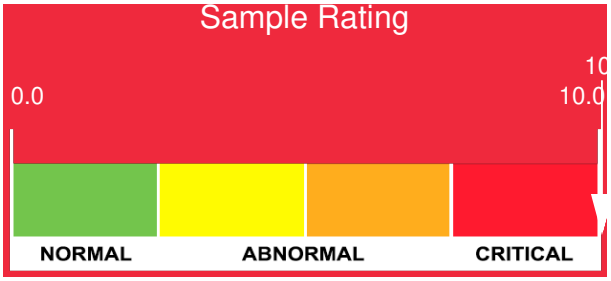
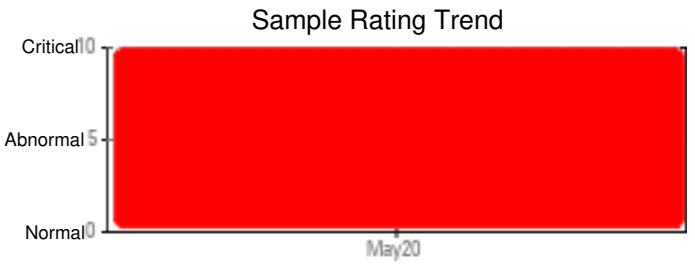




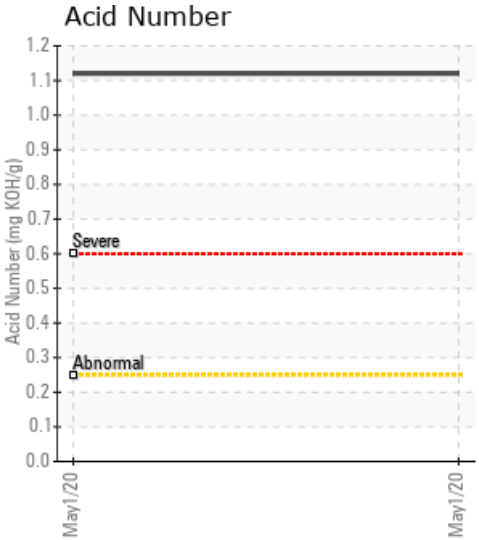
[ASPEN LEAF ENERGY / 10-22-50-26W4 /] HEATTRANSFER

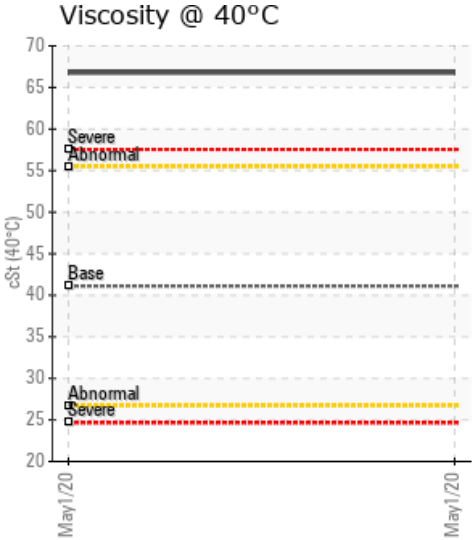
Customer: PTRHTF20174	System Information	Sample Information
Quadra Chemicals 700 4th Ave S.W Suite 470 Calgary, AB T2P 3J4 Canada Attn: Quadra Samples Tel: E-Mail: quadra_samples@quadra.ca	System Volume: 12069 ltr Bulk Operating Temp: 397F / 203C Heating Source: Blanket: Fluid: CHEVRON HEAT TRANSFER OIL 46 Make: ALCO	Lab No: 02352300 Analyst: Kevin McDermott Sample Date: 05/01/20 Received Date: 05/05/20 Completed: 05/11/20 Kevin McDermott kevin.mcdermott@petrocanadalsp.com

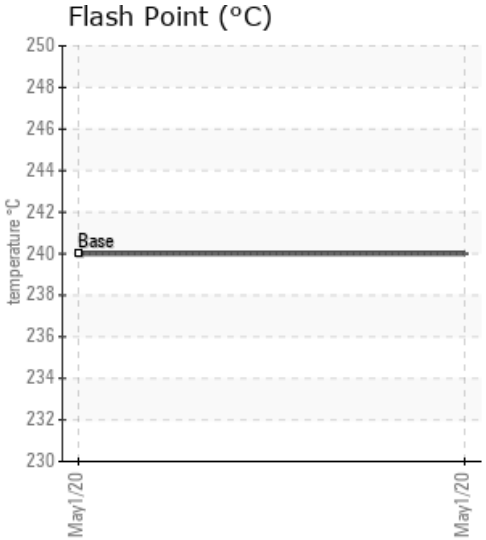
Recommendation: Fluid is in very poor condition due to severe oxidation. Very high iron content indicates corrosion. The Acid Number, viscosity and solids content also all extremely high. System will require internal cleaning and fluid replacement.

Comments:

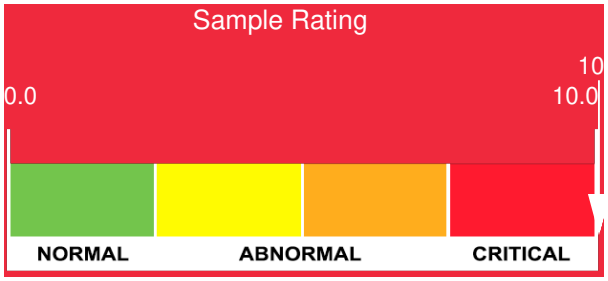
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
05/01/20	05/05/20	55m	SUCTION	464 / 240	192.0	66.8	1.12	2.52	733 / 390	833 / 445	932 / 500	2.07
Baseline Data				464 / 240		41.1			727 / 386	828 / 442	932 / 500	1.4

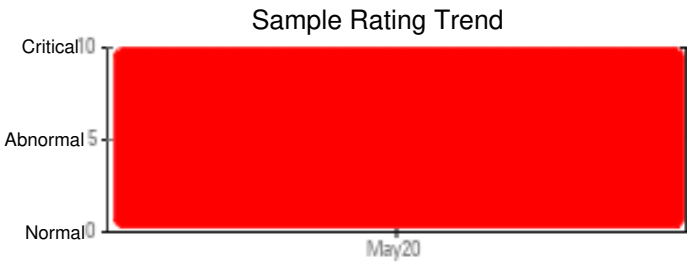






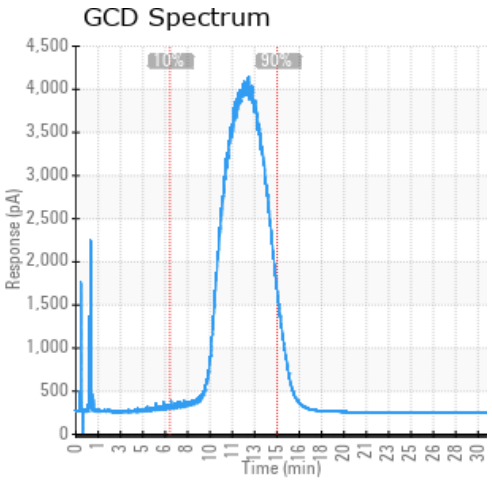
PETRO-CANADA LUBRICANTS

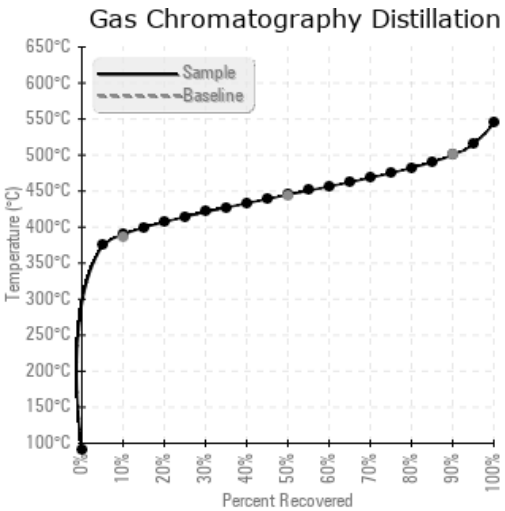


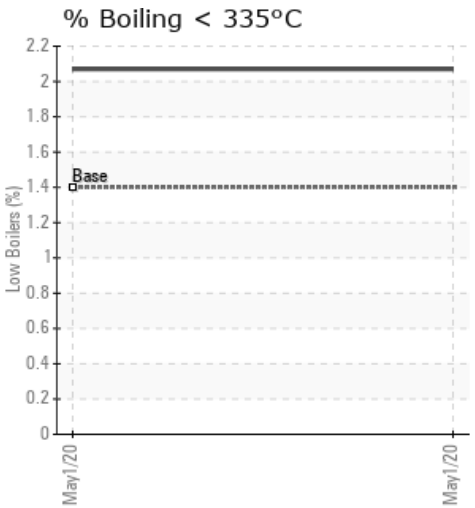


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
05/01/20	1157	1	0	4	0	0	0	0	0	0	1	0	0	0	0	0	14	0	1	0	2	0	0	1
Baseline Data			0	0						0			0	0					0				0	

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







Historical Comments
