

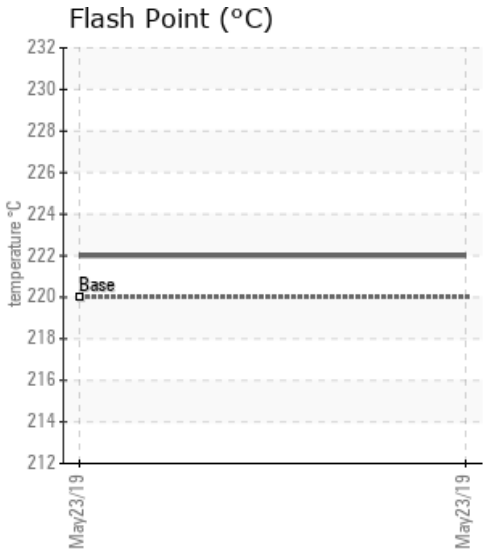
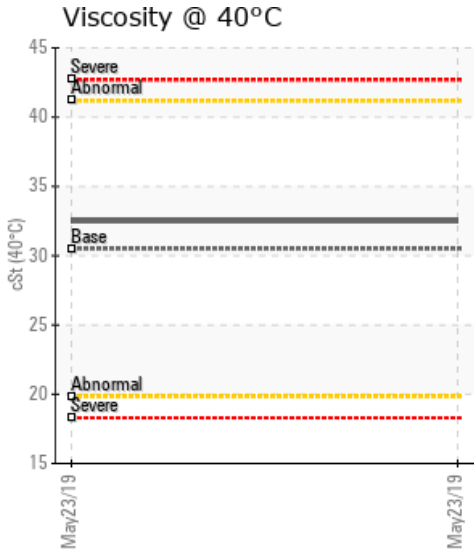
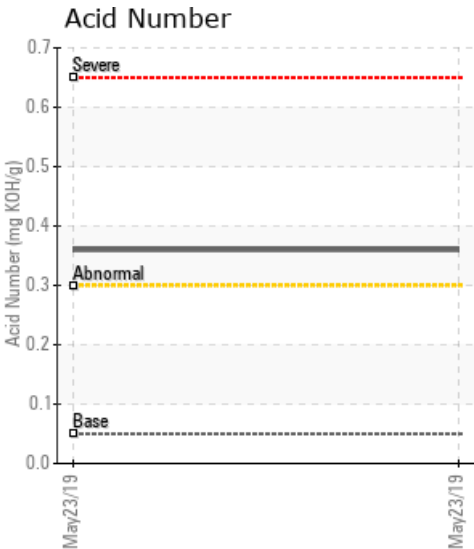
# HEAT TRANSFER

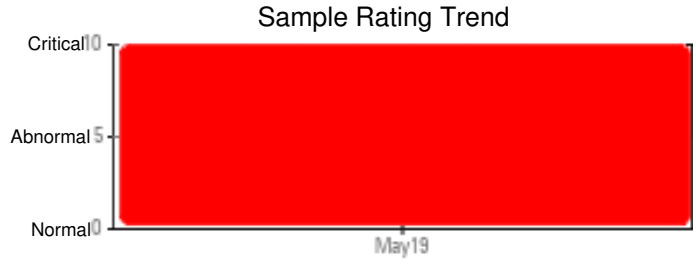
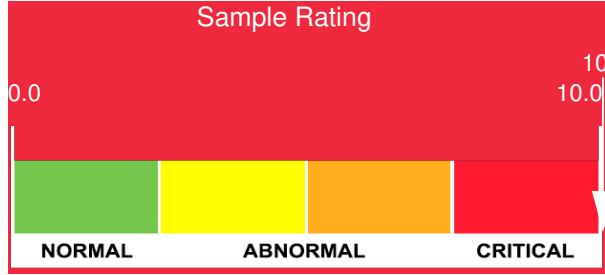
Customer: PTRHTF40131	System Information	Sample Information
ABC Maritime AG Rue Perdtemps 1 1260 Nyon, Switzerland Attn: Oleg Bashenko Tel: 4(122)365-7100 E-Mail: ob@abcmaritime.ch	System Volume: 14000 ltr Bulk Operating Temp: 374F / 190C Heating Source: Blanket: Fluid: CASTROL PERFECTO HT5 Make: AALBORG	Lab No: 02287275 Analyst: Philip Riley Sample Date: 05/23/19 Received Date: 05/27/19 Completed: 05/29/19

Recommendation: Competitor Fluid and no base to make formal diagnosis. However, the products looks to be in very poor condition in a number of areas and I would recommend a full system change, including clean and flush, based on the analysis report

Comments: PQ levels are severe. Iron ppm levels are abnormal. Water contamination levels are severely high. Water contamination levels are severely high.. ppm Water contamination levels are severely high. Pentane Insolubles levels are severely high. Sodium ppm levels are severely high. (GCD) 90% Distillation Point is severely high. Magnesium ppm levels are severely high. Calcium ppm levels are severely high. Acid Number (AN) is abnormally high.

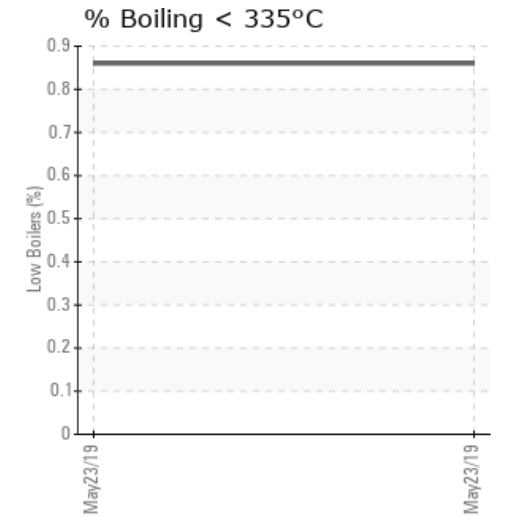
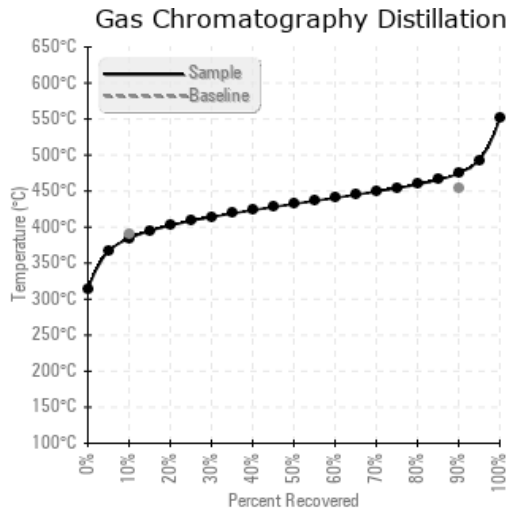
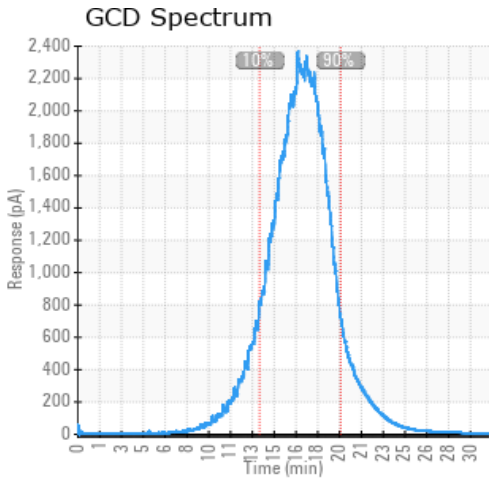
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
05/23/19	05/27/19	1848h		432 / 222	4823.0	32.5	0.360	0.571	723 / 384	810 / 432	886 / 475	0.86
Baseline Data				428 / 220		30.5	0.05		734 / 390		849 / 454	





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
05/23/19	376	0	0	0	3	0	0	0	0	0	3	104	14	0	0	0	3	0	1	43	90	0	11	6
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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