

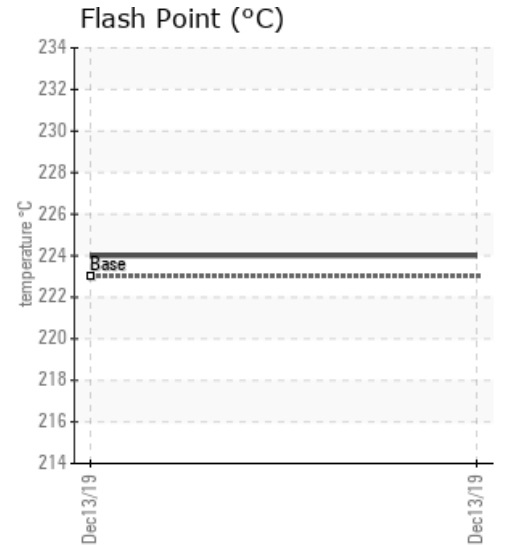
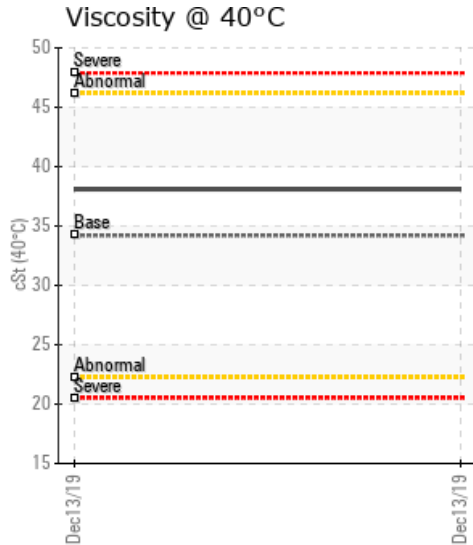
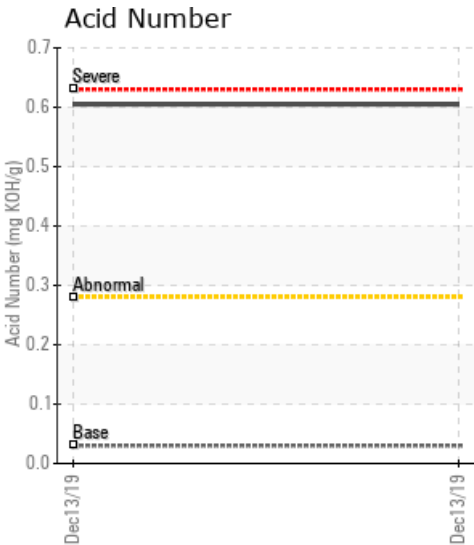
## HEATTRANSFER

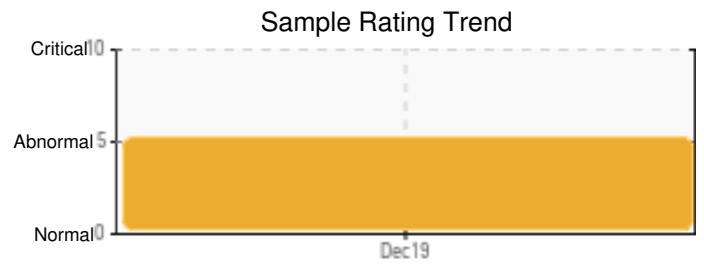
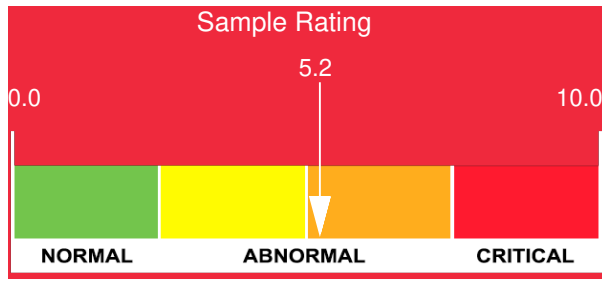
Customer: PTRHTF10222	System Information	Sample Information
K5 CONSTRUCTION CORPORATION 999 OAKMONT PLAZA DR WESTMONT, IL 60559 USA Attn: Tel: E-Mail:	System Volume: 1000 gal Bulk Operating Temp: 350F / 177C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make:	Lab No: 02327821 Analyst: Yvette Trzcinski Sample Date: 12/13/19 Received Date: 12/17/19 Completed: 12/18/19

Recommendation: There does not appear to be any asphalt contamination in the sample - if there was asphalt contamination we would see vanadium, a rapid rise in viscosity and an increase in flash point in the sample. The sample does have a large amount of water present - 1900 ppm the acid number is high and also the solids content are high- looks like this could be a bad sample - recommending a re sample to ensure the information - samples should be taken that are representative of the circulating fluid in the system.

Comments: Water contamination levels are severely high. Water contamination levels are severely high.. ppm Water contamination levels are severely high. Pentane Insolubles levels are abnormally high. Acid Number (AN) is abnormally high.

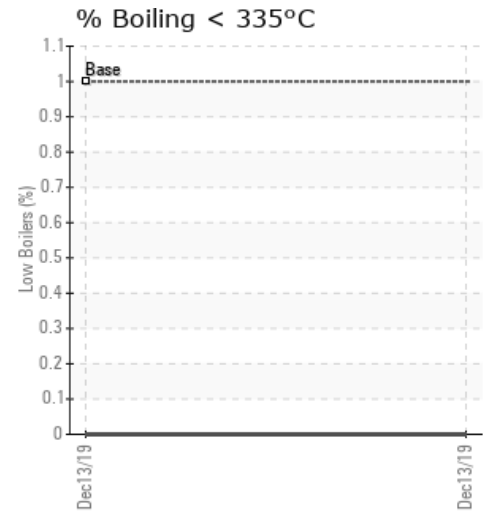
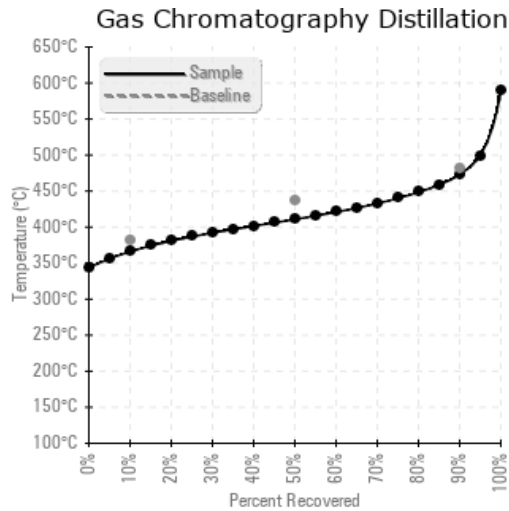
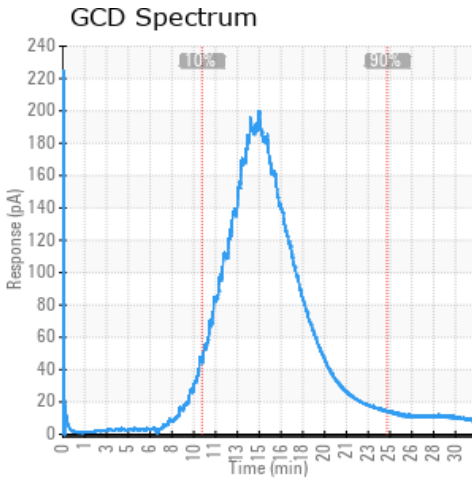
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
12/13/19	12/17/19	0h		435 / 224	1985.0	38.1	0.605	0.501	691 / 366	771 / 411	883 / 473	0.00
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00





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
12/13/19	3	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	1
Baseline Data			0	0						0		0	0				0					0		

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



### Historical Comments


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