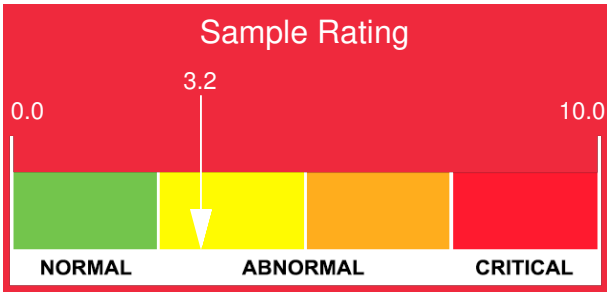
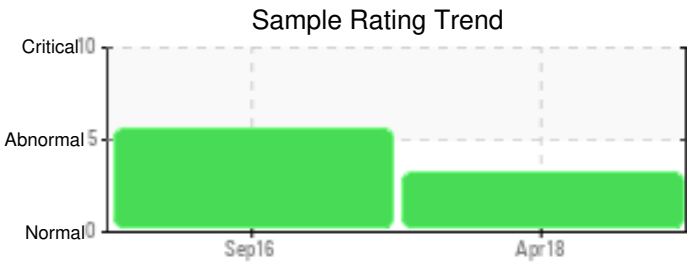




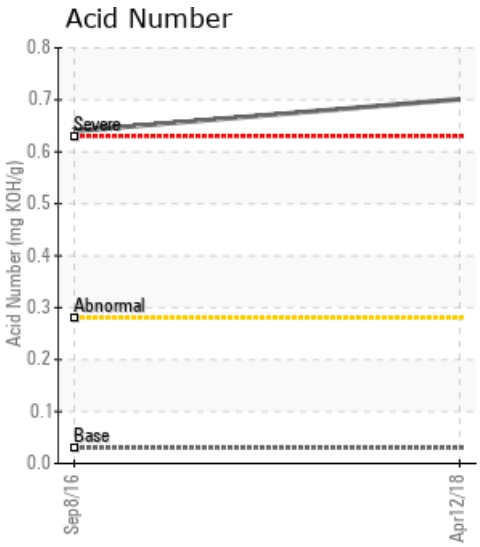
STARLING-LWF PREHEATER 0738

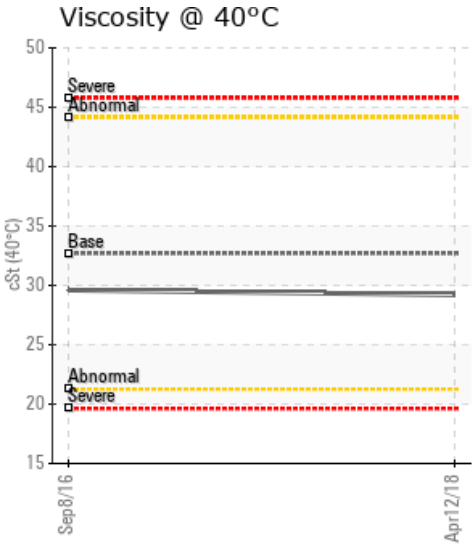
Customer: PTRHTF30095	System Information	Sample Information
HP Pelzer 115 Industrial Way Athens, TN 37303 USA Attn: Conway Tabor Tel: (423)333-9402 E-Mail: ctabor@hppelzer.com	System Volume: 30 gal Bulk Operating Temp: 420F / 216C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make: STERLING	Lab No: 02211310 Analyst: Manny Garcia Sample Date: 04/12/18 Received Date: 04/20/18 Completed: 04/26/18 To discuss this report contact Manny Garcia at 954-384-7259

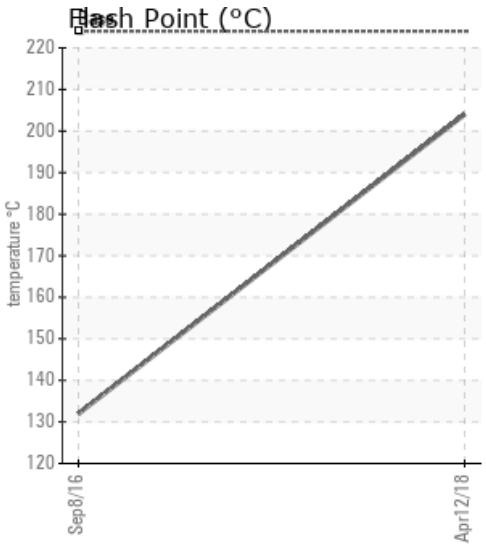
Recommendation: Acid levels have increased slightly over the last sample received ~19 months ago. The flash point is back in line as well as the distillation point at 90%. Fluid is suitable for continued use. Must monitor the acid levels.

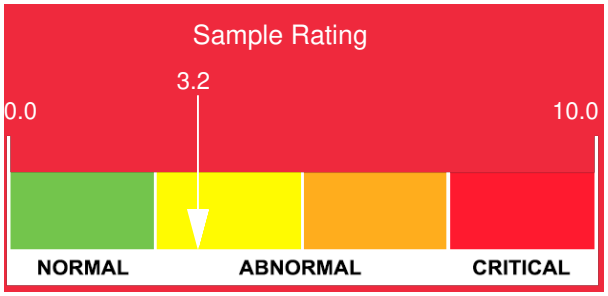
Comments: Acid Number (AN) is severely high.

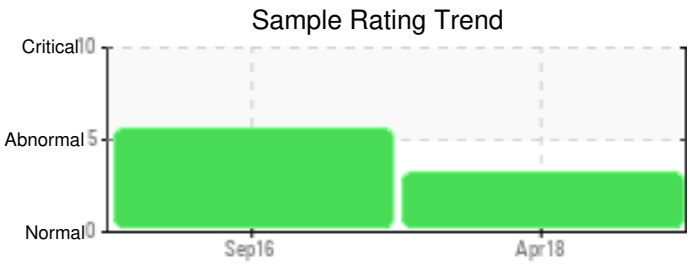
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
04/12/18	04/20/18	0m		399 / 204	22.3	29.2	0.701	0.184	687 / 364	796 / 424	904 / 485	3.44
09/08/16	09/14/16	2m	RETURN HOSE	270 / 132	60.0	29.6	0.640	0.091	701 / 372	812 / 433	910 / 488	5.42
Baseline Data				435 / 224		32.7	0.03		693 / 367	790 / 421	887 / 475	2.5





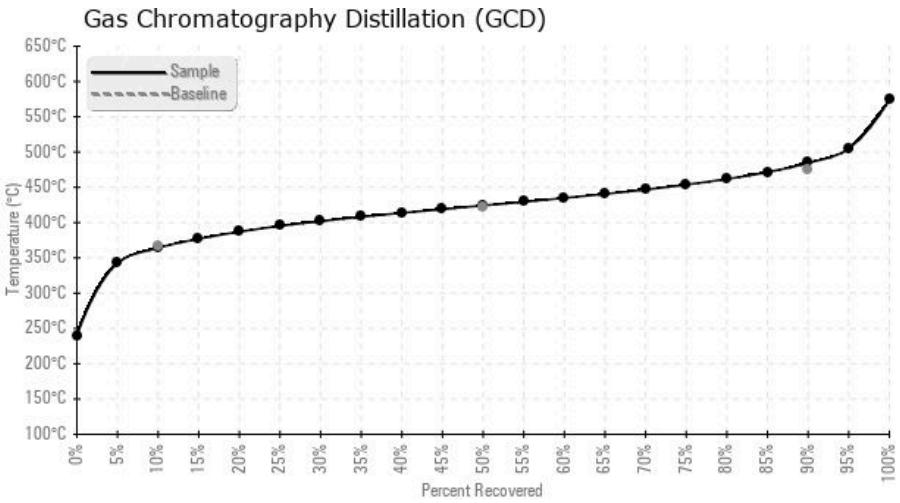


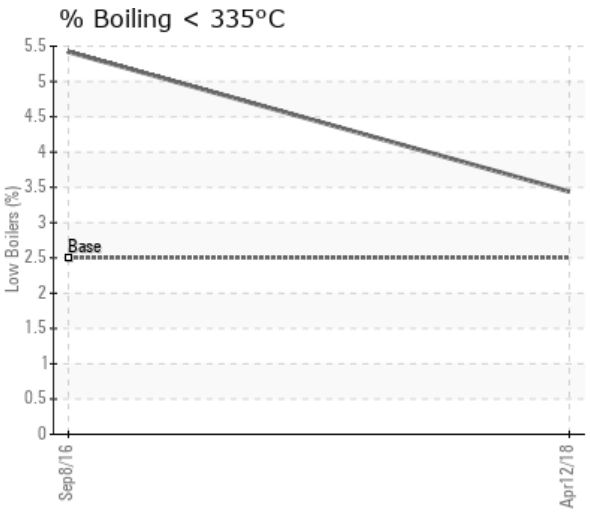




Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
04/12/18	1	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	82	1
09/08/16	18	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	173	4
Baseline Data			0	0						0			0	0					0				270	

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





Historical Comments

09/08/16	The used sample of oil is in poor condition and not recommended to 'top-up' the existing charge of fluid with any virgin oils. It is recommended that this system have the oil drained, system flushed and re-filled with premium Petro-Canada Heat Transfer Fluids.Acid Number (TAN) is severely high. COC Flash Point is severely low and at very dangerous levels. (GCD) 90% Distillation Point is marginally high. Very light visible debris in the oil sample.