

RELUTHERM RTAG-14

Customer: PTRHTF40043
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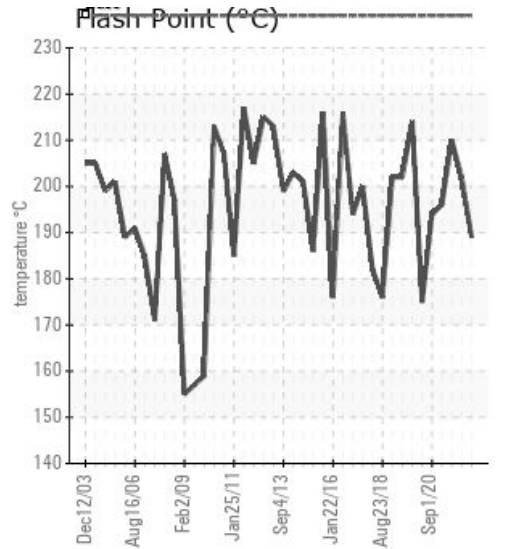
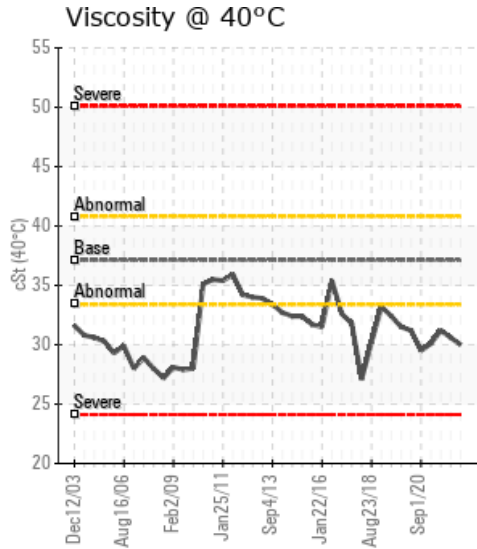
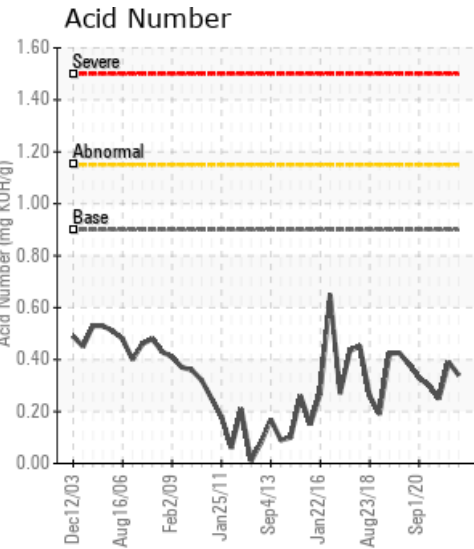
System Information
 System Volume: 10000 ltr
 Bulk Operating Temp: 275F / 135C
 Heating Source:
 Blanket:
 Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID
 Make: RELUTHERM

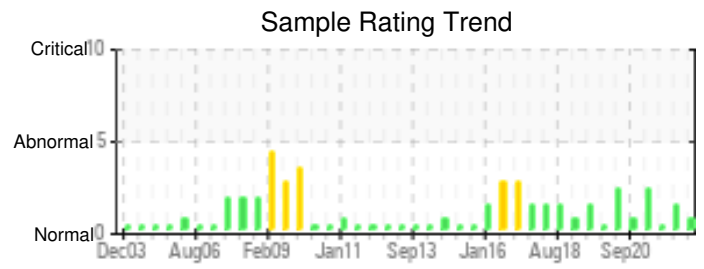
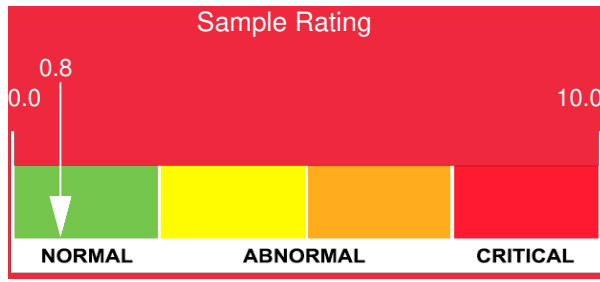
Sample Information
 Lab No: 02516483
 Analyst: Bill Quesnel CLS,OMA II,MLA-III,LLA-I
 Sample Date: 10/11/22
 Received Date: 10/17/22
 Completed: 10/19/22
 Bill Quesnel CLS,OMA II,MLA-III,LLA-I

Recommendation: COC Flash Point is low. Suggest venting the expansion tank. Resample at next normal interval.

Comments: COC Flash Point is abnormally low.

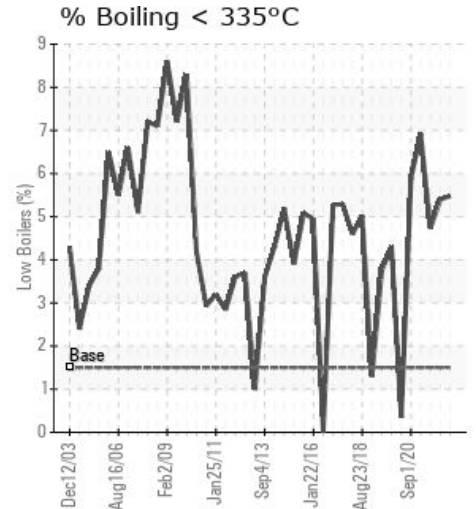
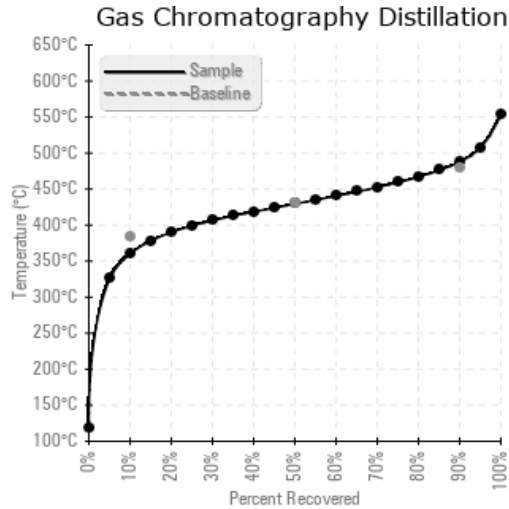
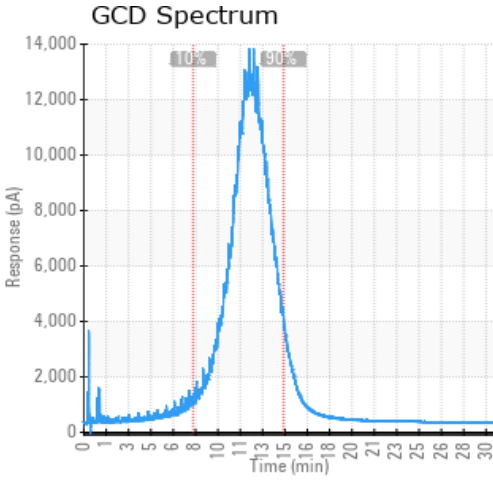
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
10/11/22	10/17/22	19.3y		372 / 189	10.6	30.0	0.34	0.360	681 / 360	805 / 429	910 / 488	5.48
04/05/22	04/12/22	18.8y		396 / 202	23.7	30.6	0.39	0.081	681 / 361	808 / 431	917 / 492	5.40
09/21/21	09/27/21	18.3y		410 / 210	15.7	31.2	0.25	0.148	685 / 363	805 / 429	908 / 487	4.74
03/09/21	03/15/21	17.8y		385 / 196	20.6	30.1	0.30	0.106	664 / 351	798 / 425	917 / 492	6.92
09/01/20	09/09/20	17.3y		381 / 194	5.9	29.5	0.33	0.150	678 / 359	805 / 429	908 / 487	5.89
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
10/11/22	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	2
04/05/22	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	1
09/21/21	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	1
03/09/21	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	34	1
09/01/20	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	0
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

04/05/22	The fluid condition is suitable for continued use. Resample in one year to monitor. (GCD) 90% Distillation Point is marginally high. COC Flash Point is marginally low.
09/21/21	All parameter are within normal limits. Oil is fit for further use. Resample at normal interval.
03/09/21	The oil is fit for further use but first signs of thermal degradation are visible. Increase in low boilers confirms trend from previous result. Vent light ends from the system if possible. Resample in 6 months time. (GCD) 90% Distillation Point is marginally high. COC Flash Point is marginally low. (GCD) 10% Distillation Point is marginally low.
09/01/20	Product within normal working limits and fit for further use. Please sample at next designated interval COC Flash Point is marginally low.

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