

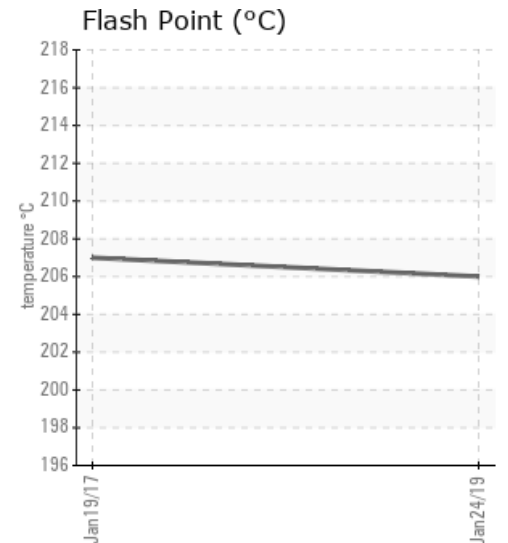
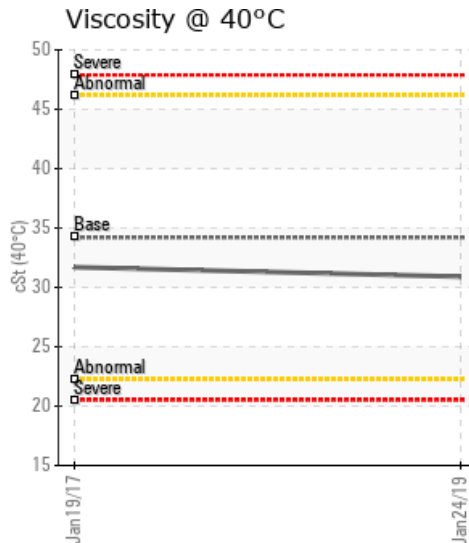
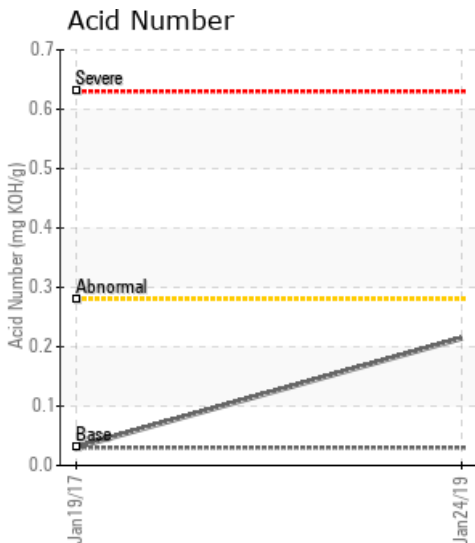
TPC450LN-MP

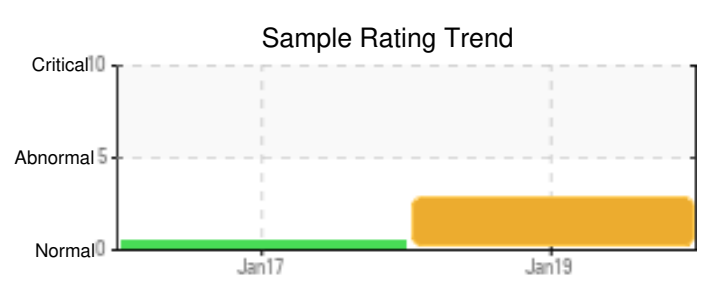
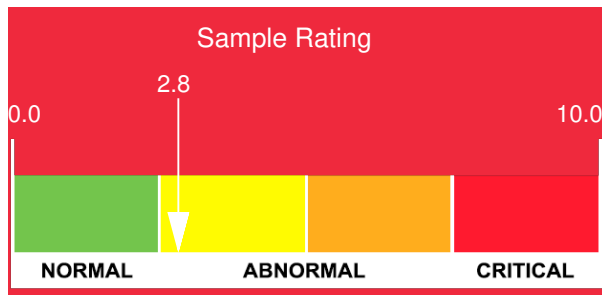
Customer: PTRHTF40122	System Information	Sample Information
VAN DE RAA MEAT & MORE BOLDERWEG 45 ALMERE, 1332 BA Netherlands Attn: Wilbert Snijers Tel: E-Mail: w.snijers@klt.nl	System Volume: 1000 ltr Bulk Operating Temp: 527F / 275C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: WANSON	Lab No: 02265957 Analyst: Philip Riley Sample Date: 01/24/19 Received Date: 02/04/19 Completed: 02/05/19

Recommendation: GCD shows 2 off spec results related to the lower end of the temperature range of the fluid. If safely possible try and vent the system to remove lighter materials and see if this has an impact. Some activity on the distillation curve to support this. No other items for concern, fluid is otherwise good, so recommend a vent (under safe conditions/procedure) and re test at normal frequency

Comments: (GCD) 10% Distillation Point is abnormally low. (GCD) % < 335°C is marginally high.

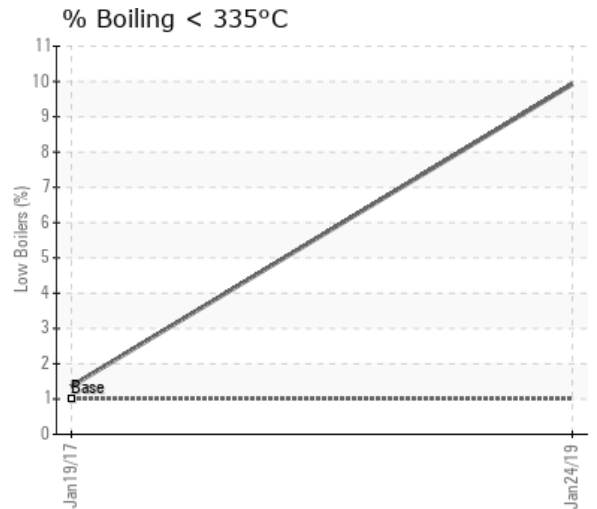
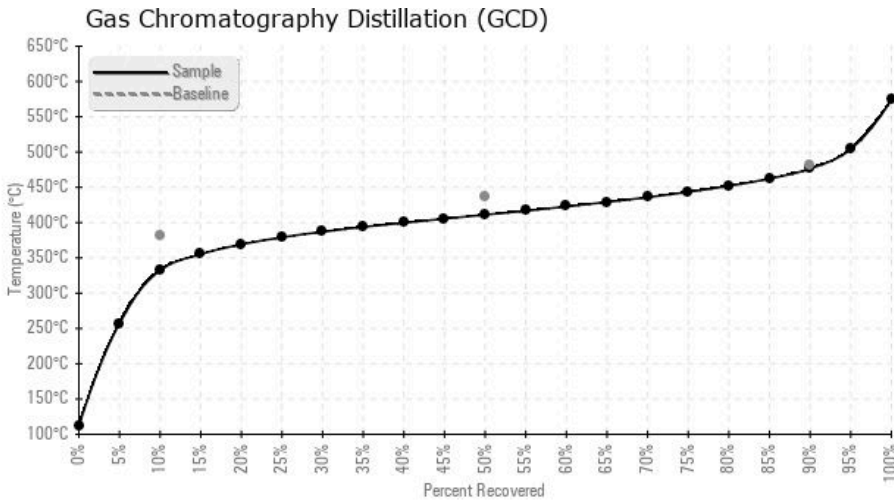
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
01/24/19	02/04/19	5y		403 / 206	34.9	30.9	0.214	0.070	631 / 333	772 / 411	890 / 476	9.92
01/19/17	01/27/17	3y		405 / 207	12.4	31.7	0.03	0.052	710 / 376	806 / 430	909 / 487	1.36
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
01/24/19	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01/19/17	20	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
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

01/19/17	Oil appears fit for further service. Suggest sample at next scheduled maintenance interval.

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