

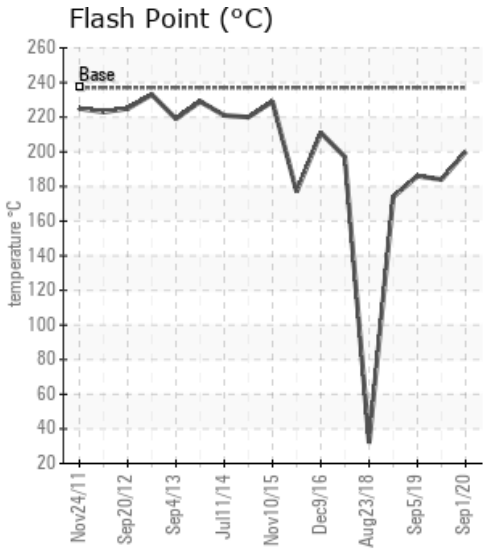
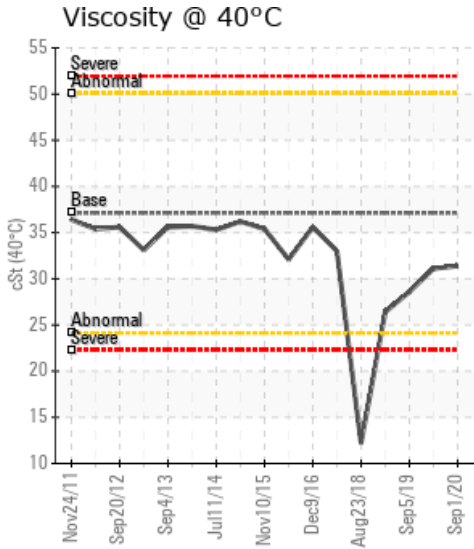
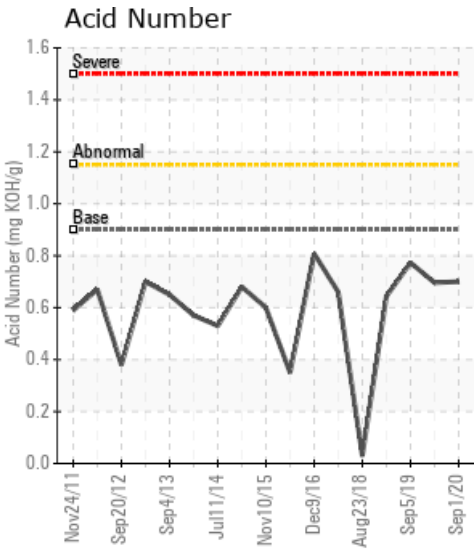
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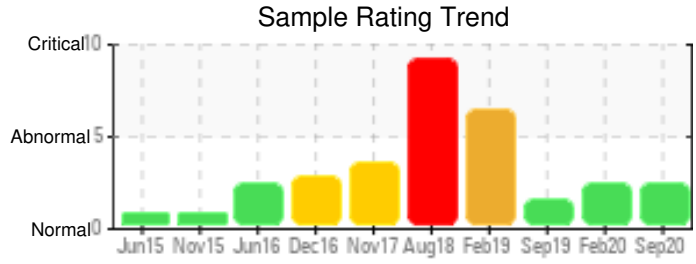
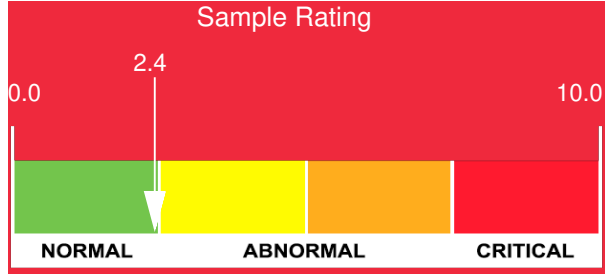
Customer: PTRHTF40043	System Information	Sample Information
MORA PRODUCTIE BV FREGATWEG 53 MAASTRICHT 6222NZ MAASTRICHT, 6222NZ Netherlands Attn: WILBERT SNIJERS Tel: E-Mail: w.snijers@klt.nl	System Volume: 800 ltr Bulk Operating Temp: 300F / 149C Heating Source: Blanket: Fluid: PETRO CANADA PURITY FG HEAT TRANSFER FLUID Make:	Lab No: 02374689 Analyst: Matthias Voss Sample Date: 09/01/20 Received Date: 09/09/20 Completed: 09/11/20 Matthias Voss Matthias.Voss@petrocanadalsp.com

Recommendation: High level of iron so please investigate the source if possible. Fit for further use and re-sample at next scheduled frequency as these are short frequencies with this system

Comments: Iron ppm levels are abnormal. (GCD) 90% Distillation Point is marginally high. COC Flash Point is marginally low.

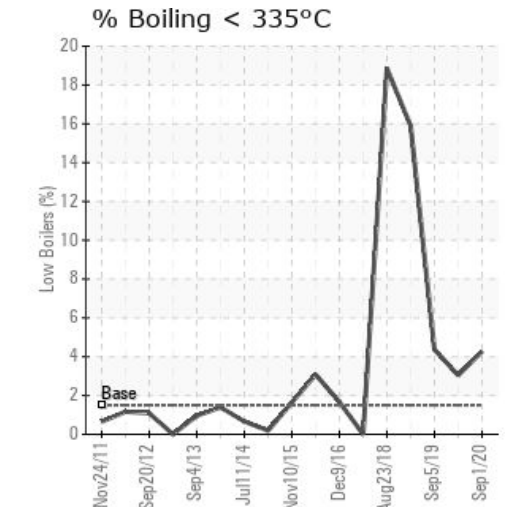
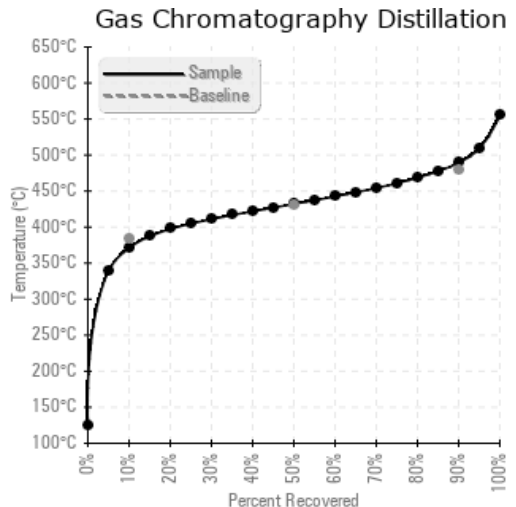
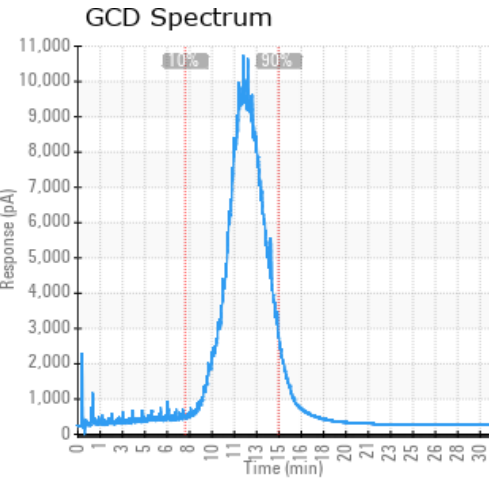
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
09/01/20	09/09/20	18m		392 / 200	13.8	31.4	0.70	0.114	700 / 371	810 / 432	913 / 489	4.27
02/18/20	02/25/20	15m		363 / 184	25.4	31.1	0.696	0.199	706 / 374	824 / 440	928 / 498	3.04
09/05/19	09/11/19	9m		367 / 186	26.5	28.6	0.773	0.084	699 / 370	814 / 435	917 / 492	4.37
02/21/19	02/26/19	3m		345 / 174	11.2	26.4	0.644	0.121	484 / 251	781 / 416	909 / 487	15.89
08/23/18	08/28/18	7m		90 / 32	51.9	12.2	0.03	0.094	486 / 252	768 / 409	864 / 462	18.86
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
09/01/20	225	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	176	8
02/18/20	265	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	190	14
09/05/19	86	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	157	6
02/21/19	222	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	170	12
08/23/18	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55	6
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	
02/18/20	COC Flash Point tracking slightly low but consistent. High level of iron so please investigate the source if possible. Initial sample (3m) was high to then drop at 9m, but return here at 15m. Fit for further use and re-sample at next scheduled frequency as these are short frequencies with this system. Iron ppm levels are abnormal. (GCD) 90% Distillation Point is abnormally high. COC Flash Point is abnormally low.
09/05/19	Marginally low on COC Flash Pt, but may be carryover from previous oil charge. Short sampling frequencies evident and recommend sample again on the current short frequency to monitor oil condition. COC Flash Point is abnormally low. (GCD) 90% Distillation Point is marginally high.
02/21/19	This follows the critical sample recently which I am aware was addressed. The flash point is very low, the GC shows evidence of light ends and cracking. If the fluid cannot be recovered safely I would recommend a change, including a clean and flush with appropriate products. Iron ppm levels are abnormal. (GCD) 10% Distillation Point is severely low. COC Flash Point is severely low. (GCD) % < 335°C is abnormally high.
08/23/18	*** NOTE: This sample represents a severe fire hazard. Please notify the customer urgently! ***Product must be changed immediately. Although we believe the system is not in use currently, the oil must be changed ahead of re-start. The flash point is dangerously low and as such presents a serious hazard. (GCD) % < 335°C is severely high. (GCD) 10% Distillation Point is severely low. COC Flash Point is severely low. Visc @ 40°C is severely low. (GCD) 90% Distillation Point is abnormally low.

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