contamination levels are marginally high. Water contamination levels are marginally high.. ppm Water contamination levels are marginally high.

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